



## PROJECT EXECUTIVE SUMMARY

### GEF COUNCIL SUBMISSION

**AGENCY'S PROJECT ID:** P089326  
**GEFSEC PROJECT ID:**  
**COUNTRY:** Kiribati  
**PROJECT TITLE:** Kiribati Adaptation Program – Pilot Implementation Phase (KAP–II)  
**GEF AGENCY:** World Bank  
**OTHER EXECUTING AGENCY(IES):** Office of the President through several line Ministries, Republic of Kiribati  
**DURATION:** 3 years  
**GEF FOCAL AREA:** Climate Change  
**GEF OPERATIONAL PROGRAM:** CC-SPA  
**GEF STRATEGIC PRIORITY:** CC-SPA  
 Piloting an Operational Approach to Adaptation  
**Pipeline Entry Date:** July 2004  
**ESTIMATED STARTING DATE:** June 1, 2006

<b>FINANCING PLAN (US\$)</b>	
<b>GEF PROJECT/COMPONENT</b>	
Project	1,800,000
PDF A	
PDF B	99,100
PDF C	
<b>Sub-Total GEF</b>	1,899,100
<b>CO-FINANCING*</b>	
GEF Agency	
Government	2,290,000
Bilateral (AusAid)	1,490,000
Bilateral (NzAID)	1,020,000
NGOs	
Others	
<i>Sub-Total Co-financing:</i>	4,800,000
<i>Total Project Financing:</i>	6,699,100
<b>FINANCING FOR ASSOCIATED ACTIVITIES IF ANY(European Union)</b> : Euro 2 million	
<b>LEVERAGED RESOURCES IF ANY:</b>	

**CONTRIBUTION TO KEY INDICATORS OF THE BUSINESS PLAN:** This is one of the planned GEF pilot/demonstration projects under the Special Program on Adaptation that shows how climate change adaptation planning and assessment can be translated into national policy and sustainable development planning and action.

**RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT(S):**

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 Permanent Secretary, Ministry of Environment,  
 Lands and Agriculture Development,  
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Date: May 27, 2004

This proposal has been prepared in accordance with GEF policies and procedures and meets the standards of the GEF Project Review Criteria for work program inclusion

Steve Gorman  
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 Date: September 1, 2005

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# 1. PROJECT SUMMARY

## Rationale

The Republic of Kiribati is one of the most isolated Least Developed Countries in the world. With a population of 96,377 (2003 estimate), it consists of 33 low-lying atoll islands spread over a vast area of 3.5 million km<sup>2</sup> of ocean in the central and western Pacific. GDP per capita was US\$567 in 2003, growing at 2.5 % per year. 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 over 40 % 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 without adaptation measures, 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 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 Program. 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 development, and provided the basis for the ongoing mainstreaming of adaptation in all relevant Ministry Operational Plans (MOPs), based upon a participatory process of national consultations. The Government of Kiribati is also strongly committed to the other 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.

There is a clear rationale for the Bank to continue its involvement in climate change issues in Kiribati. 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 key pillars of the World Bank program in the Pacific, as reflected in the Bank's new Four-Year Strategy for the Pacific Islands, published in June 2005, and currently including support to five country-level projects<sup>1</sup> and regional strategic assistance. Together with other donors and regional organizations, the World Bank helped organize two regional High Level Adaptation Consultations in 2003-04, which concluded that adaptation needs to be mainstreamed into national development plans, policies and budgets; and that it requires an integrated approach that addresses the entire spectrum of climate hazards, including current climate variability, climate change, and sea level rise. The preparation phase of the Kiribati Adaptation Program (KAP-I), 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 current project, KAP-II, would build on the merged activities of KAP-I and the preparation of the NAPA by continuing the process of consultation-based mainstreaming of adaptation, including economic planning, legislative and regulatory issues; and by building experience in implementation of adaptation through select pilot activities. The approach taken in the Kiribati Adaptation Program is fully consistent with international guidance on adaptation, including the UNDP/GEF Adaptation Policy Frameworks. Lessons learned from KAP-II are expected to become important for global strategies on adaptation investments, and help move incentives towards hazard risk prevention.

The Bank's role in adaptation economic mainstreaming complements that of other donors, such as 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 MEAs. With its involvement, the Bank would strengthen the achievement of the Government of Kiribati's key objective to "*enhance and ensure the equitable distribution of development benefits (...) according to the principles of good governance*"; as well as the 2004-2007 National Development Strategy (NDS) which highlights 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.

## **Objectives**

The **project development 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.

The **global environmental objective** of KAP-II is to assist the Government of Kiribati (GoK) in enhancing its capacity to plan and implement adaptation measures to the climate-related issues

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<sup>1</sup> Kiribati Adaptation Project Preparation, Tonga Cyclone Emergency Recovery Project, Samoa Cyclone Emergency Recovery Project, and Samoa Infrastructure Asset Management Projects I and II.

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 supporting, through this project, a key transitional stage in preparing for the long-term national response to climate change, including pilot actions 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.

### **Outcomes/outputs**

The outputs of the project would include, among others: (i) information and education materials on climate change in simple language and presentation to ensure outreach to the local communities; (ii) climate risk information and training material for various stakeholders; (iii) tools and methodologies to better monitor and evaluate sustainable management of ecosystems and biodiversity in the country; (iv) manuals containing best practices in the application of risk management and environmental assessment procedures for public infrastructure and climate change vulnerability reduction measures; (v) meetings and workshops targeted at various stakeholders to ensure their participation in planning and coordination to support activities in the climate change agenda; (vi) surveys to gauge the extent to which the activities planned for in the project are resulting in the awareness of the communities to the need to reduce actions that increase climate change vulnerability of Kiribati; and (vii) a compilation of lessons learnt for future adaptation program design. On the physical aspects expected outputs are: equipment to refurbish climate monitoring systems; protective measures for the national hospital and vulnerable stretches of coast; upgrades of a part of the Betio water supply system; water supply improvements on selected outer islands; rainwater collection/storage systems; and small-scale adaptation investments on two outer islands (e.g. mangrove replantation, protection of water wells, etc.).

The outcomes of GEF-financed activities would include: (i) stronger Government capacity to deal with the global environmental and sustainable development consequences of the increasing climate risks, by fully integrating adaptation into economic planning and by enhancing legislation and regulations, including public support and enforcement; (ii) development and application of tools and techniques that will result in sustainable management of climate change risks in an integrated and cost-effective manner; (iii) protection of select public assets and coastal areas to reduce their vulnerability to climate change and sea level rise; (iv) improvements in freshwater supply to reduce the vulnerability of scarce water resources on the islands; (v) awareness raising among high-level policy makers as well as the wider public; (vi) conservation and sustainable use of aquatic biodiversity in globally important ecosystems, in part 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; and (vii) better compliance with obligations stemming from the country's international commitments for the conservation and sustainable use of biodiversity resources, even in the face of the new climate risks.

In addition, and in particular on the social aspects, a key social outcome expected under the GEF financed activities would be improved ability of the I-Kiribati to adapt to the stresses presented by changes as a result of climate change. 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.

## **Activities**

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 sector development plans, in combination with a process of participatory adaptation, involving island councils, NGOs, churches, communities, and individuals. KAP-II also supports a number of selected priority adaptation investments, which will not only provide immediate results in terms of reduced vulnerability, but particularly 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\$ 1.18 million, of which US\$ 0.81 million is financed from the 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 support to the new National Strategic Risk Management Unit in the Office of the President; continued mainstreaming of adaptation activities into Ministry Operational Plans (MOPs); and integration of adaptation into population and resettlement programs. The third element is to generate scientific climate risk information and refurbish the capacity of the Meteorological Office.

*Component 2: Land use, physical structures, and ecosystems (US\$ 2.14 million, of which US\$ 0.41 million is financed from the 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 of 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 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 enforcement, and economic and environmental monitoring. Secondly, the component will produce design and construction guidelines, and apply them in pilot investments to protect key public assets that are at risk, including the national hospital and vulnerable coastal areas. Thirdly, the component includes 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. The component would also include the monitoring and evaluation of these activities and of the ecosystems being targeted.

*Component 3: Freshwater resources (US\$ 2.16 million, financed entirely by AusAID).* This component will support the development and management of freshwater resources to reduce their vulnerability to climate variability and climate change. It will provide assistance 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 pilot projects to identify and increase water resources in freshwater lenses, and a public awareness and education campaign to change user attitudes. On the outer islands, the component will focus on water resource assessments and improvements in the water supply system in selected locations, including attention for non-polluting sanitation systems.

*Component 4: Capacity at island and community level (US\$ 0.55 million, of which US\$ 0.31 million is financed from the GEF).* This component will provide 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 support a program of small-scale adaptation investments in two selected outer islands, identified through participatory planning and implemented directly by communities.

*Component 5: Program management (US\$ 0.57 million, of which US\$ 0.28 million is financed from the GEF).* This project component will provide overall support to the project, including program management, accounting, procurement, and operating costs of the Program Management Unit. It will also support the evaluation of KAP-II in view of the design of the next phase of Kiribati’s adaptation efforts. Furthermore, it contains an overall project contingency for currency fluctuations, price increases, etc. (US\$ 0.18 million).

Key **outcome indicators** (to be refined and confirmed during appraisal) include:

- establishment of the National Strategic Risk Management Unit (NSRMU) as the lead agency coordinating climate change adaptation and related strategic issues;
- percentage of climate-affected MOP programs that reflect systematic climate risk management; and
- good practice risk management and environmental assessment for public infrastructure and vulnerability reduction measures through options analyses.

The **critical risks and mitigation measures** that have been identified during project preparation are briefly described below. None of them have been assessed as being in-surmountable.

Risks	Risk Mitigation Measures	Risk Rating and Mitigation
<p><i>Failure or delay in establishing the NSRMU .</i> As specified in the GoK’s June 2005 CCA strategy statement, successful implementation of the strategy and identified activities, depends on strong, politically-supported, focused and effective co-ordination by the newly-established NSRM division of the President’s Office, OB.</p>	<p>A clear recognition and commitment from the responsible agencies to the importance of a timely creation and staffing of the NSRMU. Once established, the NSRMU should provide continued advocacy to sustain public and political support for systematic CCA.</p>	<p>L</p>

<p><i>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.</i></p>	<p>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.</p>	<p>M</p>
<p><i>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</i></p>	<p>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.</p>	<p>M</p>
<p>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 KAP-II</p>	<p>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</p>	<p>H</p>

## 2. COUNTRY OWNERSHIP

### a) Country Eligibility

Kiribati ratified the UN Framework Convention on Climate Change on February 7, 1995; the Conservation on Biological Diversity (CBD) on August 8, 1994; and the UN Convention to Combat Desertification (UNCCD) on 8 September 1998.

### b) Country Driven-ness

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), 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. One of the key objectives of the NIS was to establish a coherent strategy to respond to climate change by integrating climate change considerations into national development planning and relevant sectoral policies. It also aimed to identify specific adaptation and mitigation measures.

Under KAP-I, the Government of Kiribati has taken the first steps towards implementing this strategy, by mainstreaming adaptation into national economic planning. At the same time, Kiribati has started to prepare its National Adaptation Programme of Action (NAPA), which is overseen by

the same team responsible for KAP-I, and will reflect the adaptation priorities that are being mainstreamed into national and sectoral planning.

The Government's approach of integrating adaptation into economic planning is also fully consistent with the regional approach to climate change adaptation and risk management, reflected in 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 (...).

These recommendations were reflected in the 2004-2007 National Development Strategies (NDS), which highlight climate change as a key risk to Kiribati's development objectives. To provide an even firmer political basis and national planning context for comprehensive climate risk management, the government of Kiribati recently adopted the Climate Change Adaptation (CCA) Strategy (approved by Cabinet in June 2005). The document provides the framework for a participatory planning process and integration of climate risk management into Ministry Operational Plans; implementation of projects; and legislative and regulatory arrangements. KAP-II closely fits the objective and approach of this CCA Strategy.

Finally, country-driven-ness is demonstrated by the financing schedule: the government is providing the largest single contribution to KAP-II, through the recurrent budget for adaptation-related programs in Ministry Operational Plans.

### **3. PROGRAM AND POLICY CONFORMITY**

#### **a) Fit with GEF Operational Program and Strategic Priority**

Financing for KAP-II is proposed under the new GEF Strategic Priority "*Piloting an Operational Approach to Adaptation.*" Given the combination of its LDC and small island status, extreme vulnerability and good progress on mainstreaming, Kiribati is ideally positioned to become one of the first countries to implement this Strategic Priority on Adaptation (SPA)

The GEF funding in the KAP-II project is in line with the requirements of the SPA, as the project includes a combination of global benefits and incremental development costs to cover adaptation to climate change, with a majority of the GEF funding support being allocated to the generation of global environmental benefits. Given the fragile atoll environment, almost all project activities can be linked to environmental sustainability and biodiversity conservation. Activities such as improved coastal management and overall higher environmental management capacity in the face of increasing pressures on the fragile atoll environment wherein invaluable biodiversity is found will all generate global environmental benefits. The project design catalyzes comprehensive ecosystem management interventions that integrate ecological, economic and social goals to achieve multiple and cross-cutting local, national and global benefits, particularly in relation to Kiribati's coastal and marine ecosystems (such as coral reefs). In addition, the project would support a number of studies to develop better integrated ecosystem monitoring and management in the face of climate change. All project components have elements of capacity building, as well as investments that are primarily of a pilot nature, which, if successful, would be up-scaled in the follow-on, expansion phase, or could be applied in other small island states. Most importantly, all adaptation interventions in KAP-II are integrated (or "mainstreamed") into development plans and day-to-day implementation and based upon a combination of bottom-up and top-down planning – the most effective and efficient way to make this small island state and its ecosystems more resilient to the severe impacts of climate change.

The GEF grant would finance costs of activities required to achieve global environmental benefits, which would be incremental to the baseline national program undertaken by the Government with support from a number of other donors (see Annex A: Incremental Cost Analysis).

**b) Sustainability (including financial 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 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 in the Office of the President provides a permanent institutional 'home' for climate risk management, with direct access to the Development Coordination Committee (composed of Permanent Secretaries of all Government Ministries) and Cabinet. 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 only adaptation investments which are clearly identified as national priorities in the Ministry Operational Plans will be funded (with the exception of the small-scale adaptation investments on the outer islands, which will be identified through participatory planning). 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.

If the risk management process itself is sustainable, then this should hold true for the global benefits generated by the project, given that such risk management in atoll environments effectively mandates a more holistic approach to natural resources and coastal management, including for instance the use of non-structural solutions for coastal protection, such as the protection and rehabilitation of coral reefs and mangroves.

Financial sustainability is based primarily on the fact that climate risk management reduces the overall fiscal impact of climate change, climate variability and sea level rise. Many adaptation measures that need to be mainstreamed do not require substantial additional resources, just a different way of doing things that are already being done. This is reflected in KAP-II, where substantial parts of the project are covered by government resources that appear in the recurrent budgets of climate-affected programs. Once the capacity has been established to analyze the risk and choose the appropriate risk treatment, maintenance costs of infrastructure should be lower, replacement times should be longer, and costs of ad-hoc responses to problems as they occur should also be lower than they would otherwise have been, and thus easier to bear with the same government budget.

At the same time, it is important to recognize that successful mainstreaming would not imply that no further investment costs will be involved. Vulnerable countries like Kiribati are very likely to see rising impacts and incremental development costs due to climate change, even if early adaptation measures are extremely effective and sustainable. Participatory mainstreaming, as supported by KAP-II, is the best way to: (a) ensure that many low-cost adaptation measures are integrated into government policy or daily life of individuals and communities across the country, thereby becoming 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 further support from the international community after KAP-II has ended.

## **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 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 processes, and/or other adaptation programs 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).

### c) **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. A key 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 *unimanwe* 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 congregate 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 *unimanwe*, 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 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 the President, 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
- MFAI – Ministry of Foreign Affairs and Immigration
- Other Ministries with indirect links to climate change adaptation:
  - MCIC – Ministry of Commerce, Industry and Cooperatives
  - MCTTD – Ministry of Communications, Transport and Tourism Development
  - MEYS – Ministry of Education, Youth and Sports
- Civil Society, notably the Kiribati Association of NGOs (KANGO) and its constituent members, and the Council of Churches
- The private sector, as represented by the Kiribati Chamber of Commerce

These stakeholders have also been 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 consultations, as initiated in KAP-I, provides 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 will be 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 strengthening of local governance and participatory planning processes, which is supported by an ongoing UNDP project.

During implementation, consultations with the local residents will be an ongoing feature of the process of formulation, submission, approval, implementation and monitoring of the small-scale adaptation investments on the two pilot outer islands, and will include consistent attention to resettlement, land acquisition and related issues. Consultations with potential project 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 small-scale adaptation investment proposals are prepared, and continue through the life of the project. The people will 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 small-scale adaptation investment that will outline exactly how the process of discussion and negotiation will take place with PAPs.

Finally, the GEF, the World Bank and 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 will provide important lessons which will be 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.

#### **d) Monitoring and Evaluation**

Overall project monitoring and reporting will be the responsibility of the Office of Te Beretitenti (OB), while the day to day monitoring and evaluation activities would be carried out by the Program Management Unit (PMU) in the NSRMU. 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 and financial reports generated by line ministries, 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, in order to sufficiently capture lessons learnt, given the expanded pilot nature of the project and the fact that the project would be using a simplified disbursement monitoring system, additional progress reports will be required at the end of Q1 and Q3. Quarterly reports from line ministries will be collated by the PMU, and a consolidated quarterly KAP-II progress report will be submitted to the NASC, Cabinet and the WB. Quarterly reports will also contain implementation and work plans for the coming 6 months. At the end of the project, an ex-post 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.

Evaluation of project results will be carried out by the PMU, with input from the various consultants associated with the project as well as through the regular meetings held with the NASC, who will be receiving consolidated project progress reports. In addition to these ongoing evaluations, two additional evaluations will be carried out, that at midterm as well as the final net impact assessments towards the end of the project. These evaluations will include an independent review to the PMU and the NASC, and will allow for adjustments to be made in project implementation; as well as collate lessons that would be used to design the follow-on phase of KAP. Surveys, workshops and other interactive meetings will also be carried out as an additional project evaluation tool. Adequate budget has been set aside to allow for the implementation of these various activities.

#### **4. FINANCIAL MODALITY AND COST EFFECTIVENESS**

The project's estimated total cost is US\$6.60 million equivalent. Of this, the Government will contribute US\$2.29 million; AusAID US\$1.49 million; NZAID US\$1.02 million (based on exchange rates as of 1 August, 2005: AUD/USD0.76, NZD/USD=0.68). The requested GEF co-financing is US\$ 1.80 million which, given the project's demonstration value and substantial co-financing, represents a highly cost-effective use of GEF resources. Table 1 below summarizes the project financing sources and respective amounts.

**Table 1: Project co-financing sources**

<b>Co-financing Sources</b>			
Name of Co-financier (source)	Classification	Type	Amount (US\$)
Government	State budget/Executing Agency	Cash/other	2.29 million
Australia (AusAID)	Bilateral	Grant	1.49 million
New Zealand (NZ Aid)	Bilateral	Grant	1.02 million
Sub-Total Co-financing			4.80 million

Further details are provided in Annex A – Incremental Cost Analysis.

**Commitments:** AusAID has transferred AUD 2 million into a World Bank administered Trust Fund. The details of the account are being developed. The World Bank and NzAID are in the process of discussing the details of the proposed funding. All these arrangements would be finalized by Appraisal. The signed TF agreement for the AusAID portion is attached to this Exec Summary. With regards to **cost effectiveness** of the design approach for KAP-II, there are no best practices benchmarks for implementation of adaptation as yet, on which to compare. However, the design of KAP-II’s pilot investments is based upon detailed analyses by technical experts, assisted by an adaptation economist, who have assessed options for coastal protection and water resources management; including cost-effectiveness, technical/environmental and social acceptability. Cost effectiveness was also a key criterion for the prioritization of pilot investments for KAP-II by the Climate Change Study Team. Most importantly, and as noted from literature, including that published by the World Bank climate change team, mainstreaming adaptation in combination with close stakeholder involvement is the most effective and efficient way to reduce vulnerability to climate change.

## **5. INSTITUTIONAL COORDINATION AND SUPPORT**

### **a) Core Commitments and Linkages**

The proposed project is fully consistent with the small states agenda identified by the World Bank 2000 Regional Strategy for the Pacific Islands, which identifies as priorities the management of natural disasters and environmental vulnerability. It also flows directly from the analysis carried out under the World Bank 2000 Regional Economic Report “*Cities, Seas and Storms: Adapting to Change in Pacific Island Economies*”. This study funded a study of vulnerability and adaptation in Tarawa, which informed the subsequent design of KAP.

In the four years since the publication of the 2000 Regional Economic Report, adaptation and risk management have become one of the pillars of World Bank program in the Pacific. This program included investments in five projects, including three in Samoa with substantial risk management components<sup>2</sup>, KAP-I in Kiribati, and a Cyclone Emergency Recovery Project in Tonga. It also helped support two regional High Level Consultations in Adaptation in Fiji (2002 and 2003), in partnership with ADB, SPREP, the South Pacific Geoscience Commission (SOPAC), UNDP, UNEP, AusAID and NZAid. For the first time, these Consultations brought together high level

<sup>2</sup> Samoa Infrastructure Asset Management Projects I and II, and the recently approved Samoa Cyclone Emergency Recovery Project. All three projects focus substantially on coastal hazard management.

representatives of Ministries of Finance, Planning and Environment from all major Pacific Island countries to discuss adaptation and risk management. The results helped place risk management firmly into the economic planning horizon, and represented the beginning of regional efforts to merge the climate change adaptation and disaster risk management agendas. Most recently, the World Bank supported the 2003 Catastrophe Insurance study carried out by SOPAC, in collaboration with AusAID.

Natural hazard risk management is one of the five key pillars of the World Bank's Pacific Regional Strategy 2006-2009 (released in June 2005). Lessons learned from country pilots will be reflected in a Risk Management and Adaptation Policy Note that is currently being prepared. The Kiribati KAP-Is the first pilot project fully dedicated to adaptation in the East Asia and Pacific Region. Lessons learned from this pilot are expected to be crucial to the implementation of the new World Bank strategy and growing global interest in adaptation investment, and help move internal incentives towards assistance to risk prevention (as opposed to only response).

Since KAP would be one of the first projects worldwide piloting the new GEF strategic priority on adaptation, there are no major precedents on which to base its design. However, the project draws heavily from the national and regional capacity built through previous GEF enabling activities which helped fund the initial national communication and National Implementation Strategy.

**b. Consultation, Coordination and Collaboration between IAs, and IAs and ExAs, if appropriate.**

The project, through its Phase I activities is well coordinated with the other ongoing GEF-funded activities in Kiribati. Besides the preparation of a NAPA, which has been closely integrated with KAP-I, *UNDP-GEF* is also supporting projects on biodiversity and international waters. 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, including implementation of general measures for in-situ and ex-situ conservation and sustainable use; methodologies to evaluate and mitigate specific threats to biodiversity components; and preservation and maintenance of biodiversity related knowledge of local communities embodying traditional lifestyles. 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. 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, and will identify priority issues and needs for capacity building towards the implementation of the UNFCCC, UNCCD and UNCBD. *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). The NBF project will assist Kiribati to develop and strengthen biosafety policies and regulatory regimes, including by public awareness raising and stakeholder consultation. The POPs project is assisting Kiribati to implement the Stockholm Convention, including the ratification process (completed in 2004) and reporting obligations; and also aims to strengthen Kiribati's general capacity to manage POPs and chemicals.

More specifically on the NAPA, close linkages have been established from the time of KAP I preparation. Given the strong interrelationships between the NAPA and the KAP-I project, the government decided to fully merge the two activities, which were implemented by two different agencies. The merger resulted in a joint 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, under the Office of the President, with the mandate to oversee the joint work program for the NAPA and KAP (the KAP office acts as the secretariat for this steering committee). The existing NAPA Team has become the Technical Climate Change Study Team for the unified program, reporting to the Steering Committee (the NAPA program management unit acts as the Secretariat to this Study Team). The Office of the President is now the responsible agency for overall supervision of the unified climate change program.

Close coordination, complementarity and mutual benefits between KAP-II and these other GEF-funded projects will be ensured through the close involvement of the Environmental Conservation Division (ECD) in MELAD. The ECD is responsible for the implementation of all global environmental agreements and related projects, but also provides the technical support for interdepartmental climate change issues under KAP-II, through the Climate Change Study Team. Furthermore, MELAD/ECD will be responsible for all KAP-II activities that involve environmental regulations, enforcement 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.

The UNDP administered GEF Small Grants Program is not presently running in Kiribati. Should it become operational, KAP-II would ensure that strong linkages are developed, particularly to share lessons learned in implementing small-scale adaptation investments in the outer islands.

The KAP II project will also be implemented in close collaboration with other projects being implemented in the country. In a broader context, the project would complement a UNDP-managed program for the Outer Islands, US\$1 million – Strengthening Governance in Kiribati (SDGIK), which has been designed to strengthen capacity to manage development projects at the sub-national level. The implementing agency, MISA, which will also be responsible for the OI capacity building activities planned in KAP II, has indicated a very strong interest in minimizing duplication between these two projects, while emphasizing their complementarity. With guidance from MISA, a strong cooperation mechanism would be established with the UNDP, given the synergy between these programs.

The project will be co-financed by AusAID, which will provide financing for the development of freshwater resources and New Zealand is expected to provide additional support to various project activities, including for coastal infrastructure and public assets, the small-scale investments on the outer islands, and program management<sup>3</sup>. The EU will be financing the development of an

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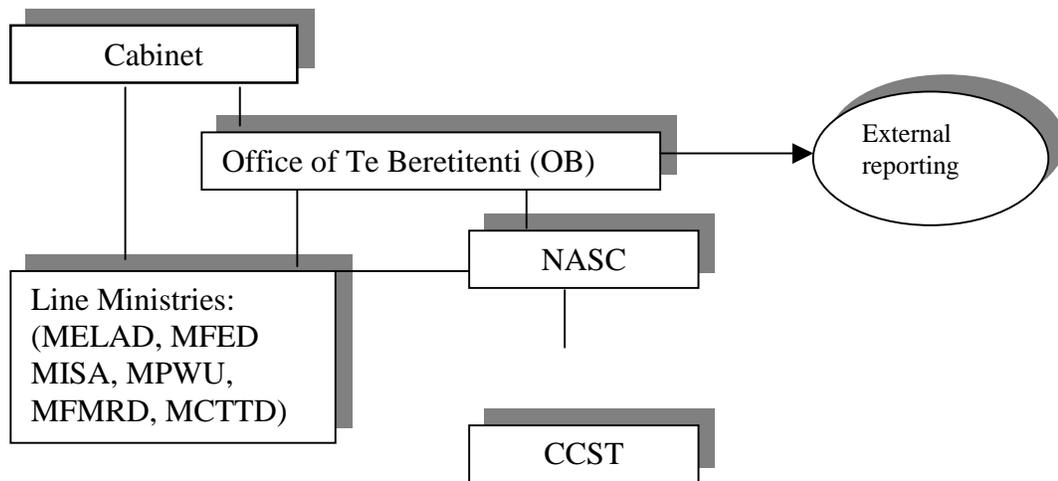
<sup>3</sup> Arrangements to be determined before Appraisal

alternative aggregate source that would reduce current pressure from beach mining - an important activity for the sustainability of the planned coastal management activities, including aquatic biodiversity management. In addition, ADB is currently financing some activities linked to sanitation, public health and environment improvement, on which the proposed project will benefit from and build on. Synergies will be developed with these programs, mainly through the NSRMU, which will be the key coordinating body for all adaptation related activities in Kiribati, including related issues such as population policy and urban renewal. Once established and fully operational, it is envisaged that the NSRMU would also host and/or compel regular sector donor consultation, collaboration and coordination.

### **c) Project Implementation Arrangements**

Overall direction and coordination of the project will be provided by the Office of Te Beretitenti (Office of the President, OB) through the National Strategic Risk Management division/unit (NSRMU). This is being established within the OB in the second half of 2005. The NSRMU will be staffed and organized so as to direct and monitor KAP-II. The NSRMU will also host the Program Management Unit (PMU). Project implementation will in part be assured by the fact that institutional capacity built during the implementation of KAP I, and strengthened during the preparation of KAP II would continue to work in the PMU. The all I-Kiribati team implementing KAP I, has acquired substantial experience in key areas such as financial management, reporting and procurement procedures. Specific components of KAP-II will be implemented 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).

The *National Adaptation Steering Committee* (NASC), which was established during KAP I, is responsible for promoting and monitoring coordination among project activities across the ministries involved in the project, including the utilization and sharing of technical expertise. The NASC is chaired by the Permanent Secretary (PS) 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 change-related matters, as well as coordinate scientific activities relevant to the planning and execution of the NAPA and KAP-II. The institutional relationships are illustrated in the following diagram:



The MFED will warrant financial provision to the OB from the Development Fund in the Annual Budget in accordance with public finance law. Project components will be executed by line ministries under Departmental Warrants (DWs) issued by the OB. DWs will allocate project funds to 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.

Regarding financial management, 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 small-scale outer island adaptation investments and the proposed Outer Island Revolving Funds. As such, disbursements for these activities would take place only once operational manuals for the implementation of these activities have been developed, and are of a quality satisfactory to the Bank. There will be a single disbursement category for the project which will significantly reduce the burden of reporting for the Government without negatively impacting on development partners. Expenditure reporting will be against agreed annual activities which will determine eligibility.

## ANNEX A: INCREMENTAL COST ANALYSIS

**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.

Kiribati is also the 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.

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.

**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 activities outlined above. The GEF alternative would add critical elements as described below.

Outcomes that contain global benefits would 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 and by enhancing legislation and regulations, including public support and enforcement; (ii) development and application of tools and techniques that will result in sustainable management of climate change risks in an integrated and cost-effective manner; (iii) awareness raising among high-level policy makers as well as the wider public; (iv) 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; and (v) 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.

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 enforcement of 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 small-scale outer island 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 Program 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.

**Table 2. Summary of Global and Local Benefits**

<b>Measure</b>	<b>Global benefits</b>	<b>Local benefits</b>
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.
Facilitating the developing of monitoring and evaluation techniques that will allow for better and more sustainable management of the coastal resources.	Conserve coastal and marine biodiversity and reduce degradation of coastal areas.	Maintain fisheries and preserve fragile coastlines and freshwater lenses

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.

## ANNEX B: RESULTS FRAMEWORK AND MONITORING

### Results Framework

<b>PDO/Global Environmental Development Objective</b>	<b>Outcome Indicators</b>	<b>Use of Outcome Information</b>
<p>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.</p>	<p>NSRMMU established as lead agency coordinating CCA and related strategies; NSRMMU is operational within the first year of implementation</p> <p>Percentage of climate affected MOP programs that reflect systematic climate risk management.</p> <p>Evidence of use of best practice in the application of risk management and environmental assessment to public infrastructure and CCA vulnerability reduction measures as assessed through options analysis, in the feasibility studies, options development and implementation</p>	<p>YR 1 gauge institutional progress</p> <p>YR 2 assess effectiveness and determine whether components need to be adjusted</p> <p>YR 3 feed results and lessons learned into design of continued GoK adaptation program</p>
<b>Intermediate Results One per Component</b>	<b>Results Indicators for Each Component</b>	<b>Use of Results Monitoring</b>
<p><b>Component One:</b></p> <p>Improved consultation, planning and coordination mechanisms to support CCA</p>	<p><b>Component One:</b></p> <p>Proportion of the adult population that is aware of CCA</p> <p>Number of NASC meetings with participation of Director/Senior Assistant Secretary or higher level officials of at least 5 key ministries</p> <p>Number of CCST meetings attended by technical officers of at least 6 key departments</p> <p>Number of schools that have incorporated climate risk management in their curriculum</p> <p>Number of church events that incorporate CCA messages</p> <p>Climate risk profile produced and used in at least three major infrastructure investments</p>	<p><b>Component One:</b></p> <p>YR1/2/3: assess adjustments to be made to awareness raising and consultation activities</p> <p>YR3: assess evidence that awareness messages are resulting in the intended behavioral changes</p> <p>Yr3 : low incorporation of CCA messages or impact may indicate need to change the awareness message dissemination or incentives in the project</p> <p>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</p>

<p><b>Component Two:</b></p> <p>Improved management of climate-related hazards to coasts, public assets and ecosystems</p>	<p><b>Component Two :</b></p> <p>Estimated quantity of aggregate being removed from the coastline and the atoll land</p> <p>Pilot investments based on rigorous analysis of risk treatment options, including economic analysis, environmental and social assessment</p> <p>Frequency of flooding causing disruption of hospital services reduced to an acceptable level</p> <p>No further erosion of causeway</p> <p>Regular reporting for coral monitoring</p>	<p><b>Component Two:</b></p> <p>YR1/YR2 assess awareness of the communities to the need to reduce and or ban coastal aggregate mining</p> <p>YR2/3 develop acceptable and cost-effective options for climate proofing public assets</p> <p>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</p> <p>YR2/3 assess detail of coral monitoring for linkage to overall climate change agenda, but also to improved integrated ecosystem management</p>
<p><b>Component Three:</b></p> <p>Improved sustainability of freshwater resources</p>	<p><b>Component Three:</b></p> <p>National Water Strategy (NWS) adopted and reflected in MPWU MOP and PUB business plan</p> <p>Master Plan (MP) for water on Tarawa produced and reflected in MPWU MOP and PUB business plan</p> <p>Number of rainwater collection/storage facilities at government/community buildings</p> <p>Building code includes freshwater collection and storage as an objective</p> <p>Evidence that local authorities are enforcing building codes</p> <p>Percentage reduction in water leakage in target area on Betio islet</p> <p>Number of water locations assessed and supply improvements implemented</p>	<p><b>Component Three:</b></p> <p>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</p> <p>YR 2/3 Assess whether the rainwater tanks are making a difference in increasing water availability</p> <p>YR 2/3 Gauge whether reduction in leakage is increasing water availability for families in target areas</p> <p>YR 2/3 Gauge enforcement capacity of local authorities in the use of building codes</p>

<p><b>Component Four:</b></p> <p>Improved capacity for CCA at island government and community level</p>	<p><b>Component Four:</b></p> <p>Number of Outer Island Profiles that contain climate risk information</p> <p>Number of Councils trained on CCA roles and responses</p> <p>Number of small scale adaptation investment grants awarded</p> <p>Share of small-scale adaptation investment grants awarded for soft solutions relative to structural solutions.</p>	<p><b>Component Four:</b></p> <p>YR 1/2/3 Gauge understanding of CCA in the OIs, and intensify awareness campaign if inadequate</p> <p>YR 2/3 Assess whether criteria to accessing the small scale adaptation investments are well understood and adjust as needed</p>
<p><b>Component Five:</b></p> <p>Support for implementation of project activities</p>	<p><b>Component Five:</b></p> <p>KAP-II Program Management Unit integrated into NSRMU in OB</p> <p>Quarterly project progress reports are timely and reflect a good understanding of progress, critical issues, corrective actions, accountability for actions and timing.</p> <p>Lessons learned compiled for future adaptation program design</p>	<p><b>Component Five:</b></p> <p>YR 1/2/3 Gauge adequacy of facilities for the KAP II office: human and equipment to support a robust M&amp;E reporting system</p> <p>YR 1/2/3 Assess adequacy of the reporting system for the project in response to the various donor requirements</p>

### Arrangements for results monitoring

Outcome Indicators	Baseline	Target Values			Data Collection and Reporting		
		YR1	YR2	YR3	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
NSRMU established 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%	50%	80%	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 infra. constructed under the project	All infra. constructed under the project	Annual	Design documents	MPWU
<b>Results Indicators for Each Component</b>							
<b>Component One:</b>							
Proportion of the adult population that is aware of CCA	None	50	60	75	Half yearly	Survey	OB/MISA
Number of NASC meetings with participation of Director/Senior Assistant Secretary or higher level officials of at least 5 key ministries	Survey in YR1	5%	20%	40%	Annual	Minutes of NASC meetings	PMU/OB
Number of CCST meetings attended by technical officers of at least 6 key departments	TBD	1	2	3	Annual	Minutes of CCST meetings	MELAD
Number of schools that have incorporated climate risk management in their curriculum	None	10	10	10	Annual	Reports from MEYS	MEYS
Number of church events that incorporate CCA messages	None	10	10	10	Quarterly	Memo	Kiribati Council of Churches representative in NASC

Outcome Indicators	Baseline	Target Values			Data Collection and Reporting		
		YR1	YR2	YR3	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
Climate risk profile produced and used in at least three major infrastructure investments	None				Quarterly	Climate risk profile Design documents	MELAD/MPWU
<b>Component Two:</b> Estimated quantity of aggregate being removed from the coastline and the atoll land	45,000 m <sup>3</sup> pa Tarawa atoll				Annual	Expert report	MELAD
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)
No further erosion of causeway after rehabilitation	None	n/a	n/a	0 events, unless extreme (return period t.b.d.) conditions occur	End of project	Status report on causeway to NASC	MPWU
Number of reports of coral monitoring	None	None	4	8	Quarterly	Coral monitoring reports	MELAD
<b>Component Three:</b> National Water Strategy adopted and reflected in MPWU MOP and PUB business plan	None	NWS Adopted	Ditto	Ditto	Annual		
Master Plan for water on Tarawa	None	MP	Ditto	Ditto	Annual		

Outcome Indicators	Baseline	Target Values			Data Collection and Reporting		
		YR1	YR2	YR3	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
produced and reflected in MPWU MOP and PUB business plan		Prepared					
Number of rainwater collection/storage facilities at government/community buildings	TBD	10	20	30	Annual		
Building code includes freshwater collection and storage as an objective	None	BC amendments complete	Ditto	Ditto	Annual		
Evidence that local authorities are enforcing building codes	None	tbd	tbd	tbd	Annual		
Percentage water leakage in target area on Betio islet	50% of water supplied	35%	25%	20%	Annual		
Number of water locations assessed and supply improvements implemented	None	None	3	5	Annual		
<b>Component Four:</b>							
Number of Outer Island Profiles that contain climate risk information	TBD	5	10	15	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
<b>Component Five:</b>							
KAP-II Program Management Unit integrated into NSRMU in OB	None	Yes	Yes	Yes	Quarterly	Progress reports	PMU/OB
Percentage of project progress reports 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 C: RESPONSE TO PROJECT REVIEWS**

### **STAP expert review and IA/ExA response**

STAP Expert Reviewer: Dr. Ian Burton (Independent scholar and consultant; Scientist Emeritus, Meteorological Service of Canada; Professor Emeritus University of Toronto)

### **KEY ISSUES**

#### **1. 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.

#### **2. 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.

#### **3. 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 4.1(b) and 4.4.

#### **4. Regional context**

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

#### **5. 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 all climate change adaptation projects and mutatis mutandis could be used in other much larger and non-island countries.

#### **6. 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 programmes, 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 the President) 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 (e.g. 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.

#### **7. 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.

### **Response to STAP Review**

Overall the STAP reviewer endorses the project concept and design. With regards to the issues posed by the STAP reviewer on the commitment of the country and various stakeholders to make needed changes to reduce future climate change vulnerability, these two sections have been strengthened to give the reader a better insight into the “on the ground” situation. However, the team also agrees that these are not simply issues of the written word, rather will need constant monitoring and adjustments to the design to ensure that the desired objectives are met.

c) GEF Secretariat and other Agencies’ comments and IA/ExA response

