

# CWIP

## **Assessment of the CWIP Special Studies Program**

# Coastal Water Quality Improvement Project

USAID Contract No. 532-C-00-98-00777-00

## **ASSESSMENT OF THE CWIP SPECIAL STUDIES PROGRAM**

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And the

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## **Acronyms**

CR	Contract Result
CWIP	Coastal Water Quality Improvement Project
CZM	Coastal Zone Management
JCRAP	Jamaica Coral Reef Action Plan
NCRPS	Negril Coral Reef Preservation Society
NEPA	National Environment and Planning Agency
NEPT	Negril Area Environmental Protection Trust
NGO	Non-Governmental Organization
NRCA	Natural Resources Conservation Authority
RADA	Rural Agricultural Development Authority
US	United States
USAID	United States Agency for International Development

## **1.0 Introduction**

The Coastal Water Quality Improvement Project (CWIP) is a five-year bilateral development initiative between the Government of Jamaica's National Environment and Planning Agency (NEPA) and the United States Agency for International Development (USAID). CWIP is comprised of five distinct yet interrelated activities aimed at improving coastal water quality.

These activities have been formulated as contract results (CR's) as follows:

- CR1** Support community-based Initiatives to Address Environmental Concerns
- CR2** Improve Operations and Maintenance of Municipal Wastewater Systems
- CR3** Improve Environmental Practices of Industries and Commercial Establishments
- CR4** Develop NGO Partnerships to Expand and Standardize Coastal Water Quality Monitoring
- CR5** Improve Co-ordination of Coastal Zone Management Activities among Jamaican Government Agencies, International Donors and NGO's

CR5 intends to assist in developing a co-ordinated approach to coastal zone management in Jamaica with particular emphasis on the enhancement of coastal water quality. CR5 comprises three components aimed at achieving intended results:

- Coastal Zone Program Inventory and Information Dissemination
- Coastal Zone management Co-ordination
- Special Coastal Resources Management Studies

The Special Studies Program in coastal resources management has contributed to the overall goal of CR-5 developing a co-ordinated approach to coastal zone management in Jamaica with particular emphasis on the enhancement of coastal water quality. Specifically the Special Studies Program has supported NEPA to provide timely and focused information gathering and training to allow for effective local, regional and national environmental management decision-making.

The CWIP contract provided approximately US\$ 100,000 for special studies under CR5. Two special studies were to be supported per year, anticipating ten studies over the life of the present CWIP contract with an average cost of US\$ 10,000 per study.

## **2.0 Scope of Work**

The Scope of Work for this assessment was to:

- Rapidly assess the effectiveness and utility of the CWIP Special Studies Program
- Assess and determine the validity of the criteria and process used for selection of special studies
- Determine methods and means for better promotion of the program among research institutions in Jamaica
- Propose approaches and actions that can be supported by CWIP to institutionalize the program within an existing organization such as NEPA's Coastal Zone Management Branch.

### **3.0 Special Studies Completed**

#### **1. Preliminary assessment of Possible Environmental Impacts of a Proposal to De-silt Drainage Channels Near Springfield, Westmoreland, Jamaica – June 27, 1999**

##### ***The Process***

This study was conducted as a result of a request from the Negril Area Environmental Protection Trust (NEPT), who sought clarification of a proposal from the Springfield farming community and the Rural Agricultural Development Authority (RADA) to clean out the canal bordering the eastern side of the Negril Morass in western Jamaica. NEPT submitted a proposal to CWIP requesting assistance to conduct the study on the proposed drainage and the potential environmental impacts. The Process of proposal submission, review and acceptance was straightforward and efficient. Funds were not disbursed directly to NEPT, but to the consultant identified to carry out the work.

##### ***The Study***

The study was conducted in June 1999 and a written report was produced. The report gave details on the background to the Negril environment and the implementation of a drainage scheme in 1959; clarification of the proposal for cleaning/de-silting the canal; summary of wetland hydrology; environmental impact assessment of the proposed wetland modification; and recommendations. These recommendations include a map of proposed areas of cultivation, a survey to determine elevations, a study of peat compaction/subsidence potential, monitoring of water quality, a historical analysis of land use in the Springfield and Silver Springs regions, and establishment of a permanent meteorological station at Negril.

##### ***Accessibility of Information***

Presentations on the findings of the study were done in the Springfield community and in Kingston. Presentations were well attended although key stakeholders – the representatives from the Ministry of Agriculture were not present. Copies of the report are available at NEPT and CWIP offices.

##### ***Concerns***

Although NEPT had requested for the study to be done, there were some concerns that the final product was not what was requested. The final product revealed the need for more studies to be carried. NEPT had anticipated a more detailed study focusing on implementation of methods to solve the problem. It is felt that constraints on funding resulted in a preliminary assessment study.

##### ***Impact***

An impact was made in identifying the relevant issues related to de-silting the canal and the information was transmitted to relevant stakeholders.

**2. Determination of the contribution of Sea Urchins to Removal of Coral Algae  
January 2000 to August 2001**

***The Process***

A graduate student at the Centre for Marine Sciences, University of the West Indies, required additional funding to carry out certain aspects of research under a PhD program. Supervisors and other members of staff at the University encouraged and supported an application to CWIP for these funds. A two page proposal was submitted and approved within three to four months. The process was felt to be straightforward and uncomplicated. Disbursement of funds occurred after the submission of required interim reports.

***The Study***

The study was to determine if the nutrient levels in the coastal waters of Negril and Discovery Bay had any effect on the ability of sea urchins to graze algae. No threshold limit was determined and constant grazing was observed at all nutrient level tested. The study was successfully completed and will be incorporated in the PhD research as a chapter.

***Accessibility of Information***

A report on the study was completed and submitted to CWIP. A copy is also at the Centre for Marine Sciences, but the information will not become widely available until the research is complete and submitted. An oral presentation on the study was discussed and is still pending.

***Concerns***

No concerns were expressed.

***Impact***

Unable to determine at this stage.

**3. Brief Survey of the Marine Environment in the Vicinity of the Route Planned for  
Fibre Optic Cabling in Long Bay, Negril, April 2000**

***The Process***

CWIP approached the Centre for Marine Sciences for assistance in surveying a site in Negril for which there were plans to lay a fibre-optic cable. A survey had been conducted by the Negril Area Environmental Protection Trust (NEPT) but the Negril Chamber of Commerce felt that some concerns would be ignored and requested the assistance of the Centre for Marine Sciences.

***The Study***

A brief survey was conducted over April 19-20, 2001, assisted by the Rangers and boat services of the Negril Coral Reef Preservation Society (NCRPS). The sites were not found to be unusual but possessing features of great value to the Negril coastal area. Parts of the site were found to be very attractive and a cable running through the reefs would negatively affect tourist use and enjoyment. During cable laying damage to fragile organisms could be expected to extend to 2m on either side. A recommendation was given for alternative sites to be determined.

### ***Accessibility of Information***

A report was produced which is available at the Centre for Marine Sciences, NCRPS and CWIP. The information was used to further the cause of stakeholders in protesting the laying of the fibre-optic cable in the area.

### ***Concerns***

No concerns were expressed.

### ***Impact***

Mostly in Negril but in other protected areas where fibre-optic cable laying was also an issue – Montego Bay Marine Park, Portland Bight Protected Area, and Palisadoes/Port Royal Protected Area.

## **4. Resource Guide to Coral Reef Educational material Available in Jamaica January to August 1999**

### ***The Process***

The Jamaica Coral Reef Action Plan (JCRAP) Steering Committee was established under the then Natural Resources Conservation Authority (NRCA) (now NEPA, the National Environment and Planning Agency) with a mandate to prepare a Coral Reef Action Plan for Jamaica. One section of the Action Plan dealt with Environmental Education and Awareness. The JCRAP Steering Committee identified the need to determine the extent of the relevant existing material on coral reefs available in Jamaica. The JCRAP Steering Committee approached CWIP for the funding to carry out the work.

### ***The Study***

A total of twenty-seven institutions were contacted and/or visited across the island. The research led to over five hundred (500) references with fourteen (14) different types of media available. The catalogue includes an entry number, title of work, date of publication, author/editor, publication details, abstract, audience target level and library/institution location. Cross-referencing is also made between libraries/institutions and materials available.

### ***Accessibility of Information***

Copies of the report were produced as hard copy and CD-ROM and were given to all libraries that participated in the media of their choice. Copies are also available at CWIP and NEPA. A presentation of the data collected was given at the offices of NEPA and relevant stakeholders were invited. A press release was also done.

### ***Concerns***

A concern was expressed by the Steering Committee on the static nature of the catalogue and that there should be some means of up-dating the information, at least annually, as publications were constantly coming out. Entry forms are included in the back of the report for new entries. These were to be submitted to NEPA, but none have been received and a less passive approach will have to be taken to up-date the resource guide.

### ***Impact***

Several requests were received for copies of the document from interested parties, including a request from Washington, USA.

## **5. Beach Sands Resource Assessment - Negril, Jamaica August 1999 to August 2000**

### ***The Process***

For several years it had been reported that Long Bay Beach in Negril had been experiencing dramatic rates of sand erosion. The Department of Geography and Geology, UWI in conjunction with the Coastal Zone Management Unit of the then Natural Resources Conservation Authority (NRCA) (now NEPA, National Environment and Planning Agency) proposed to undertake a long-term investigation of the problem. CWIP was approached for funding under the Special Studies Program.

### ***The Study***

A detailed examination of the historic and physical evidence for beach erosion and general geomorphological characterization of Long Bay was done, in addition to a preliminary land use survey of the beachfront properties along the bay. Despite concerns in Negril, beach erosion is not a uniformly occurring phenomenon along the length of the beach and the study concluded little major beach loss between 1941 and 1990. The northern section of the beach is experiencing shoreline erosion which has been combated with groynes, breakwaters and beach replenishment. The causes of erosion were identified and management responses given.

### ***Accessibility of Information***

A written report was produced which is available at UWI, CWIP, NEPA, NCRPS and NEPT.

### ***Concerns***

No concerns were expressed.

### ***Impact***

The impact of the study is yet to be determined.

## **6. White River Rapid Assessment, April 3-11, 2000**

### ***The Process***

A study was requested by residents and proprietors of businesses in the area who wanted to know the status of the water quality of the river as concerns have been expressed about possible pollution and the suitability of the water for recreational use.

### ***The Study***

A general study of the White River Basin, Ocho Rios, was done. Information was collected on chemical, biological and bacteriological parameters of water quality, uses of the river and adjoining land, presence of industrial activities, farming and housing, and physical configuration of the river course and drainage. Conclusions included the need for a more detailed study to isolate pollution sources and considerations to be taken into account including the enforcement of existing laws, connection of residents to the sewage system and attention paid to the use of the river.

### ***Accessibility of Information***

Findings of the study were communicated to relevant stakeholders. A report was prepared and is available at CWI and UWI.

### ***Concerns***

No concerns were raised.

### ***Impacts***

To be determined

#### **7. Examination of the Solid Waste Management Governance Frameworks in Port Antonio, Started: November 2001 (scheduled to end August 2002)**

To effect the clean-up Port Antonio and encourage better disposal practices. Also to strengthen through advocacy the North Eastern Parks and Markets (NEPM) and Parish Council.

#### **8. Assessment of the Impact of Groundwater Sources of Nutrients of Coastal Water Quality, Proposed**

In association with the Chemistry Department, UWI at sites in Negril and Ocho Rios.

## **4.0 Assessment of the Criteria and Process for Selection**

Based on the guidelines for the Special Studies Program the following are given as guidance for appropriate special studies:

- “Address priority environmental management decisions that impact upon local communities (examples include: sewage collection/treatment policies, land use controls to guide new development, and new measures to enhance enforcement of environmental regulations);
- Focus on conservation of key coastal resources at greatest risk of destruction or degradation (examples include: policies, regulations and management measures to guide protection of coral reefs, mangrove forests, and wetlands);
- Establish sound financial bases for private or public operation of environmental services, user fees for publicly owned resources, and incentives to encourage desirable private sector environmental initiatives);
- Assist in the refinement or development of environmental policy and legislation that promotes sustainable coastal resources management;
- Provide input to influence development planning and building practices in shorefront areas; and
- Determine appropriate standards for treatment and management of solid and liquid wastes, resource use in estuaries and marine environments, environmental health in near shore bathing waters, and local coastal water quality monitoring.”

The process for selection of projects under the Special Studies Program currently appears to be adequate and accommodating. Projects are selected in two modes:

1. Responsive – Where an application is received (verbally or written) and processed through the submission of a project proposal, and assessed by the CWIP/NEPA staff.
2. Proactive - Where CWIP/NEPA recognizes a need for research or a gap in information, and seeks to fill the need, by identifying a project that can do so.

The main focus of the Special Studies Program is to provide timely and focused information gathering and training to allow for effective local, regional and national environmental management decision-making.

A major positive aspect is the range of issues that have been addressed, ranging from community based concerns to academic studies.

## **5.0 Promotion of the Program**

Currently, promotion of the program is through CWIP and NEPA staff, newsletters and press releases, and word-of-mouth from recipients or other funding agencies. The CWIP Program is widely known in environmental and academic circles in Jamaica. However, promotion of the Special Studies Program should be a focus as this program is not well known.

Promotion should have two purposes:

1. To advise potential recipients of the availability of funding, the process of application, and the criteria for selection.
2. To share information on successful projects that have been completed.

The following methods are recommended:

1. Information sharing at meetings with other funding agencies/partners
2. "Special Studies Update" at CWIP Workshops, Conferences or Training Sessions
3. Discussions with institutions/individuals conducting applied research

Funding is still available before the end of the CWIP Program for a few short-term (6 month) projects. These projects would have to be implemented and completed before the end of the CWIP Program in December 2002.

## **6.0 Institutionalization of the Program**

### ***Selection of an Institution***

December 2002 will see the end of the CWIP Program after five successful years in Jamaica. The Special Studies Program has produced some significant reports through various projects. It is recommended that this Program continue in some format through the institutionalization with an existing body.

A forum with relevant stakeholders, potential partner institutions, and Special Studies Program recipients should be held to discuss possible linkages and ideas for institutionalization.

An agency such as NEPA appears to be a good choice but with existing constraints on funding, NEPA could not be expected to capitalize such a program and alternative sources of funding would have to be identified.

The University of the West Indies, through several departments has been a recipient of Special Studies funding. The University also appears to be a good choice for institutionalization and has several advantages over a government agency. These include:

1. Being actively engaged in research
2. Having a good international reputation
3. Having the experience of accessing research grants
4. Having the experience
4. Being a more likely choice for receiving grants from international donors

Other possibilities for institutionalization include the National Council on Ocean and Coastal Zone Management at the Ministry of Foreign Affairs.

***Identification of possible sources of funding***

Funding sources would have to be identified to capitalize the Special Studies Program. There are several grant making institutions currently operating in Jamaica and it recommended that another independent fund not be started for the following reasons:

1. Competition for the same international resources
2. Fragmentation of the corpus which would reduce potential for growth

It is recommended that an existing fund administer the Special Studies fund under an agreement with the host institution, or that funding be sought directly by the institution.

## List of Key Stakeholders Interviewed

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Mr. Krishna Desai	Director of the Coastal Zone Management Branch, NEPA
Mr. Anthony McKenzie	Immediate Past Director of the CZM Branch, NEPA
Mr. Patrick Daley	Environmental Foundation of Jamaica
Mrs. Effie McDonald	Canadian Green Fund
Mr. Harvey Webb	CEO of Portland Environment Protection Agency
Ms. Carol Grant	Project Manager for Solid Waste Management, PEPA
Mr. Trevor Spence	Consultant, Solid Waste Management, PEPA
Mr. Peter Espeut	Past Chairman, Jamaica Coral Reef Action Plan Steering Committee
Prof. George Warner	Director, Centre for Marine Sciences, UWI
Mrs. Susan Otuokon	Past Executive Director, Negril Area Environment Protection Trust
Ms. Leandra Chow	Graduate Student, Centre for Marine Sciences

## List of Documents Reviewed

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**Coastal Water Quality Improvement Project. June 27, 1999.** Preliminary assessment of Possible Environmental Impacts of a Proposal to De-silt Drainage Channels Near Springfield, Westmoreland, Jamaica . USAID Contract No. 532-C-00-98-00777-00.

**Coastal Water Quality Improvement Project. August 31, 2999.** Resource Guide to Coral Reef Educational material Available in Jamaica. USAID Contract No. 532-C-00-98-00777-00.

**Coastal Water Quality Improvement Project. Draft White River Rapid Assessment.** USAID Contract No. 532-C-00-98-00777-00.

**Coastal Water Quality Improvement Project. No Date.** CR 5 - Improve Coordination of Coastal Zone Management Activities among Jamaican Government Agencies, International Donors, and NGOs -- Coastal Zone Management Special Studies Implementation Plan.

**Department of Geography and Geology, UWI. August , 2000.** Beach Sands Resource Assessment - Negril, Jamaica. Draft Report on Phase 1.

**Warner, G. April, 2000.** Brief Survey of the Marine Environment in the Vicinity of the Route Planned for Fibre Optic Cabling in Long Bay, Negril.



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