

ASIAN DEVELOPMENT BANK

TAR: OTH 36069

TECHNICAL ASSISTANCE
(Financed by the Government of Canada)

FOR THE

CLIMATE CHANGE ADAPTATION PROGRAM FOR THE PACIFIC

November 2002

ABBREVIATIONS

ADB	-	Asian Development Bank
AtRR	-	adaptation through risk reduction
CCV	-	climate change and climate variability, including sea level rise
CSP	-	country strategy and program
CSPU	-	country strategy and program update
NGO	-	non-government organization
PARD	-	Pacific Department
PDMC	-	Pacific developing member country
PICCAP	-	Pacific Islands Climate Change Assistance Programme
PPTA	-	project preparatory technical assistance
TA	-	technical assistance

NOTES

- (i) In this report, "\$" refers to US dollars.
- (ii) The term “assessment” used in this document covers a wide range of scales, including, spatial, temporal, sector, and technical studies through to policy development.

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I. INTRODUCTION

1. The Pacific islands region faces increasing environmental and socioeconomic pressures exacerbated by global climate change and climate variability.¹ The region, comprising more than 30 million square kilometers of the Pacific Ocean with over 26 countries and territories, is unique and characterized by a high degree of ecosystem and species diversity, with high vulnerability to natural and environmental disasters. The region has also a high degree of economic and cultural dependence on the natural environment, with an extraordinarily high diversity of cultures and languages, traditional practices, and customs centered on the marine and coastal environment.

2. An ADB mission visited Fiji Islands and Samoa in May 2002 to attend a high level meeting on Investing in Adaptation and the Second Round Table on Climate Change, Climate Variability and Sea Level Rise. The mission also met with senior officials from the governments of Fiji and Samoa, bilateral and multilateral aid agencies' representatives, and senior staff of major regional agencies including the South Pacific Regional Environment Programme, South Pacific Geoscience Commission, Secretariat of the Pacific Community, Forum Secretariat, University of the South Pacific, and World Meteorological Organization. The need for a technical assistance (TA) program on climate adaptation in the region was established, and understandings were reached on the scope, objectives, and implementation arrangements.² The TA is included in the Pacific regional assistance program for 2002.

II. ISSUES

3. Adaptation³ to climate change and variability (CCV), and its impact is, ultimately, an issue of sustainable development. The integration of environment and development has been adopted in a broad range of international agreements. Under these agreements, climate change issues are specifically addressed through the need to reduce greenhouse gas emissions and to adapt to the unavoidable impacts of climate change. Under the United Nations Framework Convention on Climate Change, small island developing states are recognized as being particularly vulnerable to climate change.

4. Even without climate change, Pacific island countries are already severely affected by climate variability and extremes, and they remain extremely vulnerable to future changes in the regional climate that could increase the risks. They have clearly recognized the need to (i) reduce their vulnerability to these increasing risks through adaptation processes, and (ii) strengthen their human and institutional capacities to assess, plan, and respond to these challenges.

5. Climate change has been identified as a priority issue by the South Pacific Forum Leaders since the early 1990s through their annual Forum Communiqué. Concern reached its highest level in October 2000 when the South Pacific Forum's leaders endorsed the Pacific islands framework for action on climate change, climate variability, and sea level rise. The framework forms the basis for effectively addressing issues related to CCV as a cooperative process among relevant stakeholders. While acknowledging that climate is a priority issue at the highest levels of government, a lack of active support has been the case with key ministries

¹ Global climate change refers to a significant long-term change in the earth's climate system, whereas climate variability refers to short- to medium-term fluctuations in the climate system, and usually includes extreme weather events such as hurricanes, floods, droughts, and other related disasters caused by weather phenomena.

² The TA first appeared in *ADB Business Opportunities* on 5 June 2002.

³ Adaptation refers to actions or activities that people take to accommodate, cope with, or benefit from the effects of climate variability and climate change

concerned largely with matters of socioeconomic development, such as finance and planning, based on the belief that climate is an environmental, not developmental, issue.

6. CCV initiatives undertaken in the early 1990s were carried out in an adhoc fashion, through various sources of support and assistance (Supplementary Appendix A). Over the last 4 years in particular, the Pacific Islands Climate Change Assistance Program (PICCAP) focused activities into a comprehensive program. PICCAP successfully used a country team approach, with government-appointed national coordinators, and focused on building the in-country capacity to undertake improved technical studies and to interpret these findings for the purposes of climate policy development. However, these efforts were preliminary and were only able to build small pools of human resource capacity.

7. There continues to be high political support for climate-related initiatives and a growing belief that the impacts of a changing climate are already being experienced through the occurrence of climate extremes such as unusually intense and/or unseasonal cyclones, flooding, droughts, and other natural phenomena. Recent scientific evidence⁴ indicates that climate change will increase the frequency and/or intensity of some extreme events in the decades to come. While the costs of disasters and disaster management are generally quantifiable, the identification of the cost of adaptation (the incremental costs) to climate change is recognized as a difficult task. Similarly, while disaster management activities are usually well defined, it is more difficult to identify specific activities to address adaptation needs. One way to address this challenge is to integrate disaster management into a holistic risk reduction strategy that includes adaptation to climate change within the broader context of sustainable development. In addition, improving the ability to cope with current variability not only provides short-term benefits in terms of risk reduction and sustainable development, but also increases the adaptive capacity with respect to increasing risks from future global climate change. This linking of short-term and long-term responses to climatic risks is a critical key in seeking an integrative, participatory, and holistic approach to a complicated issue. This holistic framework can be defined as “adaptation through risk reduction” (AtRR).

8. One important step in this approach is to improve the methods for estimating the impacts of climatic extremes on both natural and human systems as a result of both present variability and scenarios of future climate change. The few scientific support programs relating to climate research, modeling, and monitoring in the region, including those supported under PICCAP, have improved the understanding of climate change impacts. Yet most of the current work has focused on biophysical impacts from average changes in climate. Additional efforts are now required to increase understanding of climate change-related extremes and variability, in terms of (i) assessing impacts on human systems as well as natural systems; (ii) quantifying the effects in social and economic terms; (iii) explicitly assessing adaptation options in terms of their costs and benefits in reducing impacts; (iv) identifying most effective adaptation options, and designing action plans to reduce vulnerability and increase resilience; and (v) identifying most effective mechanisms and modalities to mainstream adaptation programs into development decision making and economic planning.

9. The AtRR approach recognizes the need for (i) capacity building and awareness to understand and undertake adaptation; (ii) development of tools for the assessment of risks and vulnerabilities; (iii) the undertaking of required assessments; (iv) mainstreaming adaptation into development plans, policies, and strategies based upon the assessments, including the prioritization of options; and (v) implementing the adaptation options through development plans, programs, and projects. Essentially, these are the building blocks toward a “no-regrets”

⁴ As reported by the Third Assessment Report of the Intergovernmental Panel on Climate Change , Geneva. 2000

approach to climate adaptation. For a description of this approach, adaptation, risk, vulnerability, and other AtRR methods, see Supplementary Appendix B.

10. Providing follow-up support to encourage adaptation mainstreaming is another key requirement. This will specifically include (i) strengthened and improved development of national technical and institutional response mechanisms and structures for adaptation; (ii) social and economic evaluation of adaptation options and related technologies; (iii) development of adaptation strategies, detailed action plans, and prioritization of options; (iv) concrete adoption of the adaptation policies and measures at the country level; and (v) implementation of the adaptation options with monitoring and evaluation mechanisms.

11. For the aid community, there is a symmetric need to incorporate AtRR into country strategies and assistance programs, policy support, institutional strengthening, and project designs. Considering the significance of external assistance in the development process of most Pacific countries, efforts made in this direction will significantly facilitate the adaptation mainstreaming process.

12. The TA is designed to address the impacts of future CCV by mainstreaming adaptation into development policies and projects. The underlying premise of the program is that, in large part, the goals of adaptation can be achieved through reducing risks to climatic extremes, with outcomes that benefit present as well as future development. Mainstreaming adaptation through risk reduction into development is a pathway that stimulates, promotes, and facilitates sustainable development in a coherent and holistic manner.

III. THE TECHNICAL ASSISTANCE

A. Purpose and Outputs

13. The goal of the TA is to ensure that Pacific developing member countries (PDMCs) of the Asian Development Bank (ADB) adapt to CCV. The purpose of the TA is to mainstream AtRR, on a pilot basis, in development planning and management in selected PDMCs and ADB operations. The technical assistance framework is in Appendix 1.

14. TA outputs will include

- (i) a review of completed and ongoing programs on climate variability and risk management, risk reduction, and climate change vulnerability and adaptation, with specific regard to relevance, appropriateness, and applicability of AtRR;
- (ii) mainstreaming AtRR into ADB project operations to better respond to country needs; and
- (iii) at the country level, two PDMCs selected to undertake mainstreaming of AtRR on a pilot basis at the national development planning, sector programs, and project activities levels.

B. Methodology and Key Activities

15. The TA will be undertaken in two phases – an initial phase comprising a general level of activities for 2 months, and a second phase comprising ADB level and country level activities for 13 months, using full participatory approaches.

16. During the first phase, at the general level, the TA will undertake an analytical review of past and ongoing adaptation programs including lessons learned, gap analysis, identification of most effective analytical tools and methodologies, capacity building programs and institutional support modalities. The key elements of adaptation processes will be analyzed to sharpen the focus of TA implementation activities. The review will focus on how best ADB and country “mainstreaming” of adaptation can be undertaken. Identification and establishment of the TA in at least two participating countries will also be carried out during this first phase.

17. During the second phase, two levels of mainstreaming activities, ADB and country level, will be undertaken in parallel, based upon the outcomes of the review carried out during the first phase.

18. At the ADB level, key elements of the AtRR approach will be applied in selected ADB operations with the primary focus on mainstreaming adaptation in ADB processes and procedures. The results from these activities will provide validation of the AtRR approach for mainstreaming purposes. In particular, the TA will (i) raise the awareness and understanding of ADB staff concerning mainstreaming AtRR into ADB Pacific operations, (ii) prepare inputs and recommendations for the country strategy and program/country strategy and program update preparation process to incorporate AtRR at the country strategy and program level, (iii) identify projects that can incorporate AtRR, (iv) identify and recommend steps toward incorporating AtRR into the project preparatory technical assistance preparation process, and (v) develop a set of guidelines for ADB use on incorporating AtRR into ADB operations.

19. At the country level, the TA will undertake AtRR by applying the key elements of the AtRR approach in two PDMCs. While assessment of climate risk and vulnerability at the country level will result in a range of adaptation options, these latter will be prioritized with their costs and benefits estimated against various climate change scenarios. The focus of the activities will be on mainstreaming the policy adaptation options selected out of the AtRR process into countries’ development planning and decision-making. Activities will include (i) use of analytical tools for adaptation; (ii) preparation/refinement of assessments; (iii) quantification of the socioeconomic effects from the assessments; (iv) prioritization of adaptation options to maximize economic, social, and environmental benefits; and (v) mainstreaming of adaptation into development plans, programs, and policies. The TA will prepare at least one development planning, sector policy, or institutional strengthening document that incorporates AtRR, and assess at least one non-ADB-funded project by incorporating AtRR. In addition, the TA will develop a set of guidelines and a manual of instructions for mainstreaming AtRR, as well as provide AtRR training of country officials. The results of these activities will provide validation of the AtRR approach for mainstreaming purposes at the country level.

C. Cost and Financing

20. The total cost of the TA is estimated at \$800,000 equivalent and will be financed on a grant basis by the Canadian Cooperation Fund on Climate Change, funded by the Government of Canada. Detailed cost estimates and financing arrangements are presented in Appendix 2.

D. Implementation Arrangements

21. The TA will be executed by ADB over an estimated 15-month period. It is expected to commence in November 2002 and to be completed by January 2004.

22. The ADB Pacific Department will implement the TA under the overall guidance of the Renewable Energy, Energy Efficiency and Climate Change program steering committee.

Consultations with regional organizations, PDMC stakeholders, and ADB staff will be facilitated by the initial consultations, one regional workshop, three national workshops, the presentation and discussions of TA progress, and key results at one or more internal ADB “green bag” seminars, and environment sector network meetings. All these activities will provide timely contributions on the proposed mainstreaming approaches at both the ADB and country level.

23. TA implementation will be undertaken in two phases: Phase 1 will cover activities at the general level and will last for 2 months. Phase 2 will cover both ADB level and country level activities for the remaining 13 months. Four international consultants and three domestic consultants will assist in TA implementation.

24. All general level activities under phase 1 and ADB level activities under phase 2 will be undertaken by the following, recruited as individual consultants: (i) one adaptation mainstreaming specialist (international consultant, 9 person-months) with international climate change adaptation management experience, and (ii) one adaptation research assistant (domestic consultant, 15 person-months) with experience in climate change policy and environmental economics. Phase 2 country level activities will be undertaken by the following, recruited through a consulting firm: (i) one climate risk and vulnerability specialist (international, 8 person-months) with experience in climate change assessments; (ii) one island coastal zone specialist (international, 5 person-months) with experience in climate change, tropical coastal areas, and coral reef management; (iii) one Economist (international, 5 person-months) with climate change economics experience; and (iv) two local climate change specialists (domestic, total of 12 person-months) with experience in undertaking vulnerability and adaptation assessments and recruited in each of the two selected PDMCs to assist TA implementation over a period of 6 months. All consultants will be engaged by ADB in accordance with ADB’s *Guidelines for the Use of Consultants* and other arrangements satisfactory to ADB for the engagement of domestic consultants. Outline terms of reference for the consultants are presented in Appendix 3. The consulting firm selection process will follow the simplified technical proposal and the quality and cost-based selection method.

25. At the country level, climate country teams have been established under PICCAP and building upon this institutional arrangement is suggested, although strengthening the team with staff from central planning and/or finance ministries and nongovernment organizations (NGOs) may be required. The two participating PDMCs will need to ensure that they have the highest levels of support, and involve civil society, the main NGOs, the private sector and local communities. During TA implementation a national workshop for each country will be held to raise the awareness and understanding of key stakeholder groups concerning adaptation through risk reduction, as well as a training seminar for key officials on undertaking assessments. Preliminary inception, midterm and final report outlines are in Appendix 4.

IV. THE PRESIDENT'S DECISION

26. The President, acting under the authority delegated by the Board, has approved ADB administering technical assistance not exceeding the equivalent of \$800,000 to be financed by the Canadian Cooperation Fund on Climate Change on a grant basis for the purpose of the Climate Change Adaptation Program for the Pacific, and hereby reports this action to the Board.

TECHNICAL ASSISTANCE FRAMEWORK

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
Goal Mainstream adaptation through risk reduction that will enhance sustainable development programs and activities in PDMCs and in ADB operations.	<ul style="list-style-type: none"> ADB endorses mainstreaming adaptation in ADB country and project level operations. At least two PDMCs mainstream adaptation in national development planning and decision making for sustainable development. 	<ul style="list-style-type: none"> ADB reports UNFCCC reports Regional reports Statements by PDMCs leaders Government reports Newspapers and other media 	<p><u>Assumption</u> ADB takes a no-regrets approach to project development and implementation.</p> <p><u>Risk</u> Slow acceptance on adopting new processes in ADB operations and PDMC development planning</p> <p><u>Assumption</u> Political support continues. Support by regional and national stakeholders Continued political and social stability</p> <p><u>Risk</u> Political instability changes focus of mainstreaming efforts.</p> <p>Disasters or severe environmental problems may impede progress of mainstreaming.</p>

ADB=Asian Development Bank, PDMCs=Pacific developing member country, UNFCCC= United Nations Framework Convention on Climate Change

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
<p>Purpose</p> <p>Develop and implement programs and projects that will mainstream adaptation through risk reduction in</p> <p>(i) ADB country and project level operations; and</p> <p>(ii) PDMCs, building upon recently completed and ongoing programs.</p> <p>Outputs</p> <ul style="list-style-type: none"> An inception report outlining overall approach and method for TA, and PDMC involvement Midterm and final reports outlining <ul style="list-style-type: none"> (i) approach and results on mainstreaming adaptation through risk reduction in ADB/PARD country and project level operations (ii) approach and results on mainstreaming adaptation through risk reduction in PDMCs development 	<ul style="list-style-type: none"> Development of methods, tools and guidelines on mainstreaming adaptation through risk reduction Training of PARD staff ADB use of adaptation through risk reduction Capacities of two PDMCs enhanced Linkages and synergies among related initiatives developed Inception report comprising reviews and recommended PDMC involvement completed by end of the 2nd month Inputs and recommendations for CSP/CSPUs and enhanced PPTAs Draft guidelines and manual of instruction on mainstreaming developed Two development strategy/plan/programs enhanced Two non-ADB-funded investment projects assessed 	<ul style="list-style-type: none"> Endorsement by PARD and approval by ADB Approved use of climate country team with strengthening Coordination with other related efforts Completed inception report including review results to PARD/REACH Completed revised CSPs, CSPUs, and PPTAs Inception report Midterm report Final report Completed strategy/plan/programs Completed project outlines Inception report Mid-term report Final report 	<ul style="list-style-type: none"> Delays in TA implementation and TA outputs through divisional consultative process Improved coordination on climate in and out of government Project outputs and timelines achieved Delays in TA implementation and support from key ministries Adequate consultation, and competent selections Endorsement by PARD on inception report Adequate consultation and division input Acceptance by PARD Optimal timing for CSP/CSPUs and PPTAs Adequate consultation and inputs by stakeholders Acceptance by decision makers Improved coordination among ministries and public/private sectors

CSP=country strategy and program, CSPU=country strategy and program update, PARD=Pacific Department, PPTA=project preparatory technical assistance, REACH=Renewable Energy, Energy Efficiency and Climate Change, TA=technical assistance

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
planning and decision making			
Activities Inception Phase (i) Analytical review of completed, and ongoing programs and methodologies on adaptation to determine progress achieved and lessons learned, and to identify gaps (ii) Identify which parts of the adaptation process the review covers, and highlight the gaps and areas where mainstreaming can be undertaken. (iii) Select and detail the mainstreaming approach for TA use. (iv) Identify, recommend, and agree on TA participation by at least two PDMCs. Implementation Phase <u>ADB Level</u> (i) Show how adaptation through risk reduction can best be used by ADB. (ii) Inputs into the CSPU process	<ul style="list-style-type: none"> • Review completed. Selection of methodology for undertaking TA detailed • Adaptation elements reviewed, gaps and ADB opportunities highlighted • Mainstreaming options selected • Criteria developed and selection process undertaken • Detailed outline of key elements • Recommendations for revising CSPUs completed 	<ul style="list-style-type: none"> • Inception report outlining review and recommended approach and method • Review report and inception report • Review report and inception report • Inception report • Inception and special report on key elements of adaptation through risk reduction • Midterm report 	<ul style="list-style-type: none"> • Ensure applicability, relevance, and effectiveness, and meeting needs of ADB and PDMCs • An approach that encompasses short-term and long-term changes in climate • Framework and process selected is coherent, holistic, and pragmatic • Criteria may be too stringent • Good political will Involvement of finance and planning ministries and line agencies • Framework/process may require capacities and strengthening beyond the TA exercise. • Timing may be a constraint

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
<ul style="list-style-type: none"> (iii) Identify ADB investment exposure to CCV. (iv) Identify PPTAs for adaptation through risk reduction enhancement. (v) Sensitize and train PARD staff in use of adaptation through risk reduction approach and elements. (vi) Draft ADB guidelines and staff instructions on incorporating adaptation through risk reduction in CSP/CSPU/PPTA processes. <p><u>Country Level</u></p> <ul style="list-style-type: none"> (i) Undertake adaptation assessment using key elements and tools based upon the review results. (ii) Prepare a development planning incorporating document adaptation through risk reduction. (iii) Assess a non-ADB-funded project by incorporating adaptation through risk reduction as a part of the feasibility process. (iv) Sensitize and train national experts on adaptation through risk reduction. 	<ul style="list-style-type: none"> Investment exposure highlighted in a matrix framework Process for enhancing PPTAs identified and worked on Two awareness and training seminars held Draft guidelines and procedures developed and circulated for input in ADB Adaptation assessment completed with country data, and key elements addressed Draft prepared and circulated to PDMCs for input Draft assessment prepared and circulated to PDMC for input Two national awareness and training workshops held 	<ul style="list-style-type: none"> Matrix developed for PARD Enhanced PPTAs considered by ADB PARD officers understanding and use of adaptation through risk reduction raised Guidelines and procedures revised as appropriate, and presented for approval in ADB Assessment report completed including adaptation and mainstreaming options and economic evaluations Draft revised and approved by cabinet for implementation Draft assessment revised and presented to stakeholders and cabinet for approval National experts enabled to undertake adaptation through risk reduction in development planning and sector planning 	<ul style="list-style-type: none"> Investments may be too costly but urgently required. PPTAs approved for further support by ADB ADB country and project level operations enhanced Guidelines adopted and used to enhance country and project level operations Analysis of results may require further work on assessment. Adaptation through risk reduction may be too costly for project implementation Stakeholders may not want their project costs to rise significantly National experts understand adaptation through risk reduction process and use with all development projects

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
<p>(v) Draft guidelines and procedures for mainstreaming adaptation through risk reduction.</p> <p>(vi) Hold a national meeting to present the results of the mainstreaming activities.</p> <p>Inputs</p> <ul style="list-style-type: none"> • \$800,000 • Adaptation mainstreaming specialist • Climate risk and vulnerability specialist • Economist • Island coastal specialist • Adaptation research assistant • One in-country local climate change specialist in each PDMC 	<ul style="list-style-type: none"> • Draft guidelines and procedures developed and circulated to PDMCs for input • All country level results prepared as input • Workshop to highlight successes, gaps, constraints, and lessons • Canada (CCFCC) • 9 months • 8 months • 5 months • 5 months • 15 months • 6 months for each expert 	<ul style="list-style-type: none"> • Guidelines and procedures revised and presented for approval in cabinet • National experts present guidelines and associated studies and documents • Approval by Canada, and PDMCs • Consultants progress reports Inception report Midterm report Final report TA review missions 	<ul style="list-style-type: none"> • Guidelines and procedures instituted as a part of the development process • Cabinet cannot agree on guidelines without significant effort from external agencies to fund additionality • Timely disbursements, and PDMC support • Competent consultants with demonstrated ability hired

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Total Cost
Asian Development Bank^a	
1. Consultants for General and ADB Level Activities (phases 1 and 2)	
a. Remuneration and Per Diem	
i. International Consultants	162.0
ii. Domestic Consultants	60.0
b. International and Local Travel	5.0
c. Reports and Communications	2.5
2. Consultants for Country Level Activities (phase 2)	
a. Remuneration and Per Diem	
i. International Consultants	344.0
ii. Domestic Consultants	36.0
b. International and Local Travel	11.0
c. Reports and Communications	2.5
3. Training and Seminars	
Regional and National Workshops	
Awareness and Training Programs	25.0
4. Contingencies	152.0
Total	800.0

^afinancing by the Canadian Cooperation Fund on Climate Change
Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. Scope of Work

1. The technical assistance (TA) will be implemented by four international consultants and three domestic consultants, covering three levels of activities. The general level and Asian Development Bank (ADB) level of activities will be undertaken by an adaptation mainstreaming specialist (9 person-months) and an adaptation research assistant (15 person-months), recruited as individuals and based at ADB headquarters. The country level activities will be undertaken by a recruited consulting firm comprising a climate risk and vulnerability specialist (8 person-months), an island coastal zone specialist (5 person-months), an economist (5 person-months), and a local climate change specialist in each of the selected Pacific developing member countries (PDMCs) for 6 person-months each.

2. The TA will begin with the first phase of 2 months and general level of activities comprising primarily a review of past and ongoing programs. The second phase of 13 months is divided between ADB level activities and country level activities, both to be undertaken concurrently. The ADB level activities will cover mainstreaming of adaptation through risk reduction in ADB country and project operations, while the country level activities will focus on mainstreaming adaptation through risk reduction at the government, sector, and project levels.

B. Terms of Reference

3. The consultants will accomplish the following:

1. International Consultants

a. Adaptation Mainstreaming Specialist – 9 person-months

- (i) Coordinate TA implementation; liaise with the TA consultants to link all levels of activities into a coherent mainstreaming approach; brief stakeholders (ADB, development partners, organizations, and PDMCs) on the TA; consult with the stakeholders to identify synergies and opportunities within the TA; develop a structure of work for the general level and ADB level activities of the TA, including a work plan and time lines; consult and work with the selected PDMCs to agree on TA activities at the country level.
- (ii) Review and analyze existing and ongoing programs related to climate change vulnerability and adaptation to take stock of progress achieved, lessons learned, and gaps, as well as the methodologies used within the programs and activities.
 - (a) Based upon the review results, select for use during TA implementation the most appropriate framework, process, and methodology for undertaking adaptation through risk reduction.
 - (b) Undertake the first awareness seminar in ADB by preparing and showing how adaptation through risk reduction can be used to best benefit mainstreaming, leading towards a no-regrets approach.
- (iii) Prepare inputs into ADBs country strategy and program/country strategy and program update (CSP/CSPU) process on how best to enhance the process with adaptation through risk reduction.

- (iv) Identify project preparatory technical assistance (PPTA) that can be enhanced to incorporate adaptation through risk reduction at the project level through (a) outlining the steps required to enhance PPTAs by incorporating adaptation through risk reduction, (b) recommending adaptation through risk reduction consultancies in the PPTAs, and/or (c) developing of consultants terms of reference.
- (v) Draft and recommend ADB guidelines and a manual of use on incorporation of adaptation through risk reduction in CSP/CSPU formulation and TA preparation and implementation.

b. Climate Risk and Vulnerability Specialist – 8 person-months

- (i) Coordinate TA implementation, specifically on country level activities, by liaising with the general and ADB level consultants to enable use of the adaptation through risk reduction framework and key elements, results of the first phase review, and country selection; ensure that TA reporting requirements (inception, midterm, and final) are undertaken in accordance with ADB procedures and guidelines, including through provision of country reports; and develop a structure of work for the undertaking of country level activities under the TA, including a work plan, time lines, and use of experts
- (ii) Oversee, and undertake with the consultants, country level assessments, which will form the basis of mainstreaming adaptation through risk reduction.
 - (a) Based upon the assessments, identify and analyze a range of adaptation options that may be considered in addressing adaptation through risk reduction,
 - (b) Based upon the assessments, and with the PDMC, identify and analyze a range of mainstreaming options that may be considered by the PDMC.
- (iii) Supervise the domestic consultants undertaking the country level activities, in
 - (a) the collection of data, information and studies required for the country assessments; and
 - (b) undertaking an awareness seminar for senior officials on the TA, adaptation through risk reduction, its use, the key elements comprising the process, benefits, and linkages to enhancement of the development projects.
- (iv) Develop a manual on adaptation through risk reduction, which will include details on key elements needed to undertake mainstreaming. The manual together with the information kit can be used in the awareness and training activities under the TA.
- (v) Prepare a development, sector, or project document incorporating adaptation through risk reduction utilizing the results of the assessments.

- (vi) Assess a non-ADB-funded project jointly with the PDMC and development partner by incorporating adaptation through risk reduction. Analyze the results and provide to the development partner and PDMC.
- (vii) Draft a set of guidelines and instructions on use of guidelines for PDMC use on mainstreaming adaptation through risk reduction, taking into account the key sectors considered in the assessment. The guidelines will be based upon the assessment results and analysis.

c. Island Coastal Zone Specialist – 5 person-months

- (i) Undertake an assessment, with the local climate change specialist, of coastal impacts from climate change and climate variability (CCV) as a contribution to the mainstreaming adaptation through risk reduction, specifically
 - (a) an estimation of land loss resulting from extreme events;
 - (b) an estimation of sediment buildup from coral reefs, if applicable;
 - (c) the effects on human habitation and systems;
 - (d) the effects on natural systems; and
 - (e) the effects on water systems, both under and above ground.

The assessment of these effects will be undertaken in the context of a set of analyses, such as frequency analysis (how often things go wrong), consequence analysis (how much harm could be caused by an event or range of events), and risk calculation of frequency or likelihood combined with consequence for different systems and locations.

- (ii) With the climate risk and vulnerability specialist and the economist, undertake an analysis of optimal land use policies to adapt to new climate change related environmental risks.
- (iii) Analyze the results of the coastal impact activities and input into the country assessment and develop a range of adaptation options that could address the coastal impacts.
 - (a) Prepare the results of the analysis as an input to the adaptation through risk management framework and process, including them as a part of the training component at country level.
 - (b) Identify a methodology for undertaking rapid assessments of coastal impacts to CCV. Detail the applicability, relevance, gaps in knowledge, training, and capacity needs required.
 - (c) Contribute the methodology as a part of the adaptation through risk reduction process.

d. Economist– 5 person-months

- (i) Using current simple economic models or scenarios, project the socioeconomic baselines of the selected PDMCs, and contribute these to the country assessment and adaptation through risk reduction framework.

- (a) Specifically, during the country assessments, evaluate adaptation options as they are prioritized to calculate the cost-benefit ratio of the option.
 - (b) Identify the economic constraints that may be identified during the cost-benefit exercise, and recommend possible actions that may minimize or reduce the constraints.
 - (c) Identify the costs of any transfer of adaptation technologies and the economic impact upon the sector if the transfer does not take place.
 - (d) Identify key financial reform processes required that would facilitate or promote adaptation through risk reduction.
- (ii) Develop a methodology whereby a cost can be formulated for the impacts of climate change, primarily through the generation of climate change scenarios, and combine the results with the socioeconomic baseline projections (added adaptation cost or incremental cost of adaptation).
 - (a) Apply the methodology across the adaptation options resulting from the assessments to outline no-regrets costs.
 - (b) Identify the cost difference of a selected project as an adaptation option, against that of a project if no climate change occurred (i.e., a business-as-usual situation).
 - (c) Prepare the results of these activities as a part of the adaptation through risk reduction framework and process, including them as a part of the training component at country level.

2. Domestic Consultant - Adaptation Research Assistant – 15 person-months

- (i) Assist the team leader with duties, and the preparation, compilation, and editing of the TA inception report, midterm report, and final report; specifically:
 - (a) Liaise with the TA consultants on the collection and dissemination of information related to TA implementation.
 - (b) Review and detail previous and ongoing activities related to climate variability, disasters, and hazards; identify gaps; and highlight lessons learned, including the methodologies used with those programs and activities.
 - (c) Prepare the review results as a component of the overall review process undertaken as a part of the first phase, and assist the adaptation mainstreaming specialist in analyzing the results of the review process.
 - (d) Develop and prepare for dissemination in ADB, and in the selected PDMC, an information kit on adaptation through risk reduction and the role of mainstreaming within this framework.
 - (e) Undertake the second awareness and training seminar of core ADB/Pacific Department staff in the use of adaptation through risk reduction framework.

- (ii) Assist the team leader in preparing inputs into the CSP/CSPU process on how best to enhance it with adaptation through risk reduction, including identifying and detailing with ADB members case study examples of (a) types of projects that are vulnerable to CCV-sea level rise; (b) types of projects that could increase country vulnerability and decrease community and system resilience; and (c) types of projects that can be potentially included in a TA with low risk, incorporating adaptation.

3. In-Country Domestic Consultants – two Local Climate Change Specialists – 6 person-months each

- (i) During implementation of TA country level activities, and working closely with the climate risk and vulnerability specialist, organize and implement the required consultations, awareness, and training activities.
- (ii) Specifically:
 - (a) Ensure the information kit and the manual developed under the TA is a part of the awareness and training activities on adaptation through risk reduction, and is user friendly and translated if applicable.
 - (b) Facilitate input and contribution into the implementation of country level activities by the country climate team, relevant officials, nongovernment organizations, the private sector, and the community.
 - (c) Assist the international consultants in undertaking the assessment under the TA. Preference should be given to an area where previous work has been undertaken so as to build upon and strengthen the overall work and activities.
 - (d) Collect and compile the specific data, information, and studies required for input into the TA assessment, including where applicable, traditional knowledge and adaptation practices.
 - (e) With the climate risk and vulnerability specialist and the island coastal zone specialist, analyze the information contained in the assessments to identify the types of adaptation options and the range of mainstreaming options for consideration by officials.
 - (f) Undertake a “train the trainers” course on use of the adaptation through risk reduction framework and process, outlining the key elements, and how each element forms an integral part of the overall framework and process. Use the country assessments and results of the analysis as a part of the course.

PRELIMINARY REPORT OUTLINES

A. INCEPTION REPORT

1. Introduction

2. Project Commencement

- 2.1. Background
- 2.2. Pre-technical assistance (TA) consultations
- 2.3. TA administration

3. Adaptation Process

- 3.1. Overview of the process
- 3.2 Key elements that comprise the adaptation process
- 3.3 Applying the adaptation process within the adaptation through risk reduction (AtRR) approach
- 3.4. Mainstreaming AtRR
- 3.5. Mainstreaming adaptation in the Asian Development Bank (ADB)
- 3.6. Mainstreaming adaptation in Pacific developing member countries (PDMCs)

4. Review of Climate Activities (1990-2002)

- 4.1. Overview of a decade of activity
- 4.2. Experiences and lessons learned
- 4.3. Gaps and an analysis
- 4.4. Opportunities and constraints
- 4.5. Selection and rationale for most appropriate approach

5. Review of Climate Methodologies Related to Risk and Adaptation

- 5.1. Overview of methodologies – Intergovernmental Panel on Climate Change and others
- 5.2. Risk management in the context of disasters and extremes
- 5.3. Vulnerability and adaptation assessments
- 5.4. Gaps and an analysis for linking the short-term risk to long term impact assessment
- 5.5. Selection and rationale of a verifiable methodology

6. Asian Development Bank

- 6.1. Linkages to relevant activities through current mechanisms
- 6.2. Best approach for integrating adaptation into current activities under Pacific Department (PARD) through country strategy and program (CSP)/country strategy and program update (CSPU)/project preparatory technical assistance (PPTA)
- 6.3. Opportunities for wider application
- 6.4. A no-regrets approach

7. Participating Governments (PDMCs)

- 7.1. Political commitment that will enable overall government support for mainstreaming
- 7.2. Current institutional frameworks that will enable mainstreaming

- 7.3. Science as a basis for policy development under climate change and climate variability
- 7.4. Climate policy development as a basis for mainstreaming
- 7.5. TA selection process, criteria, and rationale
- 7.6. Recommendation

8. TA Workplan and Structure of Work

- 8.1. First phase – the review process
- 8.2. Second phase – ADB and PDMC
- 8.3. TA team and roles
- 8.4. Use and rationale for other expertise

9. Consultative Process and Plan

- 9.1. Outline of mechanisms established to ensure participatory approaches
- 9.2. ADB – PARD, Renewable Energy, Energy Efficiency and Climate Change
- 9.3. PDMC – climate country team, other coordination mechanisms
- 9.4. Using the established aid roundtable, and NGO processes

10. Linkages and Synergies with other Initiatives

- 10.1. TA synergy with ongoing related activities
- 10.2. TA synergy with potential related activities

11. Appendixes

- 11.1. Results of review on programs
- 11.2. Results of review on methodologies

B. MIDTERM REPORT

1. Introduction

- 1.1. General
- 1.2. Background
- 1.3. Context
- 1.4. Inception report
- 1.5. Midterm report structure

2. Project Structure

- 2.1. TA work plan implementation
- 2.2. TA consultations
- 2.3. TA financial considerations
- 2.4. TA team

3. Approach and Methodology

Ongoing monitoring of approach and methodology

4. ADB/PARD

- 4.1. The opportunity of mainstreaming adaptation into Operations
- 4.2. Revision of PDMC CSPU

- 4.3. Investment exposure
- 4.4. Expanded PPTA incorporating AtRR approaches
- 4.5. Awareness and training of ADB/PARD staff
- 4.6. Draft guidelines for mainstreaming
- 4.7. Next steps

5. PDMC

- 5.1. Host ministry and institutional coordination
- 5.2. Biophysical and climate situation
- 5.3. Socioeconomic situation
- 5.4. Key sector profiles
- 5.5. Available tools for taking account of environment in development, e.g., environmental impact assessment
- 5.6. Investment exposure within key sectors
- 5.7. Assessments at specific sites
- 5.8. Identification and economic evaluation of adaptation options
- 5.9. Policy development in key sectors based upon sites
- 5.10. Assessing other funded investments for adaptation through risk reduction
- 5.11. Guidelines for assisting in mainstreaming
- 5.12. Awareness and training for officials and other national stakeholders

6. Appendixes

- 6.1. Results of assessments
- 6.2. Results of economic evaluation and development of a methodology for costing climate impacts

C. FINAL REPORT

1. Introduction

2. Background

- 2.1. Description of TA
- 2.2. Rationale for TA
- 2.3. Synergies and related efforts
- 2.4. Lessons learned
- 2.5. Gaps

3. The TA

TA approach and method

4. Results of the TA

- 4.1. ADB
 - 4.1.1. Areas offering most opportunity for mainstreaming adaptation
 - 4.1.2. CSPUs
 - 4.1.3. PPTAs
 - 4.1.4. Guidelines

4.1.5. Investments

4.1.6. Risks

4.2. PDMC

4.2.1. Institutional mechanisms

4.2.2. Assessments

4.2.3. Policy development

4.2.4. Mainstreaming tools

4.2.5. Guidelines

4.2.6. Priority needs

4.2.7. Project profiles

4.2.8. Investments

4.2.9. Risks

5. Appendixes

Compendium of results from inception and midterm reports