USAID
FROM THE AMERICAN PEOPLE

USAID PACIFIC ISLANDS COASTAL COMMUNITY ADAPTATION PROJECT

DELIVERABLE 1.4.C

ENVIRONMENTAL MITIGATION AND MONITORING PLAN (EMMP)

JULY 2013

This document was produced for review by the United States Agency for International Development (USAID). It was prepared by the Coastal Community Adaptation Project (C-CAP) implemented by DAI for USAID/Pacific Islands.

USAID PACIFIC ISLANDS COASTAL COMMUNITY ADAPTATION PROJECT

DELIVERABLE 1.4.C
ENVIRONMENTAL MITIGATION AND MONITORING PLAN (EMMP)

SPONSORING USAID OFFICE: **USAID/Pacific Islands**

CONTRACT NUMBER: **AID-492-C-12-00010**

CONTRACTOR: **DAI**

DATE OF PUBLICATION: **July 2013**

Cover Photo: Closely linked environmental conditions in Coastal Communities – Tubuserea Village, Papua New Guinea

CONTENTS

ACRONYMS AND ABBREVIATIONS

ADS	Automated Directives System
BEO	USAID Bureau Environmental Officer
BoQs	Bill of Quantities
CCA	Climate Change Adaptation
C-CAP	USAID's Pacific Island Coastal Community Adaptation Project
CFR	Code of Federal Regulations
COP	C-CAP Chief of Party
COR	USAID Contract Officer's Representative
DAI	Development Alternatives, Inc.
DRR	Disaster Risk Reduction
EA	Environmental Assessment
EDF	Environmental Documentation Form
EIA	Environment Impact Assessment
EGSSAA	Environmental Guidelines for Small-Scale Activities in Africa, or the USAID Bureau for Africa. See also ENCAP
EMMP	Environmental Mitigation and Monitoring Plan
EMMR	Environmental Mitigation and Monitoring Report
ENCAP	Environmentally Sound Design and Management Capacity for Partners and Programs in Africa (a USAID project)
EPA	U.S. Environmental Protection Agency
EQPB	Environmental Quality Protection Board
FEMMP	Framework Environmental Mitigation and Monitoring Plan
IC	Independent Contractor
IEE	Initial Environmental Examination
M&E	Monitoring and Evaluation
MEO	USAID Mission Environmental Officer
MNRE	Ministry of Natural Resources and Environment
NBSAP	National Biodiversity Strategy Action Plan
NEMS	National Environment Strategy
O&M	Operations and Maintenance
QA/QC	Quality Assurance/ Quality Control
PacLII	Pacific Islands Legal Information Institute
PEA	Programmatic Environmental Assessment
PERSUAP	Pesticide Evaluation Report and Safer Use Action Plan
Reg 216	Code of Federal Regulations, Title 22, part 216 http://www.usaid.gov/our_work/environment/compliance/reg216.pdf
SPREP	South Pacific Regional Environment Programme

STTA	Short-Term Technical Assistance
TOR	Terms of Reference
UNCBD	UN Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNCLOS	UN Convention on the Law of the Sea
UNFCCC	United Nations Framework Convention on Climate Change
USEPA	United States Environmental Protection Agency
USAID	United States Agency for International Development
VEU	Vanuatu Environment Unit

1.0 EXECUTIVE SUMMARY

The purpose of the United States Agency for International Development (USAID) Pacific Islands Coastal Community Adaptation Project (C-CAP) is to help communities to build local adaptation capacity, engage in climate smart decision-making at the community level, and create a feedback mechanism to inform national policy through a bottom-up approach in addressing the short and longer-term impacts of climate change. C-CAP targets resiliency measures that will improve coastal livelihoods, like fishing and tourism, and human health outcomes, such as lower incidence of waterborne disease. Through a participatory community-level process, C-CAP will help local leaders prioritize resiliency measures – from built or natural infrastructure to fisheries management and land use zoning – and will integrate the variables of Climate Change Adaptation (CCA) and Disaster Risk Reduction (DRR) into customary village planning.

This Environmental Mitigation and Monitoring Plan (EMMP) describes how C-CAP will meet or exceed the requirements of the program Initial Environmental Evaluation (IEE) and the conditions established therein, approved by the Bureau Environmental Officer on 3/23/2012, complying with USAID environmental regulations (Regulation 216 and ADS 204). The threshold determinations for C-CAP are the following:

- Activities that are Categorically Excluded are those for which no environmental impacts are expected. The IEE establishes Categorical Exclusions for technical assistance, training, community mobilization and prioritization, risk assessments, gap and opportunity analyses, scaling up climate adaptation policies, practices, infrastructure standards and norms, and land use planning, as well as other capacity building, analysis, studies, academic or research workshops or meetings, and document and information transfers.

- However, the IEE anticipates that if any topic associated with Categorically Excluded activities affects the environment, the activity would include information on how to minimize and/or mitigate environmental impacts, or the activity would be classified as having environmental risk.

- The IEE establishes a Negative Determination with Conditions for activities that have potential for negative impact on the environment but where the inclusion of mitigation measures can prevent significant impacts. Small-scale construction, small-scale water and sanitation, and other infrastructure repair or upgrades typically fall in this category. The IEE requires that such activities undergo screening and review: "All infrastructure that are classified as Medium Risk will first require submittal and approval of an activity description including an evaluation of the environmental implications of the proposed infrastructure or rehabilitation project being developed through an Environmental Documentation Form (EDF)… Activities that will have potential impacts to the environment must be further reviewed by A/COR and MEO (USAID Mission Environmental Officer) through an EDF that will include EMMP (IEE p.8)." This document describes the required screening and review and proposes typical impacts, mitigation measures and indicators for review and approval.

- The IEE does not identify any proposed activities that have the potential for significant effect on the environment (Positive Determination), requiring an Environmental Assessment. No such activities are contemplated for C-CAP at this time. However, the environmental review process allows for the possibility that C-CAP could propose other activities having significant environmental risk, although none have been identified at this time.

In broad outline, the C-CAP environmental management system will first confirm that activities are covered by the IEE, then screen sub-activities according to their level of environmental risk by completing a screening procedure. Those activities with no significant environmental risk or classified

as a "categorical exclusion" will be cleared for implementation, provided none of the topics impact the environment. Those meriting "Negative Determination with Conditions" will undergo a more detailed environmental review report and checklist step, the Environmental Documentation Form (EDF). In these instances the review and EDF are designed to assist in developing a set of mitigation measures in the activity Environmental Mitigation and Monitoring Report (EMMR) that is reviewed and cleared by the COR and MEO before the activity is approved for implementation. Any activities with a recommended Positive Determination or potential for significant adverse effect would be subject to either reformulation or to further environmental assessment using several tools, including a Scoping Statement and then an Environmental Assessment (EA) approved by USAID.

Summary of Requirements

The following figure summarizes the procedure for environmental compliance for the three levels of risk defined in the Pacific Islands C-CAP IEE.

FIGURE 1: BASIC ENVIRONMENTAL COMPLIANCE PROCEDURE

The IEE requires specific project actions including:

- environmental review prior to undertaking certain activities that may have adverse environmental impacts, purpose-specific environmental screening for project activities;
- ensuring capacity to complete the environmental activities and meet USAID standards, writing environmental compliance into all subcontracts and grants;
- an annual cumulative EMMR including information from grantees and partners; and
- adherence to national environmental laws and policies where possible, and periodic field visits to assess environmental performance and identify improvements.

Actions to meet these requirements are included in the text, tables and procedures of this EMMP.

This EMMP will be accomplished in steps summarized below (Table 1).

TABLE 1: SUMMARY C-CAP ACTIONS TO ACHIEVE ENVIRONMENTAL COMPLIANCE

Action Area	Actions
Prepare C-CAP compliance documents	• Draft, submit, review and approve EMMP, including formats for Environmental Reviews including the activity EMMP.
	• Screen priority activities and draft, submit review and approve EDF for individual activities.
	• Annual report to USAID on environmental compliance.
	• Initial environmental review workshop.
Build C-CAP project capacity for environmental compliance	• Name staff responsible for environmental compliance and train staff.
	• Create information system for screening, EDFs and monitoring reports.
	• DAI QA/QC Review of environmental compliance.
	• Environmental review of priority actions. • Train project staff. • Provide additional assistance as required.
Provide STTA / IC/LTTA and quality control	• Screen and review subprojects (screening document, EDFs, activity EMMPs) as required.
Operate C-CAP environmental management system and mitigation database	• Monitor implementation of mitigation measures; assist implementation if required.
	• Maintain reference materials.
	• Train community groups and implementing partners.
Produce training materials on environmentally sound design topics and best practices.	• Prepare training manual on Environmentally Sound Design including safe agrochemical use (including post-harvest and processing).
	• Train partners in environmental procedures and use of technical materials through the Infrastructure Prioritization Index process.

This EMMP covers project and regulatory background, the principal regional environmental issues that affect C-CAP, C-CAP procedures for screening activities and developing mitigation measures, specific mitigation measures for the types of activities proposed, the Framework EMMP, monitoring recommendations, reporting, and implementation. Annexes 1 – 4 to this report provide the forms required for the EMMP from screening to reporting. This table will be amended as new activities are planned and/or if the IEE is modified or amended. The project IEE is included as Annex 5 and useful resources for conducting Environmental Reviews and USAID policy is provided in Annex 6.

All project activities (subcontracts, other program activities) must be screened for environmental risk and comply with the procedures and guidelines expressed in this EMMP.

The initial screening for activities is presented in Annex 1.

Prior to project implementation, subprojects of Risk Category 2 (insignificant, low risk of adverse effect on natural and physical environment) and Risk Category 3 (insignificant impact but moderate risk) require a screening analysis which includes environmental review and assessment checklists which are called Environmental Documentation Forms (EDF) (Annex 2).

The Framework Environmental Mitigation and Monitoring Plan (FEMMP) is included (Annex 3). The FEMMP pulls together typical impacts, mitigation measures, indicators and monitoring/reporting

requirements that will serve as the basis for the Environmentally Sound Design Manual to be used as a reference and planning manual for communities as they go through the participatory infrastructure prioritization process.

Based on the framework mitigation and monitoring measures in the FEMMP, an Environmental Mitigation and Monitoring Plan (EMMP) will be developed for each subproject/activity and is included in the EDF. This plan is developed prior to the start of an activity and becomes the most important part of the Environmental Review.

All site-specific EDFs with EMMPs for the activity or subproject will be sent for COR/MEO approval.

Subprojects of Risk Category 4 (potential for significant adverse effect) require a more detailed environmental review. If the significant level of risk is confirmed, they require an EA specific to the activity and approved by USAID, following the normal Regulation 216 procedures. As noted, projects within this risk category and complexity are not currently contemplated by C-CAP.

As activities are implemented, C-CAP and implementing partners monitor the activity mitigation to confirm both that the plan is accomplished and that it had the desired mitigating effect. Subproject mitigation efforts, as well as their effectiveness and corrective actions, will be tracked in the Environmental Monitoring Tracking Form (Annex 4). Environmental compliance activities and mitigation will be reported to USAID in an annual EMMR.

Budget

Implementation of this plan requires staff and training. The EMMP calls for one half-time local staff member dedicated to environmental compliance, local environmental STTA for specific tasks, and, as needed, international STTA for more complex environmental reviews or mitigation efforts. There is potential that EAs will be required, though highly unlikely, as no Positive Determination activities are planned at this time. Participation of DAI environmental expertise in yearly reviews and reporting is recommended. The benefits and costs of physical mitigation measures are to be included in the activity costs of individual infrastructure subprojects.

Because the required plan to meet the terms of the IEE is complex, C-CAP will rely on assistance and timely review and approval from the USAID environmental staff to meet project deadlines.

2.0 C-CAP OVERVIEW

The USAID/Pacific Islands Mission is in the process of implementing the five-year Coastal Community Adaptation Project (C-CAP) in 12 Pacific Island nations: Papua New Guinea, Solomon Islands, Nauru, Tuvalu, Vanuatu, Kiribati, Fiji, Samoa, Tonga, Republic of Marshall Islands, Federated States of Micronesia, and Palau. The Pacific region's diverse island nations and territories are considered the most vulnerable in the world to climate change. Pacific island economies depend on tourism, fisheries, forestry and agriculture, all of which are highly exposed and sensitive to sea level rise, changing ocean temperatures and acidity, increasing air temperatures, and shifting rainfall and storm patterns as a result of climate change.

The C-CAP program will help build the resiliency of vulnerable coastal communities in the Pacific region to withstand more intense and frequent weather events and ecosystem degradation in the short-term, and sea level rise in the long-term using a bottom-up approach. C-CAP will improve the management of important and vulnerable coastal and marine resources at the community level; strengthen disaster prevention and preparedness efforts that support local economies; and build capacity of communities and institutions to adapt to climate change.

In general, the program is comprised of the following components:

Component 1: Rehabilitating or constructing new, small-scale community infrastructure.

Component 2: Building capacity for community engagement for disaster prevention and preparedness.

Component 3: Integrating climate resilient policies and practices into long-term land use plans and building standards.

Target areas for C-CAP 12 Pacific Island nations are shown in Figure 2.

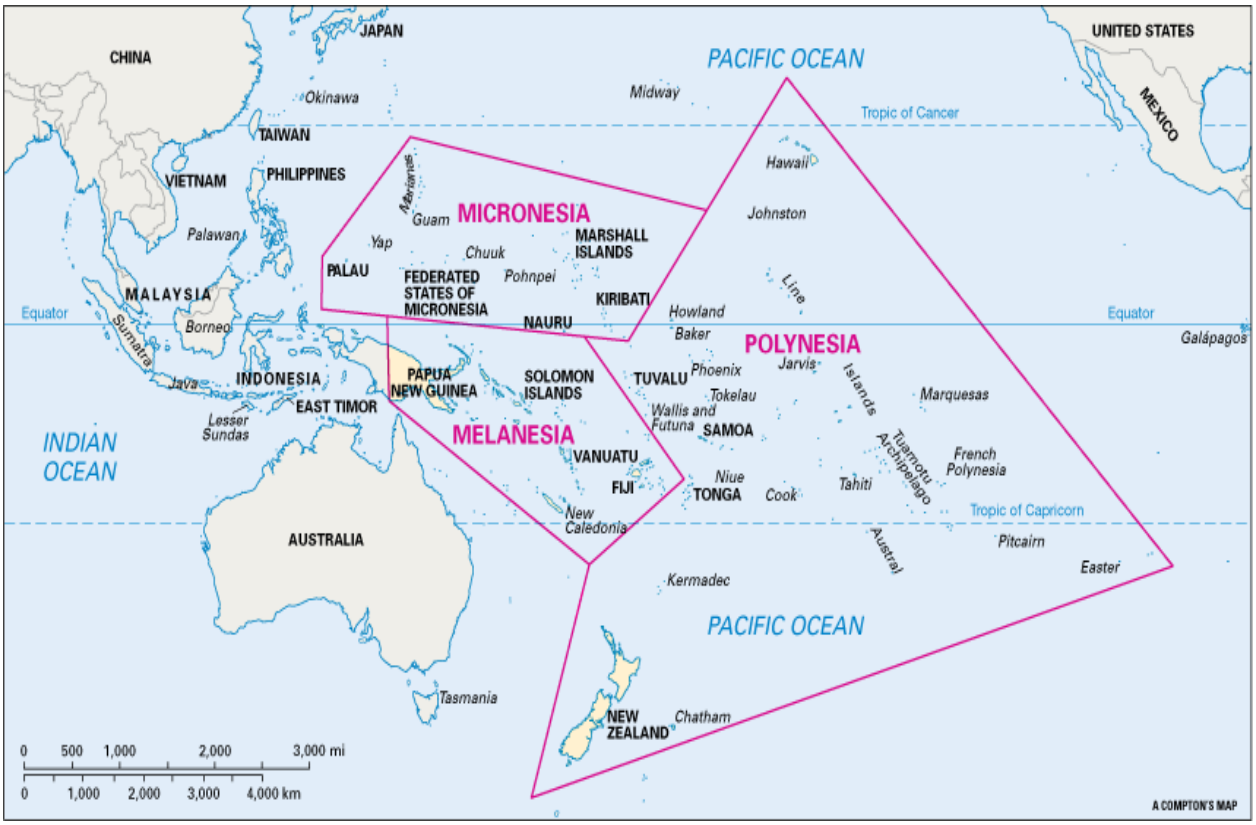

FIGURE 2: PROJECT AREAS

2.1 EMMP GUIDANCE

The documents that guide this EMMP are:

- the C-CAP program contract, approved work plans;
- the IEE approved by the Bureau Environmental Officer on 3/23/2012 (Annex 5);
- Title 22 of the Code of Federal Regulations (22 CFR 216 or "Reg 216"), which defines USAID's procedures to evaluate environmental impact and takes into account environmental sustainability (Reg 216 covers all USAID projects[1]);
- ADS 204 "Environmental Procedures" (revised 2/19/2009, which explains "how to apply Title 22")[2];
- Government laws and regulations of the C-CAP countries: Federated States of Micronesia, Fiji, Kiribati, Nauru, Palau, Papua New Guinea, Republic of Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu; and U.S. Government and international agreements and guidelines when compatible with above sources;
- Any BEO (USAID Bureau Environmental Officer)/ MEO written and/or verbal guidance, when compatible with above sources.

3.0 PURPOSE AND BACKGROUND OF THE EMMP

The purpose of the EMMP is to implement the project IEE and its conditions (Annex 5) and take other actions in favor of compliance with Regulation 216 and USAID environmental guidance.

This EMMP describes the procedures to be implemented by C-CAP to:

- recognize potential negative environmental impacts of program activities;
- avoid, prevent, reduce, mitigate or offset those potential negative environmental impacts;
- positively improve environmental management capacities of partner institutions and beneficiaries;
- plan project activities to meet the above requirements;
- provide guidance for communities in the participatory prioritization process; and
- monitor and report environmental compliance.

Following common USAID practice, "environment" is conceived broadly to include impact on the human population and natural environment.

To achieve its purpose, the EMMP will apply standard mitigation and monitoring principles (Table 2).

[1] http://www.usaid.gov/our_work/environment/compliance/reg216.pdf

[2] http://www.usaid.gov/policy/ads/200/204.pdf

TABLE 2: MITIGATION AND MONITORING PRINCIPLES

Mitigation Measures to Reduce Environmental Impacts	
Recognize potential impact	Review activities Enhanced review of activities with potential negative impact Monitor and evaluate impact during implementation
Prevent and control impact	Identify and use standard best practices to avoid impact Change means or technique Change the location Specify operating practices In worst case, drop activity
Compensate for impact	Offset adverse impacts in one area with improvements elsewhere
Remediate impact	Repair or restore the environment if damage is done
Adaptive management	Learn from experiences to adapt program procedures

4.0 ENVIRONMENTAL CONTEXT IN THE PACIFIC ISLANDS

The C-CAP program will work across 12 different island nations, each with a different set of governing laws, regulations, permitting requirements and specific environmental issues. The specific country context will have an influence on the identification of environmental impacts and the selection of appropriate mitigation measures. The summary discussion below demonstrates the complexity of dealing with environmental issues and the relevant environmental laws and regulations in 12 separate countries.

4.1 NATIONAL ENVIRONMENTAL LAWS AND REGULATIONS

There is wide range in the topics covered and varying degrees of sophistication in the national environmental laws and regulations in the C-CAP Pacific island nations. The various laws and regulations are briefly described below.

FIJI

Fiji is subject to potentially catastrophic climate events such as cyclones, flooding and multiple landslips. Climate change and sea level rise could also have profound consequences for some urban centers, agriculture, and coastal development. The environment is under increasing pressure from a range of natural pressures, and developmental pressures including tourism development, cultivation on steep lands, and poor solid and liquid waste management. Early enactment of the Environmental Management Bill is expected to enhance Fiji's capacity to respond effectively to these identified environmental risks.

- Important environmental laws in Fiji include:
- Birds and Game Protection Act [Cap 170]
- Endangered and Protected Species Act 2002
- Endangered and Protected Species Regulations 2003
- Environment Management Act 2005
- Fisheries Act [Cap 158]
- Fisheries (Protection of Turtles) (Amendments) Regulations 2004
- Forest Decree 1992
- Land Conservation and Improvement Act [Cap 141]
- Land Development Act [Cap 142]
- Litter Decree 1991

- Natural Disaster Management Act 1998
- Rivers and Streams Act [Cap 136]
- Ozone Depleting Substances Act 1998
- Town Planning Act [Cap 139]

KIRIBATI

Global warming has serious implications for Kiribati as rising sea levels pose a real threat to its already small land area. Rising seas could also reduce the availability of fresh water.

Environmental concerns regarding waste management, commercialization of marine species, control of pollution, fecal contamination of fresh water, shortage of fresh water supplies, sewerage and solid waste disposal have led to the establishment of legislation and strategies for sustainable utilization, production, and environmental protection. Important environmental laws in Kiribati include:

- Environment Act 1999
- Fisheries Ordinance [Cap 33]
- Land Planning Ordinance [Cap 48]
- Recreational Reserves Act 1996
- Special Fund (Waste Material Recovery) Act 2004
- Wildlife Conservation Ordinance [Cap 100]

MARSHALL ISLANDS

Amongst the Marshall Islands' more significant environmental problems are water pollution due to lack of adequate sanitation facilities, inadequate supplies of drinking water, and the rise of sea levels due to global warming. Any rise in the sea level is a constant and serious threat to an island nation whose land mass is 2–3 meters (6–10 ft) above sea level.

The Marshall Islands Environmental Protection Agency, established in 1984, is concerned with programs for water quality standards, solid waste disposal, earthworks, and use of pesticides. The environments of the Bikini, Enewetak, Rongelap, and Utirik atolls were contaminated by nuclear testing. Nuclear tests were carried out in the region from 1946 to 1958. The long-term environmental effects on these atolls and their populations remained undetermined. The hawksbill turtle and green turtle are on the endangered species list.

The Environmental Protection Act and the Coast Conservation Act are the two pieces of legislation that establish Marshall Islands Environmental law. There are a number of Marshall Islands government regulations which also govern environmental protection, which included:

- Public Water Supply Regulations
- Marine Water Quality Regulations
- Earthmoving Regulations (expired in 2012)
- Sustainable Development Regulations
- Environmental Impact Assessment Regulations
- Solid Waste Regulations
- Toilet Facilities and Sewage Disposal Regulations
- Ozone Layer Protection Regulations
- Pesticides and Persistent Organic Pollutants Regulations

In addition, the Government approved the National Coastal Management Framework. This Framework is the basis for local coastal management plans, and guides environmental concerns for strategic development, including:

- Sustainable Development

- Discharge into Marine Water
- Toilet and Sewer

Important environmental statutes in the Marshall Islands include:

- Alternative Energy Fund Act 1989
- Coast Conservation Act 1988
- Endangered Species Act 1975
- Littering Act 1982
- Marine Mammal Protection Act 1990
- National Environmental Protection Act 1984
- Planning and Zoning Act
- Public Lands and Resources Act

FEDERATED STATES OF MICRONESIA

Solid waste disposal in urban areas is a continuing problem, and the threat posed to land by toxic pollutants from mining operations has been a concern for Federated States of Micronesia. Micronesia's water supply is also threatened by industrial and agricultural pollutants. Population increases in urban areas, untreated sewage, and contaminants from industrialized countries in the region add to the problem of water pollution.

The rise of sea levels is a threat to Micronesia's forests, agricultural areas, and fresh water supply. Pollution from industrial and agricultural sources also threatens the nation's mangrove areas. The fish population is endangered by waterborne toxins and explosives used in commercial fishing. The country also has a problem with the degeneration of its reefs due to tourism. Threatened species include the chuuk flying-fox, the chuuk monarch, and the Mortlock Islands flying-fox. The Kosrae crake and the Kosrae mountain starling have become extinct.

National laws can be found on smlaw.org./fsm/code/index.htm (e.g., Title 23: Resource Conservation, Title 25: Environmental Protection) as well as national regulations (e.g., Environmental Impact Assessment Regulations, Earthmoving Regulations). In addition each State has its own Constitution, Code and regulations.

Important environmental laws include:

National Laws and Regulations

- Marine Resources Act 2002
- Marine Resources Amendment Act 2001
- Title 23. Resource Conservation
- Chapter 1. Marine Species Preservation (§§ 101-116)
- Chapter 3. Endangered Species Act (§§ 301-317)
- Title 25. Environmental Protection
- Subtitle 1 Trust Territory Environmental Quality Protection Act
- Chapter 1. General Provisions (§§ 101-104)
- Chapter 2. Environmental Protection Board (§§ 201-208)
- Chapter 3. Enforcement (§§ 301-309)
- Chapter 4. District Advisory Boards (§§ 401-413) Subtitle 2 Federated State of Micronesia Environmental Protection Act
- Chapter 5. General Provisions (§§ 501-503)
- Chapter 6. FSM Environmental Protection Board (§§ 606-610)

- Chapter 7. Enforcement (§§ 701-708)

Environmental Impact Assessment Regulations

- Part I. GENERAL PROVISIONS
- Part II. RESPONSIBILITIES
- Part III. EIA PROCESS
- Part IV. INITIAL ASSESSMENT
- Part V. COMPRHENSIVE ENVIRONMENTAL IMPACT ASSESSMENT
- Part VI. CONTENTS OF ENIVIRONMENTAL IMPACT ASSESSMENT STATEMENT
- Part VII. APPEAL FROM AGENCY ACTION

Earthmoving Regulations

- Part I. GENERAL PROVISON
- Part II. EROSION AND SEDIMENTATION CONTROL
- Part III. PERMITS
- Part IV. RIGHT OF ENTRY
- Part V. ENFORCEMENT
- Part VI. SEVERABILITY
- Part VII. REPEALERS

Chuuk State

- Title 22. ENVIRONMENTAL PROTECTION AND PRESERVATION
- Chapter 1. Chuuk State Environmental Protection Act
- Chapter 3. Littering
- Chapter 4. Fire Control

Kosrae State

- Title 11. LAND AND ENVIRONMENT
- Chapter 11. Marine Life
- Chapter 12. Rivers and Streams
- Chapter 13. Protection of Environment
- Chapter 14. Antiquities
- Chapter 15. Pig Control
- Chapter 16. Wildlife

Pohnpei State [pending]

Yap State

- Title 18. Conservation and Resources
- Division 3. CONSERVATION
- Chapter 10. Wildlife Conservation
- Chapter 11. Fruitbats
- Division 4. ENVIRONMENTAL PROTECTION
- Chapter 15. Environmental Quality Protection

PALAU

The environmental vulnerability of Palau is high due to diverse, but limited natural resources and fragile ecosystems that must withstand the pressures of a rapidly growing population, an increasing tourism industry and the expected rapid and large-scale development of Palau's largest island, Babeldaob. Urbanization, suburbanization, and poor management of natural resources has led to increased pressures on public infrastructure, Palau's fragile environment and water supply, and the continuing depletion of Palau's natural resources. Lack of capacity, funding and commitment continue to be constraints and agency coordination needs to be improved. The effects of urbanization are being felt in Koror: increased numbers of vehicles result in morning and afternoon traffic jams, sewage treatment and waste disposal facilities are becoming overburdened, and mangrove areas have been cut and filled to create new coastal land for building.

To help protect Palau's marine resources, the Government has placed restrictions on many species of marine life and also ratified several instruments, including the Convention for the Prohibition of Fishing with Long Driftnets in the Pacific (Wellington Convention) to prohibit fishing with long driftnets in the South Pacific. Palau is also a Member Country to the South Pacific Regional Environment Programme (SPREP). One major focal area for Palau is the development and management of protected areas and a protected areas network. Currently, there are 23 protected areas recognized in Palau.

Palau has ratified a number of regional and international agreements which include the United Nations Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol, the UN Convention on the Law of the Sea (UNCLOS), the UN Convention on Biological Diversity (UNCBD), and acceded to the Cartagena Protocol on Biosafety, the United Nations Convention to Combat Desertification (UNCCD), Stockholm Convention on Persistent Organic Pollutants and the Ramsar Convention on Wetlands

Some relevant information:
Title 24 of the Code addresses Environmental Protection and is broken into the following Divisions:

Division I Environmental Quality

- Chapter I Environmental Quality Protection Act
- Chapter 2 Trust Territory Environmental Quality Protection Act

Division II Wildlife Protection

- Chapter 10 Endangered Species Act
- Chapter 12 Protected Sea Life
- Chapter 13 Illegal Methods of Capture
- Chapter 14 Protected Land Life

Division III Preserves and Protected Areas

- Chapter 30 Ngerukewid Island Wildlife Preserve
- Chapter 31 Ngerumekaol Spawning Area
- Chapter 32 Natural Heritage Reserve System

Environmental Quality Protection Board (EQPB) Regulations

The purpose of Palau's Environmental Quality Protection Act is to ensure protection of the environment while promoting sustainable economic development. The Act created the EQPB, a semi-autonomous agency of the Republic, responsible for the protection and conservation of the environment. EQPB oversees regulations regarding: (1) Earthmoving, (2) Marine and Freshwater Quality (3) Pesticides (4) Environmental Impact Statements, (5) Air Pollution Control.

PAPUA NEW GUINEA

Papua New Guinea has historically been subjected to multiple landslips, king tides, volcanic eruptions, flooding and droughts. Climate change and sea level rise could have also affected some smaller atoll islands as such Katrats Island in Bougainville, where two relocation schemes have started. The environment is under increasing pressure from a range of natural pressures and developmental pressures that include liquefied natural gas (LNG) development, mining, and proposed deep sea mining. The country's Environmental Act is expected to enhance Papua New Guinea's capacity to respond effectively to these identified environmental risks.

The integrated Environment Act 2000 is based on three levels of regulation, dependent on the magnitude and significance of the activity.

- **Level l** activities are those that require a minimum level of environmental protection. Regulation of such activities will be based on standards, codes and regulations that set benchmarks for environmentally acceptable activities under a self-regulatory framework.
- **Level 2** activities are those that require a framework of environmental approvals allowing for water discharge permits, or licensing for importation, sale and use of environmental contaminants and for site-specific environmental conditions. Level two activities will be regulated by means of conditions in environmental permits, environmental improvement plans and environmental management programs.
- **Level 3** activities cover those with the potential of major environmental impact and are projects of national significance or of large scale. Such activities will be subject to a process of detailed appraisal of environmental implications and public consultation through the Environment Impact Assessment (EIA) process. Recognizing that capacity and resources are major constraints to monitoring and enforcement roles, the Department of Environment and Conservation is now looking at self-regulation and using economic instruments to encourage compliance. In this regard, it is moving toward pro-active prevention approaches by encouraging companies to adopt "environmental best practice" management systems that comply with "environmental guidelines" and Environmental Codes of Practice issued by the Department.

A number of these guidelines and Environmental Codes of Practice have been prepared to date, including:

- Sanitary Landfill Sites Code of Practice (2002).
- Motor Vehicle and Machinery Workshops, Hydrocarbon Fuel Storage, Re-sale and Usage Sites.
- Code of Practice (1998).
- Palm Oil Processing Industry Code of Practice (1997).
- PNG EIA Guidelines for Roads and Bridges (1996).
- PNG Logging Code of Practice (1996).
- Specific Guidelines for Commercial Forestry Harvest Operations (1993).

Important environmental laws potentially affecting C-CAP activities include:

- Conservation Areas Act 1978
- Crocodile Trade (Protection) Act 1974
- Crocodile Trade (Protection) Regulation 1980

- Dumping of Wastes at Sea Act 1979
- Environmental Contaminants Act 1978
- Environmental Contaminants (Pesticides) Regulation 1988
- Environmental Planning Act 1978
- Environmental Planning Regulations1992
- Environment Act 2000
- Fauna (Protection and Control) Act 1966
- Fauna (Protection and Control) Regulation 1968
- Fauna (Protection and Control) Bagiai Wildlife Management Area Rules 1977
- Fisheries Management Act 1998
- Fisheries Management Regulation 2000
- Forestry Act 1991
- Forestry Regulation 1998
- International Trade (Fauna and Flora) (Fauna) Regulation 1982
- International Trade (Fauna and Flora) Act 1979
- Land Act 1996
- Mining Act 1992
- National Parks Act 1982
- National Parks Regulation 1984
- National Water Supply and Sewerage Act 1986
- Oil and Gas Act 1998
- Physical Planning Act 1989
- Physical Planning Regulation 1990
- Prevention of Pollution of the Sea Act 1979
- Prevention of Pollution of the Sea Regulation 1980
- Public Health Act 1973
- Water Resources Act 1982
- Water Resources Regulation 1982

SAMOA

Industrial pollutants, solid waste disposal, and contaminants from industries threaten the marine species and Samoa's mangroves. The rise of sea levels is a threat to the forests, agricultural areas, and declining coastline. The population increases in urban areas, untreated sewage, and contaminants from industrialized countries in the region add to the problems and challenges of water pollution, fresh water supply availability, and fish population endangerment from waterborne toxins and explosives used in commercial fishing.

The mandate for the protection and management of the environment resulted in institutional restructuring from the former Department of Lands Surveys and Environment to the new Ministry of Natural Resources and Environment (MNRE), incorporating: lands, natural resources, environment, planning, disaster management and supporting technical services. Processes for the management of natural resources and environment were also developed which saw the draft procedures for EIAs implemented, and its enabling legislation put in progress. Legislation and cases can be found on the Pacific Islands Legal Information Institute (PacLII) site. Important environmental laws in Samoa include:

- Lands, Surveys and Environment Act 1989
- National Parks and Reserves Act 1974

- Noxious Weeds Ordinance 1961
- Planning and Urban Management Act 2004
- Plants Act 1984
- Samoa Water Authority Act 2003
- Stevenson Memorial Reserve and Mount Vaea Scenic Reserve Ordinance 1958
- Water Act 1965

SOLOMON ISLANDS

The adverse impacts of climate change in Solomon Islands will be felt in critical human systems affecting agriculture and food security, water supply and sanitation, human settlements and human health. Water Resources, waste management, fisheries, marine resources, infrastructure development agriculture and food security are a major concern for many communities and villages. Evidence from changes in temperature and rainfall and the occurrence of tropical cyclones in Solomon Islands will have long-term effects on food production systems. These are likely to be exacerbated by the climate change and sea level rise. Some of the impacts of concern are: increased intensity and frequency of tropical cyclones (e.g. Cyclone Namu destroyed rice industry in 1986); occurrence of pests and diseases; storm surges and flooding; sea level rise and coastal erosion and inundation; increased temperatures; drought and ENSO-related changes to temperature and rainfall.

Important environmental laws for the Solomon Islands include:

- Environment Act 1998
- Environmental Health Act [Cap 99]
- Fisheries Act 1998
- Forest Resources and Timber Utilization Act [Cap 40]
- Mines and Minerals Act [Cap 42]
- National Parks Act [Cap 149]
- River Waters Act [Cap 135]
- Town and Country Planning Act [Cap 154]
- Wild Birds Protection Act [Cap 45]
- Wildlife Protection And Management Act 1998

TONGA

The limited natural resources, fragile ecosystems, and rapid growing population in Tonga are factors that contribute to the country's environmental vulnerability. Both urbanization and poor management of natural resources has led to increased strains on the environment, public infrastructures, and Tonga's fresh water supply. Sewage treatment and waste disposal facilities are becoming overburdened, and mangrove areas have been cut and filled to create new coastal land for building infrastructure.

Tonga uses a broad definition of environmental law, to include law concerned with the physical environment and natural resources and those laws which facilitate the sustainable development of natural resources. The public health laws which address nuisances and direct threats to health are considered to be no longer adequate to protect the environment. A distinct body of law recognized as "environmental" is emerging to protect not only human health but the very systems which sustain life and to address the needs of future generations.

Legislation can be found on http://legislation.to/cms/home.html or the PacLII site for both legislation and cases. Important environmental laws in Tonga include:

- Birds and Fish Preservation Act
- Environmental Impact Assessment Act 2003
- Fisheries Regulation Act
- Forests Act
- Garbage Act
- Minerals Act
- Noxious Weeds Act
- Parks and Reserves Act
- Pesticides Act 2002
- Petroleum Mining Act

TUVALU

Tuvalu—a country with an already small land area-- is facing very real threats from the impacts of global warming, including rising sea levels which, amongst other concerns, are reducing the availability of fresh water. Human-related environmental impacts in Tuvulu are cause for concern, including those relating to waste management, commercialization of marine species, control of pollution, fecal contamination of fresh water, shortage of fresh water supplies, sewerage and solid waste disposal. Climate change and the effects of global warming is a serious concern for Tuvalu. The Government has been vocal in the international arena on the issue of global warming. There are concerns and issues relating to waste management, for example within the nation's growing Capital, where the improper dumping of waste has implications for human and ecosystem health. The other main challenge is the effect of sea level rise on atolls, agricultural crops, coastal erosion and flooding.

The Government of Tuvalu has made some progress to mitigate the effect of dumping waste. In 1997 the Government introduced its National Environment Strategy (NEMS). As a result the National Environment Protection and EIA guidelines have been produced. More recently in 2009, the Government introduced a separate waste legislation as a separate part of a comprehensive Environment Management Act. The Act ensures that the public disposes of waste appropriately in designated facilities and areas. In addition, the Government in 2009 also introduced its National Biodiversity Strategy Action Plan (NBSAP) to combat the loss of both terrestrial and marine life.

Legislation and cases can be found on the PacLII site. Important environmental laws in Tuvalu include:

- Conservation Areas Act 1999
- Foreshore and Land Reclamation Ordinance [Cap 26]
- Marine Pollution Act 1991
- Pesticides Act 1990
- Plants Ordinance [Cap 39]
- Wildlife Conservation Ordinance [Cap 47]
- Wreck and Salvage Amendment Act 1990
- (At independence all Ordinances were redesignated Acts)

VANUATU

Declining coastlines, water resources, waste management, fisheries, marine resources, infrastructure development, agriculture and food security are major concerns to Vanuatu. Evidence from changes in temperature and rainfall and the occurrence of tropical cyclones in Vanuatu will have long-term effects on food production systems.

Climate change and sea level rise has exacerbated concerns for agricultural production and food security. Predicted climate change impacts of key concern include increased intensity and frequency of tropical cyclones, and occurrence of pests and diseases; storm surges and flooding; sea level rise and coastal erosion and inundation; increased temperatures; drought and changes to temperature and rainfall.

The Vanuatu Environment Unit (VEU) of the Ministry of Lands, Survey, Environment, Energy, Minerals and Water Resources is the major body dealing with environmental matters.

The 1980 Constitution of Vanuatu refers to natural resources or environment in two places. Firstly, it imposes on every ni-Vanuatu "to protect the Republic of Vanuatu and to safeguard the national wealth, resources and environment in the interests of the present generation and of future generations". Secondly, it sets out the broad outlines of the land tenure systems of the country: ni-Vanuatu indigenous custom owners collectively own all land in the country in perpetuity. Environmental management must therefore be a prime concern of every indigenous ni-Vanuatu.

Article 7(d) of the Constitution of the Republic of Vanuatu provides: everyone with responsibility to protect the Republic of Vanuatu and to safeguard the national wealth, resources and environment in the interests of the present generation and of future generations; government policy on environment and conservation is to provide an affordable framework of environmental protection and compliance within Vanuatu. This policy has been materialized through the enactment of the Environmental Management and Conservation Act No 12 of 2002 (EMC) which represents the only legislation governing environmental protection of all natural resources in Vanuatu. The law applies throughout Vanuatu and includes its lands, air and waters. Under this Act it is now mandatory for any development proposal or application to be the subject of a Preliminary Environment Assessment (PEA) to be carried out by the Ministry, Government Agency, Provincial Government or Municipal Council to which it is submitted. Subsequently, and on the advice of the Director of Environment, an EIA will have to be carried out before any local or national authority gives consent to developers and project proponents.

Important environmental laws in Vanuatu include:

- Derelict Vessels (Disposal) Act [Cap 9]
- Environmental Management and Conservation Act 2002
- Forestry Act [Cap 147]
- National Parks Act 1993
- Physical Planning Act [Cap 193]
- Water Resources Management Act 2002
- Wild Bird (Protection) Act [Cap 30]
- Conventions are given the force of law in their entirety at the national level by way of Act of Parliament, e.g., Convention on Biological Diversity (Ratification) Act 1992.

4.2 NATIONAL ENVIRONMENTAL ISSUES

There is substantial agreement amongst several major sources about the principal environmental issues affecting all Pacific Island nations as well as some specific issues relevant to specific countries. These sources are generally consistent and support the summary in Table 3.

TABLE 3: SUMMARY OF MAJOR NATIONAL ENVIRONMENTAL ISSUES IN THE C-CAP ISLAND NATIONS

Regional Environmental Issues Common to All C-CAP Island Nations
Domestic Waste Affecting almost all island countries, a widespread environmental problem is the safe disposal of liquid domestic wastes, particularly human waste and urban sewage. Few countries have adequate waste collection and treatment facilities even in the most developed urban areas, and those that exist are costly and seldom properly maintained. In spite of considerable efforts at rural sanitation, facilities in many rural areas are still rudimentary or entirely lacking. The result is serious water pollution both of fresh water supplies (rivers, groundwater and even rainwater catchments) and coastal waters around beaches, reefs and lagoons that are important for tourism, recreation and fishing.
Fisheries and Coastal Management. The damage or destruction of productive coastal resources and fisheries is a nearly universal problem. Coral reefs are destroyed by construction or dredging, pollution, siltation and dynamiting or poisoning for fish. Mangroves are killed off by dredging or filling, or by changing essential patterns of water circulation and salinity. Sea grass beds are dredged or silted over. Modern boats and fishing techniques combined with increased fishing pressure have driven some coastal fisheries resources (such as giant clams, dugongs or manatees, and sea turtles) to extinction in local areas, and left others seriously depleted. Ciguatera fish poisoning has increased with damaging activities in coral reef areas, further reducing useable fish resources. The result has been a steady reduction in the productive potential of coastal fisheries, one of the most important subsistence sources of protein, with a corresponding increase in imports of canned fish and other substitutes. The establishment of 200 mile exclusive economic zones has brought most of the ocean area of small island developing states under national jurisdictions. The principal concern in these zones at present is the management of the fisheries for highly migratory species, principally tuna, which can only be done on a regional basis.
Land Use and Land Tenure Traditional systems of land and resource tenure have prevented the application of western approaches to land management in many island countries. Land is a limited and precious commodity on an island. An islander's attachment to his or her land may include mystical and spiritual dimensions rooted in island cultures. The systems of collective tenure were often effective before European contact in maintaining the fair allocation and wise management of scarce resources, but authority and control within traditional land tenure systems are rapidly breaking down. The current vacuum allows anarchic development, resource abuse and destruction without the possibility of imposing modern systems of zoning or control in the common interest. While some land is abused, other areas are neglected. Building on customary systems of management may be the most acceptable and effective approach where it is still possible.

Soil Loss

The soil resources are inevitably limited in the island situation. Island countries are subject to the same problems of soil erosion and loss of fertility as most other parts of the world, but the problem is more acute because the resource is often so limited. Many island soils are poor to begin with, and irregular island topography, geological instability, heavy rainfall and larger areas of cleared land increase susceptibility to erosion. Traditional agriculture generally involves lengthy fallows or the addition of humus, but these techniques are being abandoned with modernization and increasing pressure on the land. On Niue, for example, where soil fertility is particularly sensitive to poor agricultural practices, a comparison of two land surveys suggested that degraded lands increased from about 20% to 45% of the total island surface in two decades.

Water Resources

While heavy rains are characteristic of many tropical islands, they can be irregular from season to season and from year to year. Since most islands have little water storage capacity because of their porous rocks and many small watersheds, dry periods can result in serious water shortages which impact development, and can create public health problems. Destruction of forest cover causes formerly perennial streams to stop flowing in the dry season. The shallow freshwater lens of atolls and coastal groundwater supplies of high islands can be irreversibly contaminated by saltwater when too much water is extracted from wells. Rainwater catchments are dependent on regular precipitation. On some islands, water is the limiting factor in development.

Solid Waste Disposal

The smaller the island, the more difficult are its problems with solid waste disposal. The steady increase in imports from overseas has brought with it an accumulation of old car bodies and broken down heavy equipment, appliances, bottles, cans and plastic. Disposal sites are often in coastal swamps, or take land from other important uses. Collection and disposal of wastes are expensive on a small scale, so that wastes are either not collected, or the disposal sites are improperly managed, with resulting health and pollution problems.

Industrial Chemicals

There is widespread concern about the potential dangers of the toxic chemicals being imported into islands in increasing amounts. Most governments lack adequate legislation controlling toxic chemicals. Pesticides or herbicides may be imported in bulk and then repackaged without adequate labeling, resulting in accidental poisonings. Products considered too dangerous elsewhere are still in widespread use (and misuse) with no public awareness of the risks involved. Pesticides have been widely used in campaigns to control mosquitos and other insect pests with no monitoring of possible environmental effects. On one island, a warehouse containing barrels of Lindane was swept into the lagoon during a hurricane, killing a large area of reef; on others, drums of arsenic were spilled into the harbor, and toxic pesticides like Dieldrin have been used for fishing. Accidents with toxic chemicals are that much more serious within the limited environment of small islands but few island doctors have experience in identifying poisoning by toxic chemicals, so most incidents probably go unreported. Monitoring for chemical residues in foods and the environment has hardly begun.

Endangered Species

In the Pacific Islands isolation has permitted the evolution of unique flora and fauna with large numbers of endemic species and the small size of these populations increases their vulnerability. The demands of increasing human populations on limited land resources make it difficult protect natural areas, even where the land tenure situation would allow such action. Habitat destruction, competition, and predation by introduced species further increase the pressure on native species. The situation on many islands is becoming critical as the area of undisturbed natural habitat diminishes. The result is a relatively large number of endangered (and extinct) species in countries where the scientific and financial resources available to deal with the problem are very limited.

Sand and Gravel

Many islands have difficulties finding supplies of sand and gravel for construction purposes without creating serious environmental problems. Removal of sand from beaches leads to coastal erosion and the loss of beaches which are an important tourism and recreation resource Dredging of coral and sand from coastal waters damages productive fisheries resources and marine habitats. Mining on land may affect the area available for agriculture, and leaves pits and quarries behind.

Human Habitat

In areas where cyclonic storms, hurricanes or typhoons are common, many houses are unable to resist hurricane force winds, or are in areas subject to flooding. The pressure of migration to urban areas has also resulted in overcrowding and makeshift construction with consequent health problems. Some cities now have at least partial sewage treatment, but the problems of urban pollution in general are far from solved.

Coastal Erosion

Islands are in a dynamic relationship with the sea, with material constantly being deposited on or carried away from shorelines. Coastal erosion due to building of new land is a serious local concern, particularly where it affects roads, buildings, or scarce agricultural land. The expense of protective works to control erosion of shorelines is a continuing drain on those countries (particularly atolls) suffering from this problem.

Radioactivity

Weapons testing with nuclear devices have only recently ceased in certain areas. A few islands still have residual levels of radioactivity from local fallout from these tests and some individuals have been impacted. Recent reports of past dumping of nuclear wastes in the Pacific have fuelled further fears of regional contamination. The immediate danger in the region from present nuclear activities is minimal, but the moral and political issues remain, perhaps more importantly than the current environmental issues.

Mining

Mining is the most significant economic activity for a number of island countries, and it is inevitably accompanied by serious environmental problems. These include the disposal of mine wastes, tailings and processing wastes, erosion problems and the pollution of rivers in mined areas, loss of natural habitat or of land with agricultural potential, and the abandonment of unusable wastelands once the mining has ended. While new mines today are generally subject to strict environmental controls, older mines and areas abandoned after earlier mining continue to present serious environmental problems. Some phosphate islands were mined to the point that their inhabitants had to be evacuated as the island could no longer support a human population.

Other Industrial Pollution

Industry is not widespread in the region, concentrating mostly on the processing of food or minerals for export. However, it is a cause of pollution and other problems in localities where it occurs. Wastes from fish and fruit processing plants, effluent from textile dyeing, and dangerous air pollution from smelting operations are examples of localized industrial pollution problems in island countries. While some general air pollution (mostly from vehicles) is present in the larger urban areas of the C-CAP island nations, it is typically of local significance and usually dissipates quickly.

Specific Issues of Concern	COUNTRIES											
	Federated States of	Fiji	Kiribati	Nauru	Palau	Papua New Guinea	Republic of Marshall Islands	Samoa	Solomon Islands	Tonga	Tuvalu	Vanuatu
Climate change	X	X	X	X	X	X	X	X	X	X	X	X
Conversion and degradation of habitat and ecosystems	X	X	X	X	X	X	X	X	X	X	X	X
Over-exploitation and unsustainable harvesting methods and practices	X		X		X			X	X	X	X	
Waste management	X	X		X	X			X			X	X
Invasive organisms and pests	X							X			X	X
Natural and environmental disasters	X	X	X	X	X	X	X	X	X	X	X	X
Coastal and marine resources	X				X	X	X	X	X	X	X	X
Water resources		X	X			X		X		X		
Energy resources		X		X								
Tourism resources		X										
Biodiversity resources		X				X						
Land resources	X	X	X	X	X	X	X	X	X	X	X	X

Coastal zone management for adaptation	X	X	X				X	X	X	X	X	X
Strengthening climate change information and monitoring	X	X	X	X	X	X	X	X	X	X	X	X
Agricultural food crops / food security	X	X	X	X	X	X	X	X	X	X	X	
Fisheries, coral monitoring, restoration and stock enhancement	X	X	X	X	X	X	X	X	X	X	X	X
Access to sustainable safe drinking water and sanitation				X	X	X	X	X	X	X	X	X
Decline in water quality in river and coastal waters	X	X	X	X	X	X	X	X	X	X	X	X
Degradation of topsoil (inland)				X	X	X	X	X	X	X	X	X
Land use		X										
Congested housing				X	X	X	X	X	X	X	X	
Sewage treatment					X							
Over-exploitation, unsustainable methods and practice in fisheries			X		X			X				
Effects of urbanization			X	X	X		X	X	X	X	X	
Deforestation						X		X				
Increase land degradation	X		X	X		X	X	X	X	X	X	X
Population growth				X	X		X	X	X	X	X	X
Soil erosion	X	X	X	X	X	X	X	X	X	X	X	X
Inundation			X	X	X	X	X	X	X			
Cyclones and strong winds	X		X								X	
Rising sea level / sea surface temperature	X	X	X	X	X	X	X	X	X	X	X	X

5.0 C-CAP PROCEDURES FOR SCREENING ACTIVITIES AND DEVELOPING MITIGATION MEASURES

5.1 SCREENING SUBPROJECTS AND ACTIVITIES

C-CAP will use the Activity Screening Checklist for Initial Screening (Annex 1) that incorporates criteria from the IEE to classify project activities by risk and threshold determination levels. The levels of risk and the required Reg 216 actions are as follows:

1. Categorical Exclusion (Risk Category 1 – Very Low Risk). Activities that do not have an effect on the natural or physical environment. No action required.

2. Negative Determination (Risk Category 2 - Low Risk). Activities with no anticipated significant adverse effects with normal good practices. No further action required.

3. Negative Determination with Conditions (Risk Category 3 - Medium Risk). Activities requiring EDF to confirm or disconfirm adverse environmental effects. These activities have probable negative determination with conditions but possible risk. Further Regulation 216 actions depend on screening results as follows:

a. If significant adverse impacts are NOT determined, develop EMMP for the activity and proceed by getting the EDF with EMMP table cleared by the COR and MEO.

b. If potential significant adverse impact is confirmed, do terms of reference for Scoping Statement and then an EA for review by the MEO and approval by the BEO prior to start of activities.

c. C-CAP will not consider activities using pesticides in any of its project activities.

4. Positive Determination (Risk Category 4 - High Risk): for activities normally having a significant effect on the environment. Activities that may have a significant effect on the environment require an environmental due diligence review to confirm or not confirm adverse environmental effects, with possible Positive Determination. As identified in the project IEE, C-CAP activities are anticipated to be Low and Medium Risk activities only.

a. If significant adverse effect is NOT determined through the process detailed in the EDF, develop an EMMP, request that Positive Determination be reversed and upon approval from the BEO, proceed with the activity.

b. If potential significant adverse effect is confirmed, prepare terms of reference for the Scoping Statement for approval by the BEO and complete the EA for approval by the BEO.

c. C-CAP will not consider activities using pesticides in any of its project activities.

The EDF (Annex 2) is the next step for Medium Risk subprojects. These documents are based on models used on similar USAID projects. They provide the information required to review the classification of the subproject activities. Based on the information in the EDF, a Medium Risk project could be reclassified as High Risk. Alternatively, and with written approval of the BEO, a High Risk subproject might be downgraded to Medium Risk activity. Completing the EDF requires knowledge of the local area and subproject details.

For Medium Risk projects, the EMMP for an activity is completed based on mitigation measures in the FEMMP, best practices, and activity or subproject details. The EDF and the activity-specific EMMP are submitted to the MEO for clearance prior to implementation.

If High Risk is confirmed, refer to the requirements for EA for High Risk activities, set out in Regulation 216. The scope and cost of the EA will correspond to the gravity of the risk and the complexity of the situation. The project will follow USAID practice to include human or social factors in risk assessment. Part of the EA includes a presentation of the EMMP for an activity or subproject, which will be reviewed and approved by USAID along with the EA when done for a High Risk project. Alternatively, the scope of the activity may be revised in order to reduce environmental risk to Medium Risk.

The Framework EMMP (Annex 3) provides environmental mitigation and monitoring actions for types of activities anticipated in the C-CAP. These are primarily Component 1 activities that include small-scale infrastructure construction, repair, upgrades and rehabilitation.

This EMMP provides due diligence documents for the classes of expected activities that would require environmental due diligence.

5.2 SUMMARY OF ENVIRONMENTAL SCREENING AND PLANNING

The steps presented so far take potential activities from screening to planning. Table 4 describes the C-CAP environmental screening and planning procedure.

TABLE 4: STEP-BY-STEP C-CAP ENVIRONMENTAL SCREENING AND PLANNING PROCEDURE

Step	Scope	Primary Responsibility	Working Documents	Purpose
Determine activity risk category by IEE criteria (low, medium and high risk).	All subprojects.	Infrastructure Specialist	Activity Screening Checklist For Initial Screening (see Annex 1) List of screened subprojects	Classifies proposed subprojects according to the IEE, and Reg 216 categories.
EDF with EMMP table.	Not required for Low Risk subprojects.	Infrastructure Specialist	EDF(see Annex 2)	Gathers more detailed data on impact to determine risks and check classification of subproject. Includes mitigation measures from FEMMP and best practices.
Incorporate selection criteria and mitigation measures from EMMP table into activity implementation.	All activities covered by FEMMP.	Technical staff, procurement staff	Activity documents, Bill of Quantities (BoQs), procurement documents, monitoring reports, etc.	Applies approved mitigation measures to activities; may be incorporated with other good practices.
Training plan for communities, beneficiaries and/or project staff.	All mitigation measures suggested by the project must be clearly communicated to communities as it is critical to successful activity implementation.	Infrastructure Specialist	Training and Communications Plan	Identifies positive opportunities to train beneficiaries in environmental matters.

Step	Scope	Primary Responsibility	Working Documents	Purpose
Terms of reference for Scoping Statement and EA.	High Risk Activities, if any.	DAI Environmental Compliance Advisor and team of experts	Terms of reference for Scoping Statement and EA	Propose review of Positive Determination subprojects. Assessment of risk, alternatives, mitigation, and recommendations in accordance with Reg 216.

The following narrative describes the procedure for environmental review, approval and reporting.

The Infrastructure Specialist will complete the Screening Checklist for Initial Activity Screening (Annex 1). Proposed Low Risk subprojects proceed without further environmental review to implementation; the Infrastructure Specialist may choose to recommend (but not require) positive environmental actions as part of the proposed activity.

For activities classified as Medium Risk, the Infrastructure Specialist completes the EDF including the EMMP table (Annex 2). The activity-specific EMMP table will draw on the FEMMP provided in this plan together with information gathered from site visits, consultations and other reference materials. The COP reviews, approves and submits the EDF to the COR and MEO for USAID revision and clearance. Activities proceed to implementation with the approved mitigation measures as part of the proposed activity.

For all activities, the subcontract agreement and/or memorandum of understanding should include the following provisions:

- The implementing partner and/or community agree :
    - to implement all required mitigation measures;
    - to report periodically on implementation of mitigation measures, and to allow and support inspections of mitigation measures, including field visits and the preparation of required documentation (financial or technical);
    - to take and provide photos of field activities at inception, during and after implementation; and
    - that failure to implement mitigation measures is sufficient cause to terminate project support for the activity.
- The activity budget includes sufficient funding to implement all required mitigation measures.

For High Risk activities, if any, the DAI Environmental Compliance Advisor will support the C-CAP project team in developing the Scoping Statement terms of reference for the EA. Once approved by USAID, an Environmental Assessment Team will be identified and will conduct the EA. Activities may proceed with conditions once approved by USAID.

6.0 MONITORING

6.1 RECOMMENDATIONS FOR MITIGATION MEASURES FOR PROJECT ACTIVITIES

Each activity that has an EDF with an EMMP table will be regularly visited for environmental monitoring and documentation for construction compliance. Activity mitigation activities, including associated training, will be monitored and reported (see Table 5).

The monitoring reports will become a part of overall project monitoring, and will specify who will implement the Monitoring and Evaluation (M&E) measures.

TABLE 5: MONITORING IMPLEMENTATION OF MITIGATION MEASURE

Monitoring	Application
Environmental Monitoring Tracking Form	In accordance with EDF; not required for Low Risk activities
Training report	If applicable
C-CAP monitoring report	Provides tables for annual reports

The Environmental Monitoring Tracking Table (Annex 4) will be completed for environmental compliance for each community infrastructure activity, based on the requirements of the activity EDF. The Environmental Monitoring Tracking Table is completed periodically, in addition to regular construction monitoring and/or other program M&E activities. The Environmental Monitoring Tracking Table lists each of the mitigation measures previously identified in the EDF and evaluates the results of implemented mitigation measures, including: problems encountered, the effectiveness of the mitigation, and any recommended adjustments.

7.0 REPORTING DOCUMENTS

7.1 REPORTING AND APPROVALS

All activities financed by subcontracts require environmental clearance. This generates a series of reports and decisions (refer Table 6). This section summarizes the reporting documents that the subproject will generate. The Screening Document for Initial Screening is a requirement for project activities and/or subcontracts (refer to Annex 1).

TABLE 6: ACTIVITY (SUBCONTRACT) ENVIRONMENTAL CLEARANCE

Category	Application
All subprojects financed by C-CAP	Infrastructure Specialist completes Screening Document for Initial Screening (Annex 1). Low Risk activities proceed to clearance and approval from USAID.
Medium and High Risk activities	Infrastructure Specialist works with community mobilizers and technical staff to develop EDFs including EMMP table for each activity. COP reviews category to confirm or adjust category. High Risk activities (if any) require EA to be approved by USAID.
Review of EDF and EMMP table for clearance	USAID reviews and clears EDFs for Medium Risk activities.
Medium Risk activities	Identified mitigation measures are incorporated into the activity and implementation proceeds.
High Risk activities	Environmental Specialist develops the Scoping Statement for BEO approval. Environmental Assessment Team is identified and completes EA.
High Risk activities	After USAID approval of EA, all requirements of the EA and the EMMP for the subproject or activity are incorporated and implementation begins.
Discontinue Activity	USAID approval is not received on the EA or the EA identifies environmental issues and concerns that are beyond the scope to C-CAP to adequately address

REPORTS TO USAID

The following documentation and reports include information associated with the environmental compliance (also refer Table 7):

- **Annual Work Plans** will have a section on the planned actions related to environmental compliance.
- **This EMMP**, including the FEMMP, will be reviewed and approved by USAID. Working documents (EDFs and assessments including EMMP tables for activities and other reports as described above) are available for review at the project office.
- **Annual Reports** will include a section on the status of actions related to environmental compliance and results, including: project summaries along with environmental impacts; success or failure of mitigation measures being implemented; results of environmental monitoring; and any major modifications/revisions to the project. If the activities implemented do not have any negative impact on the environment, this should be documented as well.
- **Project reports and the Final Contract Report** will have a section that will summarize program actions related to environmental compliance and will describe environmental outcomes, including information on any positive or negative environmental effects of program activities.

TABLE 7: REPORTS

Report	Note	Location
EDF and EMMP table for subprojects or activities.	An EDF with an EMMP table for USAID clearance/approval should be prepared for each Medium Risk subproject.	To USAID for clearance. Once approved, documentation will be uploaded on TAMIS.
Annual Reports will include a section on the status of actions related to environmental compliance and results, including: project summaries along with environmental impacts; success or failure of mitigation measures being implemented; results of environmental monitoring; and any major modifications/revisions to the project.	If the activities implemented do not have any anticipated/observed negative impact on the environment, this should be documented as well.	Annual Report details at project office
Annual Work Plan environmental section.		At USAID and project office (TAMIS).
Project reports and Final Contract Report.		At USAID and project office (TAMIS).

SUMMARY OF WORKING DOCUMENTS KEPT AT PROJECT OFFICE

- Screening Checklist For Initial Activity Screening (See Annex 1)
- List of screened subprojects
- Environmental Documentation Form (EDF) (See Annex 2)
- List of screened subprojects (including revisions)
- EMMP for subproject, which becomes part of the EDF and activity implementation plan
- Environmentally Sound Design Manual
- Training and Communications Plan for subproject (optional)
- Annual Reports

SUMMARY OF DOCUMENTS PROVIDED TO USAID

- This EMMP for the C-CAP program including supporting documents and the FEMMP
- Individual Activity EDFs with EMMP table for clearance
- Terms of reference for EA Scoping Statement, as required, for written approval (email, letter, signature)
- EA, as required, for written approval (email, letter, signature)
- Environmental Compliance section of Annual Reports

8.0 IMPLEMENTATION

8.1 STAFFING

C-CAP is a large, complex project that will be implementing a variety of activities in 12 Pacific Island nations where much of the field work for environmental compliance will be done by local project staff. Community mobilization and technical assistance will be provided for various communities and direct beneficiaries. If needed, STTA for environmental/social issues will cover additional staff training, quality control, special studies participation, and other requirements.

8.2 BUDGET

There will be a cost associated with staffing and direct costs for environmental compliance. The cost of required mitigation measures remains to be determined and incorporated into the design assumptions for any given activity. Environmental compliance costs of well-designed activities with strong community participation however, often improve sustainability of the projects and promote community involvement, in addition to achieving beneficial compliance-related outcomes.

8.3 STAFF TRAINING

Table 1 below summarizes the initial training activities anticipated:

TABLE 1: INITIAL TRAINING ACTIVITIES

Training	Date	Status
Initial training to C-CAP team members on environmental compliance and implementation	3rd quarter of 2013 financial year	Training for C-CAP Infrastructure Specialist completed Community Mobilizers, to be trained as required
Beneficiary training	To commence with subproject implementation, from the 3rd quarter of 2013 financial year	To be trained as required
Continuing DAI home office support and training	TBD	As requested by COP

8.4 REVISION OF THIS DOCUMENT

This manual is an evolving document that may be revised and updated as needed to meet C-CAP environmental compliance objectives.

ANNEX 1. SCREENING CHECKLIST FOR INITIAL ACTIVITY SCREENING

Table 1 below is used to screen proposed activities using the terms set out in the C-CAP project IEE. It is called 'initial' activity screening because environmental due diligence will be used to review potential impacts and possibly revise the risk category after completion of the EDF, if required. Table 2 summarizes the courses of action that may occur following the initial screening process.

TABLE 1: SCREENING CHECKLIST FOR INITIAL ACTIVITY SCREENING

Use this checklist to screen the corresponding threshold determination for every subcontract and activity

Activity	Included in subproject?	
	Yes	No
Low Risk Activities (Categorical Exclusion and Negative Determination) No or very low potential adverse effect		
Develop and apply criteria to identify and prioritize districts and coastal communities for participation and activities for implementation.		
Develop a network of social mobilizers from participating districts/communities.		
Develop and apply criteria to identify and prioritize community-specific social and economic infrastructure activities.		
Develop or update locally tailored assessments to improve understanding of current and future risks.		
Identify gaps and opportunities to reduce vulnerability and risk over both short and long time scales.		
Support for implementation of risk reducing adaptation activities at community level.		
Scale-up mainstreaming climate adaptation policies and practices into community land use and/or development planning.		
Scale-up mainstreaming climate adaptation policies and practices into community building and infrastructure standards and norms.		
Develop and implement a methodology and plan of action based on best available information for integrating climate adaptation into land use planning and into building and infrastructure standards and norms.		
Other technical assistance.		
Other activity with no effect on the environment.		
Medium Risk Activities (Negative Determination with Conditions) Insignificant potential adverse effect with appropriate mitigation		
Construction of small buildings including community centers for use in meetings, training, and cultural affairs.		

Activity	Included in subproject?	
	Yes	No
Development of small spring and well water supply systems. Watershed integrity is a major environmental consideration in the selection of water and supply source. Estimated water supply yields, planned users and sustainability of water use will be determined. Drinking water quality shall be within prescribed standards. Operation and maintenance system will be put in place or will be enhanced.		
Expansion of small water supply systems. These subprojects will extend existing water supply systems that serve rural villages. The work could include repair, refurbishing or limited upgrading of existing spring or well water supply systems with or without pipelines, storage tanks or communal faucets where water is conveyed by gravity. Including rainwater collection and storage, or by pressure pump driven by solar power or fuel. Construction of rainwater collector and storage facility.		
New construction or upgrading of existing small pre-cast concrete boat or fish landings. Most of this work will consist of fixing or extending existing jetties as well as providing boat landings. No reclamation work or resettlement will be involved, and no mangrove forests will be cleared.		
Upgrading of small existing irrigation canals and conveyance structures. This will consist of providing concrete lining or re-grading canals and repairing broken parts of existing conveyance structures, i.e., turnouts, gates, etc.		
Construction/upgrading of drainage and flood control facilities. These subprojects could include: (a) construction of new box or pipe cross culverts; (b) repair of side ditches overflow structure and side pipe culverts; and (c) repair of overflow structures (spillway) that will entail improvement of existing culverts and concrete or mortared end encasement across a road alignment where water overflows at high level of water inundation during peak precipitation.		
Construction of footbridges and pedestrian walkways. These subprojects include: (a) construction of new suspension footbridges across waterways; and (b) rock mounted or pre-cast concrete platform pedestrian walkways between coastal buildings or houses on stilts. Any clearing of coastal vegetation, such as nipa and mangrove, should be avoided, prevented or minimized.		
Development, repair or construction of coastal protection infrastructure, such as sea walls or hybrid systems that combine both built and ecological systems.		
Other activity with similar effect on the environment.		
High Risk Activities (Positive Determination) Potential for significant adverse effect		
Activity with significant potential negative effect on the environment or human population.		
Other reason to suggest significant potential negative effect on the environment or human population. Specify:		
Activities NOT covered in the IEE Potential for significant adverse effect - will require an amendment to the IEE		
Procurement, use, or training for use of pesticides or activities involving procurement, transport, use, storage, or disposal of toxic materials, which will require preparation of a PERSUAP in accordance with Reg.2l6.3(2)(b)(l)-(2) in an amended lEE submitted to Asia/BEO for approval.		

Activity	Included in subproject?	
	Yes	No
Activities involving support to wood processing, agro-processing, industrial enterprises and regulatory permitting.		
Assistance, procurement or use of genetically modified organisms, which would require preparation of biosafety assessment (review) in accordance ADS 201.3.12.2(b) in an amendment to the IEE approved by Asia/BEO.		
Procurement or use of Asbestos-Containing Materials (ACM) (i.e., piping, roofing, etc.), Polychlorinated Biphenyl's (PCB) or other toxic/hazardous materials prohibited by USEPA as provide at http://www.epa.gov/asbestos and/or under international environmental agreements and conventions, e.g. Stockholm Convention on Persistent Organic Pollutants as provided at http://clun.pop.int		

TABLE 2: RESULTS AND ACTIONS FOLLOWING INITIAL ACTIVITY SCREENING

RESULTS	Yes	No	REGULATION 216 ACTIONS
All risk Low Risk activities			Proceed to clearance and approval from USAID.
Any Medium Risk activity			Continue to produce EDF (including EMMP table) then to MEO for approval.
Any High Risk activity			Continue to Scoping Statement for EA and obtain BEO approval if category is confirmed. OR Continue with EDF Report including EMMP and request that Positive Determination be reversed if significant impact is NOT indicated. Requires BEO approval. OR Redesign activity to eliminate actions with high environmental risks.

ANNEX 2. ENVIRONMENTAL DOCUMENTATION FORM (EDF)

The purpose of this EDF is to determine whether the proposed activity (scope of work) encompasses the potential for environmental pollution or concern and, if so, to determine the scope and extent of additional environmental evaluation, mitigation, and monitoring necessary to fulfill federal U.S. environmental requirements. The environmental review is intended to be used by the coastal communities and C-CAP staff to ensure USAID and the host country takes environmental consequences into account.

ENVIRONMENTAL DOCUMENTATION FORM (EDF)

A. Summary Data, Certification and USAID Clearance

Project	
Project Implementation Partner	
Project Duration	
Project Description	
Project Category, Recommended Determination and Documentation	

Certification: I the undersigned, certify that:

1. The information in this form is correct and complete
2. The following actions have been taken to assure that the project complies with environmental requirements established under the code of federal regulation 22 CRF 216.

☒ Those responsible for implementing this project have received training and or documents describing essential design elements and best practices for activities of this nature.

☒ These design elements and best practice will follow in implementing this activity, unless USAID specifically requests a change.

☒ Any specific mitigation and monitoring measures described in the environmental review will be implemented in their entirely.

☒ Complete work in accordance to all technical specification as stated in all relevant building codes in the respective C-CAP countries with reference to the regional and international Building Codes. Which include but not limited to cyclonic earthquake, zoning, Fire code and other related codes of best practice. The Specifications references shall include the latest editions of the Standard Specifications prepared by the relevant C South Pacific Governments, Department of Works, Engineering, Architectural Branches, Environmental Act, Mining Act, Environmental Planning Physical Planning Act; Environmental Contaminants Act; Water Resources Act and relevant manufactures' manual. The governing technical specification shall be the latest editions.

☒ Compliance with the conditions will be regularly confirmed and documented by on-site inspections during project construction and its completion.

Prepared By

(Signature) Name and Title (Date)

Approved By:

(Signature) Name and Title (Date)

BELOW THIS LINE FOR USAID USE ONLY

USAID Clearance

USAID COR ☐ Approved ☐ Rejected	(print name)	(signature)
USAID MEO ☐ Approved ☐ Rejected	(print name)	(signature)

USAID comments: (if documentation is rejected, comments must be provided to applicant)

ENVIRONMENTAL DOCUMENTATION FORM (EDF)

B. Environmental Screening Review Report

1.0 BACKGROUND, RATIONAL AND EXPECTED RESULTS

The _____ project is an infrastructure project implemented by DAI under the C-CAP project. Project background information is provided in **Table 1**.

Table 1: Project Background Information

Background	
Rationale	
Expected Results	.

2.0 ACTIVITY DESCRIPTION

[SHORT ACTIVITY DESCRIPTION GOES HERE]

The project component activities are described in **Table 2.**

Table 2: Project Component Activities

Project Phase	Activity Description and Assigned Responsibilities	Responsible Parties
Planning and Design Phase		
Pre-Construction Stage		
Construction Phase		

Project Phase	Activity Description and Assigned Responsibilities	Responsible Parties
Post Construction/ Turnover		
Operation and maintenance		
Implementation Schedule and Funding		

3.0 ENVIRONMENTAL BASELINE INFORMATION

Table 3 presents the baseline environmental information that describes the existing conditions at the project site location prior to implementation

Table 3. Summary Matrix of Environmental Baseline Information

Site Characteristics	Environmental Parameters	Description
Geographical Location (Project Site)	Latitude	
	Longitude	
Local Topography	Terrain / Slope	
	Elevation	
Local Geology	Soil Type	
	Minerals	
Local Hydrology	River/Creek	
Local Climate	Climate type	
	Annual Rainfall	
Natural Physical	Earthquakes/Volcanic	

Site Characteristics	Environmental Parameters	Description
Hazards	Landslide/Erosion	
	Flooding	
Vegetation Cover	Type	
	Coverage Area	
Protected Areas	Forest	
	Inland / Coastal Waters	
Land Area and existing Land Use	Area	
	Land Classification/ Use	
Population	Total population	
	Total Households	
	Ethic Group (%)	
Local Economy	Labor force	
	Main Income Source	
Basic Services and Infrastructures	Water Supply	
	Sanitary Toilet	
	Electricity	
	Transportation	
	Communication	
	Education	
	Health	
	Social Welfare	
	Mosque	
	Police/ Fire Protection	

4.0 EVALUATION OF PROJECT ISSUES WITH RESPECT TO POTENTIAL ENVIORNMENTAL IMPACT

[Instructions: Describe the following and summarize in Table 4 below

i. *Briefly note the potential environmental impacts or concerns presented by the proposed activities (if any). For guidance, refer to Africa Bureau's Environmental Guidelines for Small-Scale Activities; available at www.encapafrica.org/egssaa.htm.*

- *In accordance with the Small-Scale Guidelines, consider direct, indirect and cumulative impacts across the activity lifecycle (i.e. impacts of site selection, construction, and operation, as well as any problems that might arise with abandoning, restoring or reusing the site at the end of the anticipated life of the facility or activity). Note that "environment" includes air, water, geology, soils, vegetation, wildlife, aquatic resources,*

historic, archaeological or other cultural resources, people and their communities, land use, traffic, waste disposal, water supply, energy, etc.)

ii. *Assess the extent to which these potential impacts and concerns are significant in the context of the specific activity design and site.*

iii. *Set out the mitigation actions to be employed to address these issues.*

- *Mitigation actions are means taken to avoid, reduce or compensate for impacts. Mitigation measures must be reasonable and implementable by field staff. They should be consistent with the good practice guidance provided in Africa Bureau's Environmental Guidelines for Small-Scale Activities; (www.encapafrica.org/egssaa.htm.) Cite this or other guidance used for mitigation design.*

iv. *Reach one of three findings regarding the potential impacts:*

***a. Significant adverse impacts are very unlikely**. Of its nature, the activity in question is very unlikely to result in significant, adverse environmental impacts. Special mitigation or monitoring is not required.*
Note: this conclusion is rarely appropriate for high-risk activities.

b. With implementation of the specified mitigation and monitoring, significant adverse impacts are very unlikely.

***c. Significant adverse impacts are possible**. That is, it is not possible to rule out significant adverse environmental impacts even given reasonable, attainable mitigation and monitoring.]*

Table 4 presents a summary of the environmental issues and impacts and the analysis of those that can be mitigated.

Issue or Cause for Concern	Analysis	Finding regarding potential impacts
		Significant impacts are very unlikely.
		With implementation of the specified mitigation and monitoring, significant adverse impacts are very unlikely.
		Significant adverse impacts are possible.

5.0 ENVIORNMENTAL MITIGATION AND MONITORING PLAN (EMMP) TABLE

Table 5 presents the activity Environmental Mitigation and Monitoring Plan including responsibilities and frequency of monitoring.

Potential Issue (risk)	Mitigation Measure	Responsible Party	Monitoring Indicators, Method and Frequency	Monitoring Cost	Monitoring Responsibility

6.0 ADDITIONAL INFORMATION

[Include additional information; maps; figures and technical drawings; photos of the site and surroundings; and list the names of any reference materials or individuals consulted.]

ANNEX 3. FRAMEWORK ENVIRONMENTAL MITIGATION AND MONITORING PLAN (FEMMP)

PURPOSE

The purpose of this FEMMP is to list the environmental risks that correspond to C-CAP-supported activities and define appropriate mitigation measures. Table 1 below is used to screen against environmental risk. When individual activities are reviewed, each applicable line (environmental risk) will be incorporated in the EMMP table for the activity EDF. This table is based on international best practices, USAID guidelines, and experience from experts from Pacific Islands or who have worked in the Pacific Islands.

USE OF THE FRAMEWORKS EMMP TABLE

The DAI Infrastructure Specialist or his/her designee will review the following framework table and select all risks pertinent to a defined specific action. Those line items become the EMMP for the activity or subproject and will be included in Section 5.0 of the EDF for that subproject.

TYPICAL COMMUNITY INFRASTRUCTURE ACTIVITIES ANTICIPATED

1. Construction, rehabilitation and storm-proofing of small buildings which may include: clinics, schools, municipal buildings, and community centers that are used in meetings, training, cultural affairs.
2. Natural infrastructure may include: (a) mangrove rehabilitation; (b) beach/dune erosion control; and (c) coastal wetland rehabilitation.
3. Development of small spring and well water supply systems: Watershed integrity is a major environmental consideration in the selection of water supply source. Estimated water supply yields, planned users, and sustainability of water use will be determined. Drinking water quality shall be within prescribed standards. Operation and maintenance system will be put in place or will be enhanced.
4. Expansion of small water supply systems: These subprojects will extend existing water supply systems that serve rural villages. The work could include repair, refurbishing or limited upgrading of existing spring or well water supply systems with or without pipelines, storage tanks or communal faucets where water is conveyed by gravity. Including rainwater collection and storage, or by pressure pump driven by solar power or fuel. Construction of rainwater collector and storage facility.
5. New construction or upgrading of existing small pre-cast concrete boat/ fish landings, and storm walls: Most of this work will consist of fixing or extending existing jetties as well as providing boat landings. No reclamation work or resettlement will be involved, and no mangrove forests will be cleared.
6. Upgrading of small existing water conveyance structures: This will consist of providing concrete lining or re-grading canals and repairing broken parts of existing conveyance structures, i.e., turnouts, gates, etc.
7. Construction/upgrading of drainage and flood control facilities: These subprojects could include: (a) construction of new box or pipe cross culverts; (b) repair of side ditches overflow structure and side pipe culverts; and (c) repair of overflow structures (spillways) that will entail improvement of existing culverts and concrete or mortared end encasement across a road alignment where water overflows at high level of water inundation during peak precipitation.

TABLE 1: SCREEN AGAINST ENVIRONMENTAL RISK: SMALL-SCALE COASTAL ADAPTATION INFRASTRUCTURE PROJECTS

Potential Issue (Risk)	Mitigation Measure(s)	Monitoring Indicator(s), Method and Frequency	Monitoring Responsibility
General Impacts			
Risk that construction activities will cause negative environmental impacts that are not acceptable on C-CAP and USAID projects.	Where significant environmental impacts may occur, **document and photograph** pre-construction and post-construction conditions.	Require pre-construction and post-construction documentation in technical specifications. Monitor during construction inspection visits.	Construction Site Inspector or Community Mobilizer.
	The use of any **asbestos-containing materials** is not allowed on the construction site, including: cement; paper; board; sealant and glazing formulations; piping; roofing material; or other materials containing asbestos	Include requirement in technical design specifications. Monitor during construction inspection visits.	
	The use of **PCBs** in electric transformers is not allowed.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
	Only **lead-free paints**, primers, varnishes and stains are allowed. Whenever possible use water-based paints instead of solvent-based paints.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
	Removal, clearing or destruction of coastal vegetation, such as **nipa or mangrove plants**, is not allowed.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
Impacts to the AIR			
Risk that project construction activities increase dust and particulate matter in the air.	Require that the soil is dampened before an area is disturbed.	Include requirement in technical design specifications. Monitor during construction inspection visits.	Construction Site Inspector or Community Mobilizer.
	Provide screening for sensitive areas.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
	Do not allow construction during sensitive times of the day.	Include requirement in technical design specifications by setting allowable construction periods. Monitor during construction inspection visits.	

Potential Issue (Risk)	Mitigation Measure(s)	Monitoring Indicator(s), Method and Frequency	Monitoring Responsibility
	Minimize burning of waste materials on the site.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
Impacts to SURFACE WATER			
Risk that project construction will degrade surface water.	Require that all chemicals, oils, gasoline, paints, solvents and other pollutants are properly stored in secondary containment. Place solvents, lubricants, oils, and other semi-hazardous and hazardous liquids over a lined area with appropriate secondary containment in order to contain spillage. Test the integrity of bulk storage tanks and drums, and secure valves on oil and fuel supplies.	Include requirement in technical design specifications. Monitor during construction inspection visits.	Construction Site Inspector or Community Mobilizer.
	Set protocols for vehicle maintenance to control contamination by grease, oil and fuels.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
	Avoid pollution of waterways with stockpiled construction materials. Cover stockpiled construction materials, as practicable.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
	Avoid chemical spills. If spills occur remove contaminated soil and dispose of in an appropriate manner.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
	Do not allow contaminated wash water, construction debris, or other foreign materials from the construction site to be disposed of in natural waterways or the ocean, or thrown on sensitive habitats.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
Risk that the project construction will increase water runoff.	When a project will increase impervious area due to compacted soils, paving, roofing or other hard surfaces, require that runoff is directed to side drains or areas with rip rap (cobbled stone).	Include requirement in technical design specifications. Monitor during construction inspection visits.	
	Re-vegetate areas where vegetation is to be removed or destroyed during construction.	Include requirement in technical design specifications. Monitor during construction inspection visits.	

Potential Issue (Risk)	Mitigation Measure(s)	Monitoring Indicator(s), Method and Frequency	Monitoring Responsibility
Risk that the project construction will restrict natural runoff.	Require that adequate cross-drainage structures (culverts) are constructed in appropriate places to allow drainage under roadways and to avoid flooding. Require that structures are routinely cleaned.	Include requirement in technical design specifications and O&M manuals. Monitor during construction inspection visits.	
Risk that construction in the flood plain will increase flooding either downstream, upstream or both.	Do not design new construction in the flood plain.	Evaluate siting during design. Confirm that construction is not in flood plain during construction inspection visits.	
	If construction or reconstruction is located in floodplain, design appropriately to not cause upstream or downstream impacts, and design project to withstand flood situations.	Include design requirements in design subcontract. Monitor during construction inspection visits.	
Risk that the project construction activities will negatively impact coastline and estuarine habitats	If possible, avoid seawall construction by restoring natural intertidal zone, managing shoreline with natural vegetation and/or managing the shoreline with vegetation and temporary structures (i.e. wave barriers)	Include requirements in technical design specifications. Monitor during construction inspection visits.	
	Improve existing seawalls by planting native riparian vegetation (including a mix of trees, shrubs and grasses) on the landward side; Increase the roughness and texture of the seawall face; and plant estuarine vegetation on the seaward side and/or create artificial reefs with boulders, rock clumps and large woody debris.	Include requirements in technical design specifications. Monitor during construction inspection visits.	Construction Site Inspector or Community Mobilizer.
	If constructing a new seawall, incorporate estuarine and riparian vegetation in the appropriate locations; maximize habitat diversity and complexity; and design low-sloping seawalls.	Include requirements in technical design specifications. Monitor during construction inspection visits.	
Impacts to GROUND WATER			
Risk that the construction activity will degrade ground water.	If chemicals are used during construction or if there is an oil or gas leak from the machinery - avoid chemical spills if possible; be careful how they are discarded of, avoid areas near wells and surface water, avoid areas that could drain to waterway and other sensitive areas.	Include spill prevention requirements and procedures in technical design specifications. Monitor during construction inspection visits.	Construction Site Inspector or Community Mobilizer.

Potential Issue (Risk)	Mitigation Measure(s)	Monitoring Indicator(s), Method and Frequency	Monitoring Responsibility
	Seal or remove abandoned drains to minimize water contamination.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
Risks that the construction will contaminate either the groundwater table or groundwater recharge zones.	Avoid designing project in protected areas or in recharge zones.	Evaluate siting during design. Confirm that construction is not in protected area or recharge zone during construction inspection visits.	
	Site latrines a minimum of 15 meters from wells, streams, lakes, pond, or other water sources. If the water table is known to be very shallow, require that latrines are lined with clay or other impervious material.	Evaluate siting during design. Confirm that latrines are properly sited during construction inspection visits.	
Impacts to LAND AND SOIL			
Risk that construction activities will cause or increase soil erosion.	Recover and replant top soil and plants as practicable.	Include requirement in technical design specifications. Monitor during construction inspection visits.	Construction Site Inspector or Community Mobilizer.
	If the excavated ground is left bare or drainage channels are not protected - install retaining walls, or stone drainage ways, where needed.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
	Install temporary erosion control and sediment retention measures when permanent ones either are not feasible or are delayed.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
Risk that poor borrow pit management will cause adverse impacts.	Ensure excavation is accompanied by well-engineered drainage to control runoff into borrow pits.	Include requirement in technical design specifications. Monitor during construction inspection visits.	Construction Site Inspector or Community Mobilizer.
	Place fences around borrow pit excavations, as necessary.	Include requirement in technical design specifications. Monitor during construction inspection visits.	

Potential Issue (Risk)	Mitigation Measure(s)	Monitoring Indicator(s), Method and Frequency	Monitoring Responsibility
	Develop specific procedures for storing topsoil and for phased closure and restoration of the pit when extraction has been completed. Include plans for segregating gravel and quarry materials by quality and grade for possible future uses. Where appropriate, include reseeding or re-vegetation to reduce soil erosion, prevent gulleying and minimize visual impacts	Include requirement in technical design specifications. Monitor during construction inspection visits.	
Poor management of construction wastes contaminate area and/or soil.	If waste will be buried on site, avoid siting burial pits up-gradient from drinking water sources such as wells. Pits should be lined with impermeable material (e.g., clay or polyethylene).	Include requirement in technical design specifications. Monitor during construction inspection visits.	
	If waste will be buried on site, avoid siting waste pits where water tables are high or underlying geology makes contamination of groundwater likely. If no alternative site is available, ensure that pits are lined with impermeable material.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
	Introduce measures to control and minimize the volume of waste on site. Segregate waste which can be salvaged, re-used or recycled.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
	Take waste materials to appropriate, designated local disposal areas.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
Impacts to HABITATS			
Risk that the construction will negatively impact sensitive habitats or species.	Do not build structures in sensitive areas such as wetlands, biologically sensitive areas, aquifer recharge zones, or other sensitive areas.	Include requirement in technical design specifications. Monitor during construction inspection visits.	Construction Site Inspector or Community Mobilizer.
	Re-vegetate large areas to be cleared during construction using locally appropriate landscaping and species.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
Impacts to SOCIAL/CULTURAL STRUCTURES			
Risk that individuals will lose resources or structures; or that the project will conflict with local	Avoid, protect or negotiate compensation for any losses.	Include requirement in technical design specifications. Monitor during construction inspection visits.	Community Mobilizer

Potential Issue (Risk)	Mitigation Measure(s)	Monitoring Indicator(s), Method and Frequency	Monitoring Responsibility
norms; or create resource conflicts.	Work with local communities to identify and address conflicts.	Follow C-CAP community infrastructure prioritization procedures. Monitor during construction inspection visits.	
	Include all groups that would benefit and that could be impacted from the project in project development and conflict mitigation.	Follow C-CAP community infrastructure prioritization procedures. Monitor during construction inspection visits.	Community Mobilizer
	Minimize any changes in, encroachments on and/or the destruction of environments or sites of economic, ecological, cultural, archaeological or historical importance and the natural resources they contain.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
Impacts to HUMAN HEALTH and SAFETY			
Risk that workers on site or community will be injured or impacted during construction.	Develop and implement appropriate human health and worker safety measures during construction.	Include requirement in technical design specifications. Monitor during construction inspection visits.	Construction Site Inspector or Community Mobilizer.
	Provide workers with appropriate personal safety equipment: including head protection, eye protection, hearing protection, foot protection, and fall protection when working at heights.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
	Maintain good first aid capabilities on site. Follow construction subcontractor's health and safety plan on site.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
	Provide temporary sanitary services at the construction site for workers.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
Risk that community members will be sickened by contaminated water supply.	Water samples shall be taken and submitted to a national test lab to test for quality initially and periodically.	Include requirement in technical design specifications. Monitor during construction inspection visits.	
Workers or community members are injured in open trenches.	For all trenches wider than 70 cm wide or deeper than 1 meter deep, the construction subcontractor shall ensure: 1. Planks or suitable walkways will be placed over all open trenches as needed to permit pedestrian access. 2. Open trenches will be marked to prevent injuries at night.	Include requirement in technical design specifications. Monitor during construction inspection visits.	

Potential Issue (Risk)	Mitigation Measure(s)	Monitoring Indicator(s), Method and Frequency	Monitoring Responsibility
CUMULATIVE IMPACTS			
Risk that a number of projects in the same area will result in large cumulative impacts greater than any of the individual projects.	Take all ongoing and planned projects into consideration during the design phase.	Include review in EDF. Monitor during construction site inspection visits.	C-CAP Infrastructure Specialist.
GENERAL NUISANCE IMPACTS			
Risk that the project construction will interrupt transportation or construction noises will cause disruptions.	Establish and adhere to construction timetables that minimize disruption to the normal activities of the construction area.	Include requirement in technical design specifications. Monitor during construction inspection visits.	Construction Site Inspector or Community Mobilizer.
	Coordinate truck and other construction activity to minimize noise, traffic disruption and dust.	Include requirement in technical design specifications. Monitor during construction inspection visits.	Construction Site Inspector or Community Mobilizer.
	Post-construction timetables and traffic diversion schedules at the project site.	Include requirement in technical design specifications. Monitor during construction inspection visits.	Construction Site Inspector or Community Mobilizer.

ANNEX 4. ENVIRONMENTAL MONITORING TRACKING FORM

The following form (Table 1) is used to track environmental compliance for each subproject as required by the subproject EDF. The Infrastructure Specialist uses this format as a template and inserts the mitigation measures identified in the activity EDF. The template is then sent to the appropriate country office, where the Community Mobilizer tracks each mitigation measure during the life of the activity.

TABLE 1: ENVIRONMENTAL MONITORING TRACKING TABLE

Project ID:	**Project Name**:
Community Name:	**Country**:
Implementing Organization: DAI C-CAP	**Construction Subcontractor**:
Community Mobilizer:	**Project Construction Cost**:
Project Manager:	**Construction Inspector**:
Monitoring Period:	

#	Description of Mitigation Measure	Responsible Party	Monitoring Indicators, Methods and Frequency	Estimated Cost	Results			Recommended Adjustments	Signature
					Dates Monitored	Problems Encountered	Mitigation Effectiveness		
1				N/A	1				
					2				
					3				
					4				
2				N/A	1				
					2				
					3				
					4				
3				N/A	1				
					2				
					3				
					4				

ANNEX 5. FACESHEET FROM C-CAP INITIAL ENVIRONMENTAL EXAMINATION (IEE)

INITIAL ENVIRONMENTAL EXAMINATION

Program/Activity Data:

Country:	Pacific Regional
Objective:	Build the resiliency of vulnerable coastal communities in the Pacific region to withstand more intense and frequent weather events and ecosystem degradation in the short-term, and sea level rise in the long-term.
Activity Name:	The Coastal Community Adaptation Program (C-CAP)
Funding Period:	2012-2016
LOP Amount:	$31.5 million
IEE Prepared by:	Joseph Foltz (jofoltz@usaid.gov) **Date:** February, 22 2012
IEE Amendment (Y/N)	N **Date of original IEE:** N/A

Environmental Action Recommended:

Categorical Exclusion:	[X]	Deferral:	[ ]
Positive Determination:	[ ]	Negative Determination:	[X]
With Conditions:	[X]	Exemption:	[ ]

1. BACKGROUND AND ACTIVITY DESCRIPTION

1.1 Purpose and Scope of IEE

The purpose of this IEE, in accordance with 22CFR216, is to provide the first review of the reasonably foreseeable effects on the environment, as well as recommend Threshold Decisions for the activities under the CCAP Program that contribute to the desired result of building the resiliency of vulnerable coastal communities in the Pacific region to withstand more intense and frequent weather events and ecosystem degradation in the short-term, and sea level rise in the long-term. This IEE provides a brief statement of the factual basis for a Threshold Decision as to whether an Environmental Assessment or an Environmental Impact Statement is required for the activities managed under this program.

1.2 Background

Responding to challenges posed by climate change to the development and survival of Pacific Islands, the United States Government has made the Pacific a strategic focus by expanding bilateral and multilateral climate change related assistance to the region. Secretary Clinton announced at the meeting with Pacific leaders on the margins of the UN General Assembly in September, 2010 that the U.S. Government intends to catalyze re-engagement in the region by addressing adaptation to global climate change. In response, USAID recently opened a Pacific Islands office at the US Embassy in Port Moresby, Papua New Guinea on October 5th, 2011. In coordination with development partners, USAID's climate change program will support Pacific

1

Island nations to reduce long-term impacts associated with climate change and achieve sustainable climate-resilient development, both of which will strengthen U.S. Government objectives by mitigating climate change related threats to stability, conflict and migration.

The Pacific region's diverse island nations and territories are considered the most vulnerable in the world to climate change. Pacific island economies depend on tourism, fisheries, forestry and agriculture, all of which are highly exposed and sensitive to sea level rise, changing ocean temperatures and acidity, increasing air temperatures, and shifting rainfall and storm patterns as a result of climate change. Nowhere in the world is adapting to climate change as urgent and central to safeguarding cultures and economies as it is in the Pacific. The Pacific Islands' Framework for Action on Climate Change states that: "Reducing the risks associated with the impacts of extreme weather and climate variability…must be urgently addressed in order to contribute to improving livelihoods, economic well-being and health as well as maintaining biodiversity and culture."[1]

Adaptive capacity across the Pacific is low, at both national and local levels. Scale, services and capacities are especially weak at the community level. The region exhibits an adaptation deficit - an inability to deal with historic weather variability- related to a host of challenges, including: strained central budgets; a lack of technologies and technical capacity to monitor, maintain and operate infrastructure; provision of services such as water supplies and solid waste management; low education levels; and emigration. Furthermore, the Pacific Island nations face significant non-climate change-related challenges that increase their vulnerability, including population growth, growing poverty and unemployment rates, gender inequality, gender based violence, rapid and unplanned urbanization, weak infrastructure, and political instability. These capacity gaps and non-climate stresses factor into climate change adaptation strategies.

While climate change exposure and sensitivity are generally high and adaptive capacity is generally low, there is significant variation across the islands. The high volcanic islands (PNG, Solomon Islands, Vanuatu, Fiji), benefit from more fertile soil and freshwater resources, making agriculture and water more resilient than in low lying atolls only a few meters above sea level (RMI, Tuvalu, Kiribati). Atoll islands' poor soils and limited surface and ground water resources are exceptionally exposed and sensitive to tidal flooding and sea level rise, and it is estimated that some of these islands will no longer be habitable at the end of this century.

1.3 Description of Activities

1.3.1 Objective and Results

The purpose of this procurement is to: 1) improve the management of important and vulnerable coastal and marine resources; 2) strengthen disaster prevention and preparedness efforts that support local economies; and 3) build capacity of communities and institutions to adapt to climate change. This will be achieved through the services of a technical assistance contractor for the C-CAP Program.

1.3.2 Activities

[1] SPREP. Pacific Islands Framework for Action on Climate Change 2006-2015. 12 JUNE 2005

The program will have three components: (1) rehabilitating or constructing new, small-scale community infrastructure (2) building capacity for community engagement for disaster prevention and preparedness (3) integrating climate resilient policies and practices into long-term land use plans and building standards; and two support activities (1) establishing a special activities fund (SAF) to support climate adaptation and (2) a service facilitation function that complement or otherwise add value to the three components mentioned above. Although this program is focused on coastal communities, in-land communities may be considered as program participants on a case-by-case basis.

By the end of this five-year program, the Contractor will have strengthened community resiliency to climate change in up to twelve Pacific Island countries: Papua New Guinea, Solomon Islands, Marshall Islands, Tuvalu, Vanuatu, Kiribati, Fiji, Samoa, Tonga, Republic of Marshall Islands, Federated States of Micronesia, and Palau. At a minimum, the Contractor will be expected to work in two to three districts in each country and with three to five communities in each district. The target for the duration of the program is 135 communities, pending availability of funds. This target may be adjusted during program implementation to reflect realities on the ground and current unknowns (i.e. severe weather events, political instability, travel constraints).

In year one, the Contractor is expected to work in three priority countries, one district in each country and between three and five communities in each district.

Key Activities: The planned CCAP activities are shown in the following table.

Key area	Activities
Climate Resilient Small-Scale Social and Economic Infrastructure	• Develop and apply criteria to identify and prioritize districts and coastal communities for participation and activities for implementation. • Develop a network of social mobilizers from participating districts/communities • Develop and apply criteria to identify and prioritize community-specific social and economic infrastructure activities • Develop specifications and award subcontracts for infrastructure rehabilitation, repair or upgrading and new construction activities • Provide quality assurance and quality control over construction activities.
Improved Local Capacity for Disaster Risk Reduction and Adaptation	• Develop or update locally tailored assessments to improve understanding of current and future risks • Identify gaps and opportunities to reduce vulnerability and risk over both short and long time scales • Support for implementation of risk reducing adaptation activities at community level
Climate Resilient Land Use Planning and Building Standards	• Scale-up mainstreaming climate adaptation policies and practices into community land use and/or development planning • Scale-up mainstreaming climate adaptation policies and practices into community building and infrastructure standards and norms

	• Develop and implement a methodology and plan of action based on best available information for integrating climate adaptation into land use planning and into building and infrastructure standards and norms

2. COUNTRY AND ENVIRONMENTAL INFORMATION (BASELINE INFORMATION)

2.1 Locations Affected

CCAP will prioritize investment in the region, recognizing that with limited resources there remains a need to ensure benefit is felt throughout the region from U.S. development assistance. USAID/Pacific Islands will prioritize investments based on existing U.S. Government strategic objectives and investments (including MCC agreements), regional and national adaptation priorities, population, human development indicators, other development partner assistance investments, and opportunities for collaboration. The criteria will not be weighted, due to additional considerations, such as vulnerability to sea level rise, dependence on fisheries, and U.S. strategic maritime interests. A prioritization approach will validate the technical approach, and ensure the operational control for the USAID/Pacific Islands office and its stakeholders. Therefore, in the first year of operations the Offeror shall provide recommendations for the provision of good and/or services, as articulated in Section C of the contract, in three countries, and before the end of the first year of operations the Offeror shall provide to the COR a plan to provide goods and/or services to the remaining nine.

2.2 National Environmental Policies and Procedures (of host country both for environmental assessment and pertaining to the sector)

The CCAP will be implemented in up to twelve Pacific Island countries including Papua New Guinea, Solomon Islands, Marshall Islands, Tuvalu, Vanuatu, Kiribati, Fiji, Samoa, Tonga, Republic of Marshall Islands, Federated States of Micronesia, and Palau. The Awardee is required to follow all host country regulations, and shall use or reference use of existing USAID guidance including: Environmental Issues and Best Practices for Small-Scale Infrastructure; Environmental Guidelines for Small-Scale Activities and IFC EHS Guidelines and other applicable international best practice acceptable to USAID on important matters such as battery disposal, and waste management that closely mirror local laws and regulations. All efforts associated with the program are to take place in established dwellings and are not expected to have significant impact on the environment should all conditions be met. National environmental laws and baseline information in the countries covered by CCAP are at various levels, greater detail may be found in Annex 1[2].

3. EVALUATION OF ACTIVITY/PROGRAM ISSUES WITH RESPECT TO ENVIRONMENTAL IMPACT POTENTIAL

[2] Annex 1 is composed of information from a compendium of open sources, including, the Asian Development Bank, World Bank, and independent consultants.

The activities under this Initial Environmental Examination will provide assistance at the site-, LGU-, and national levels for, increasing resilience to impacts of climate change and reducing risks from climate-related disasters (see table below).

A **Categorical Exclusion** is recommended for the following activities, which are anticipated to be 30 percent of total activity effort, except to the extent that the activities directly affect the environment, pursuant to CFR 216.2(c)(1) and:

a) CFR 216.2(c)(2)(i), for activities involving education, technical assistance or training programs;
b) CFR 216.2(c)(2)(ii), for activities involving controlled experimentation exclusively for the purpose of research and field evaluation which are confined to small areas and carefully monitored;
c) CFR 216.2(c)(2)(iii), for activities involving analyses, studies, academic or research workshops and meetings;
d) CFR 216.2(c)(2)(v), for activities involving document and information transfers; and
e) CFR 216.2(c)(2)(xiv), for activities involving studies, projects or programs intended to develop the capability of recipient countries to engage in development planning.

A determination of categorical exclusion notwithstanding, the Mission Environmental Officer and Deputy Mission Environmental Officer are expected to provide advice on and/or inputs to the scope of the training, research, meetings, assessments, and related activities as identified in the table below.

Key elements of program / activities	Threshold determination
1. Develop and apply criteria to identify and prioritize districts and coastal communities for participation and activities for implementation. 2. Develop a network of social mobilizers from participating districts/communities 3. Develop and apply criteria to identify and prioritize community-specific social and economic infrastructure activities	Categorical exclusion
4. Develop or update locally tailored assessments to improve understanding of current and future risks 5. Identify gaps and opportunities to reduce vulnerability and risk over both short and long time scales 6. Support for implementation of risk reducing adaptation activities at community level	

5

Key elements of program / activities	Threshold determination
7. Scale-up mainstreaming climate adaptation policies and practices into community land use and/or development planning 8. Scale-up mainstreaming climate adaptation policies and practices into community building and infrastructure standards and norms 9. Develop and implement a methodology and plan of action based on best available information for integrating climate adaptation into land use planning and into building and infrastructure standards and norms	

Activities involving public-private partnerships and technical assistance targeting livelihoods or natural resource regeneration actions such as mangrove reforestation which may have negative consequences if environmental considerations are not factored into these activities and the resulting program designs. Therefore a **Negative Determination with Conditions** is recommended pursuant to 22 CFR 216.3 (a)(2)(iii) for these activities, which are anticipated to be 70 percent of total activity effort.

Key elements of program / activities	Illustrative Infrastructure Activities	Risk Classification
1. Develop specifications and award subcontracts for infrastructure rehabilitation, repair or upgrading and new construction activities 2. Provide quality assurance and quality control over construction activities.	1. Construction of small buildings which may include: (a) warehouses to house cold storage and/or post-harvest treatment; (b) agricultural trading posts or for product display, market days; and (c) community centers for use in meetings, training, cultural affairs; and (d) solar dryers .	Low-risk
	2. Development of small spring and well water supply systems. Watershed integrity is a major environmental consideration in the selection of water supply source. Estimated water supply yields, planned users and sustainability of water use will be determined. Drinking water quality shall be within prescribed standards. Operation and maintenance system will be put in place or will be enhanced.	Medium-risk

6

	3. Expansion of small water supply systems. These subprojects will extend existing water supply systems that serve rural villages. The work could include repair, refurbishing or limited upgrading of existing spring or well water supply systems with or without pipelines, storage tanks or communal faucets where water is conveyed by gravity. Including rainwater collection and storage, or by pressure pump driven by solar power or fuel. Construction of rainwater collector and storage facility.	Medium-risk
	4. New construction or upgrading of existing small pre-cast concrete boat or fish landings. Most of this work will consist of fixing or extending existing jetties as well as providing boat landings. No reclamation work or resettlement will be involved, and no mangrove forests will be cleared.	Medium-risk
	5. Upgrading of small existing irrigation canals and conveyance structures. This will consist of providing concrete lining or re-grading canals and repairing broken parts of existing conveyance structures, i.e., turnouts, gates, etc.	Medium-risk
	6. Construction/upgrading of drainage and flood control facilities. These subprojects could include: (a) construction of new box or pipe cross culverts; (b) repair of side ditches overflow structure and side pipe culverts; and (c) repair of overflow structures (spillway) that will entail improvement of existing culverts and concrete or mortared end encasement across a road alignment where water overflows at high level of water inundation during peak precipitation.	Medium-risk
	7. Construction of footbridges and pedestrian walkways. These subprojects include: (a) construction of new suspension	Medium-risk

7

	footbridges across waterways; and (b) rock mounted or pre-cast concrete platform pedestrian walkways between coastal buildings or houses on stilts. Any clearing of coastal vegetation, such as nipa and mangrove, should be avoided, prevented or minimized.	

4. RECOMMENDED MITIGATION ACTIONS (INCLUDING MONITORING AND EVALUATION)

4.1 Recommended IEE Determination

Provision of technical assistance, assessments and studies, policy analyses, biophysical and socio-economic research, and stakeholder consultations to be conducted under this program will not have a direct significant impact on the environment. Thus, these are recommended for Categorical Exclusion.

However, activities involving public-private partnerships and technical assistance targeting rehabilitation of infrastructure, which may have negative consequences if environmental considerations are not met, were not factored into this set of activities. Thus, the resulting program design is recommended for a Negative Determination with the following Conditions:

- All technical assistance, workshops, consultations, research, and recommendations for program designs involving livelihood or resource generation actions will include Best Practices regarding sustainable use, including principles of environmental protection, impact mitigation and environment sustainability.
- There will be a sub-contract using locally appropriate best adaptation building standards and infrastructure norms. Subcontracts may be for multiple activities and communities and will be awarded on a competitive, fixed-price basis. In addition to subcontracts for rehabilitation and/or new construction, the Contractor will develop a Quality Assurance Plan for a representative range of small-scale infrastructure activities to be undertaken.
- The Contractor will develop a Manual that will guide environmentally sound design for all community level adaptation infrastructure projects.
- All infrastructure projects that are classified as low-risk will have to be designed and constructed based on the Manual that will be developed by the sub-contractor.
- All infrastructure that are classified as medium risk will first require submittal and approval of an activity description including an evaluation of the environmental implications of the proposed infrastructure or rehabilitation project being developed through an Environmental Documentation Form. These documents must be approved by the Agreement/Contracting Officer Representative (A/COR) and the Mission Environmental Officer, and if deemed necessary by the A/COR, an IEE will be required. Activities that will have potential impacts to the environment must be further reviewed by A/COR and MEO through environment review report that will include Environmental Mitigation and Monitoring Plan (EMMP).

- All other small-scale infrastructure that are not included in the above list but will have a risk threshold of low to medium will follow the conditions stipulated above prior to construction. For infrastructures not included in the above list and will be classified as high risk, an environmental assessment report must be approved by the Mission Environment Officer (MEO) and the Bureau Environmental Officer (BEO) prior to construction.
- If, during implementation, activities are considered other than those described above, such as pilot demonstrations, further environmental review will be conducted by the implementing partner, which will be cleared by the relevant MEO and BEO prior to activity implementation.
- Only native and locally-sourced species of mangroves will be used for any mangrove reforestation activities, following research showing that although a mangrove species may have a wide range internationally, areas of its range become genetically isolated and develop special varietal characteristics or ecological practices.[3]
- These conditions will be integrated in the procurement instruments (contract and/or grant agreement) and shall be reflected in the over-all work plan of the contractors and/or grantees, as appropriate. If necessary, the contract or agreement will require the preparation of an environmental mitigation and monitoring program that will be reviewed and approved by the A/COR and the MEO.
- In accordance with ADS 204.3.9.(a), a due diligence investigation of the environmental record and practices of each sub-contractor will be made and documented by the prime contractor, particularly an analysis of a partner's past record of environmental accountability and how it might affect the partner's specific plans under the PPP.
- Water quality and quantity analysis should be a prerequisite for developing new small-scale water sources and sensitive habitats should be mapped; the Manual should establish environmental screening. selection and eligibility criteria, provide sample forms, e.g. environmental data form/screening checklists/review reports, which should be completed, and standard environmental mitigation and monitoring measures; EM should stipulate that site-specific forms, checklist, simple EMMP should be approved by COR/MEO; a simple, easy to understand and implement EM itself should be approved by COR/MEO.

4.2 Mitigation, Monitoring, and Evaluation

The conditions identified in this IEE will be integrated into the awards to implementing partners, which will require the development of an Environmental Mitigation and Monitoring Program (EMMP). The EMMP will be prepared by the implementing partner and will be approved by the A/COTR and the MEO. The EMMP will be developed at the project or activity level to monitor and implement the conditions stated above. In addition, project work plans and budgets will specifically provide for the implementation of the EMMP. Performance management plans will also incorporate measures of EMMP implementation for review and approval of the A/COTR. The Contractors shall implement, document and report on the conditions.

4.3 Limitations of the IEE

[3] Duke, N. C. (1992). Mangrove flonistics and biogeography. InTropical Mangrove Ecosystems, Eds. A. 1. Robertson and D. M. Alongi, 63-100. Washington DC, American Geophysical Union

This IEE does not cover activities involving:

1. Assistance for procurements (includes payment in kind, donations, guarantees of credit) or use (including handling, transport, fuel for transport, storage, mixing, loading, application, cleanup of spray equipment, and disposal) of pesticides (where pesticides cover all insecticides, fungicides, and rodenticides, etc. covered under the "Federal Insecticide, Fungicide, and Rodenticide Act" FIFRA) or activities involving procurement, transport, use, storage, or disposal of toxic materials, which will require preparation of a PERSUAP in accordance with Reg.216.3(2)(b)(1)-(2) in an amended IEE submitted to Asia/BEO for approval.
2. Activities involving support to wood processing, agro-processing, industrial enterprises and regulatory permitting.
3. Assistance, procurement or use of genetically modified organisms (GMOs), which would require preparation of biosafety assessment (review) in accordance ADS 201.3.12.2(b) in an amendment to the IEE approved by Asia BEO.
4. Procurement or use of Asbestos Containing Materials (ACM) (i.e., piping, roofing, etc.), Polychlorinated Biphenyl's (PCB) or other toxic/hazardous materials prohibited by USEPA as provide at http://www.epa.gov/asbestos and/or under international environmental agreements and conventions, e.g. Stockholm Convention on Persistent Organic Pollutants as provided at http://chm.pop.int

Any of these actions would require an amendment to the IEE duly approved by the Asia BEO.

4.4 Revisions

Pursuant to 22CFR216.3(a)(9), if new activities are added and/or information becomes available which indicates that activities to be funded by the Program might be "major" and the Program's effect "significant," this Categorical Exclusion will be reviewed and revised by the originator of the project and submitted to the Bureau Environmental Officer for approval and, if appropriate, an environmental assessment will be prepared."

MSSION APPROVAL:

Deputy Chief, OEECC	drafter	Feb 22
	Joseph Foltz	Date
Deputy Mission Environmental Officer	Cleared via email	March 8
	Joy Pichico	3/23/12 Date
Mission Director	Gloria Steele	3/23/12 Date

CONCURRENCE:
Bureau Environmental Officer/Asia — Robert Macleod 3/28/12

10

Robert Macleod 3/28/12
Robert Macleod Date

CLEARANCE:
Regional Environmental Officer for Asia & OAPA

concurred by e-mail	March 20
Andrei Barannik	Date

ANNEX 6. RESOURCES

This annex presents useful resources. It is to be edited as the project proceeds.

Authorities

ADS 204 is available at: http://www.usaid.gov/policy/ads/200/204.pdf

Regulation 216 is available at http://www.usaid.gov/our_work/environment/compliance/reg216.pdf

References

Country Reports Directory | Secreatariat of the Pacific Regional Environment Program - SPREP, www.sprep.org/Pacific-Environment/country-profiles-directory

Country Profile on Environment Papua New Guinea - SPREP www.sprep.org/att/IRC/eCOPIES/Countries/Papua_New_Guinea/30.pdf

Country Profiles - Mundi, http://www.indexmundi.com/oceania.html› Factbook › Countries

Environmental Legislative review of Pacific Island Countries: http://archive.iwlearn.net/www.sprep.org/legal/national.htm

Essential Background - United Nations Framework Convention on Climate Change, http://unfccc.int/essential_background/items/6031.php

Greenleaf Environmental Profile - Solomon Colors, www.solomoncolors.com/.../Solomon%20Colors_Mortar_StuccoLR.pdf

PacLII, http://www.paclii.org/databases.html

PEIN Country Profile and Virtual Environment Library | Niue - SPREP, www.sprep.org/.../pein-country-profile-and-virtual-environment-library

Republic of Marshall Island Marine turtle Legislation review, SPREP Report, www.sprep.org/att/publication/000935_RMI_turtle_legislation_review.pdf

- Tuvalu Millennium Development Goals Progress Report 2010/2011, Government of Tuvalu http://unstats.un.org/unsd/mdg/Metadata.aspx
- http://www.spc.int/prism/MDG/mdg_p.htm
- http://www.sprep.org/publication/pein_tuvalu.asp

http://www.who.int/chp/chronic_disease_report/en/

Vanuatu Environmental Profile: www.sprep.org/att/IRC/eCOPIES/Countries/vanuatu/75.pdf

United Nations Convention on the Law of the Sea, www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf