

R2RW

**Semi Annual Report
April 2001 – September 2001**

The logo consists of the letters 'R' and 'D' in a stylized, serif font. The 'R' and 'D' are connected at the top, with the 'R' having a curved top and the 'D' having a similar shape. The letters are white and set against a dark green background.

RD

Ridge To Reef Watershed Project

USAID Contract No. 532-C-00-00-00235-00

R2RW Semi Annual Report April 2001 - September 2001

October 31, 2001

Prepared for the:

Government of Jamaica
National Environment and Planning Agency

And the

United States Agency for International Development

Implemented by:

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PREFACE

The Ridge to Reef Watershed Project (R2RW) is a five-year bilateral initiative between the Government of Jamaica's National Environment and Planning Agency (NEPA) and the Government of the United States Agency for International Development (USAID). The Project focuses on three distinct, but interrelated activities working towards the objective of improving the management of Jamaica's watersheds. The R2RW Project Components are:

- Component 1 Sustainable Environmental Practices
- Component 2 Compliance and Enforcement
- Component 3 Institutional Strengthening

The Project is directly supportive of the USAID Strategic Objective 2 (SO2) – Improved quality of key natural resources in selected areas that are both environmentally and economically significant. Associates in Rural Development, Inc. (ARD) implement the R2RW Project with assistance from Cargill Technical Services, Inc. (CTS).

This is the second Semi-Annual Report (SAR) produced under the R2RW Project, and covers the period April 1, 2001 to September 30, 2001. This SAR provides a comprehensive overview of the progress on project implementation under USAID Contract No. 532-C-00-00-00235-00, and reports on progress on meeting the R2RW First Annual Work Plan. This SAR contributes to the fulfillment of the overall Ridge to Reef Watershed Project Life of Project Strategy, as well as reports on progress made under the R2RW Performance Monitoring Plan (PMP). Finally, this SAR summarizes achievements under the agreed performance benchmarks, and reports on the financial operations for the period April to September 2001.

The Terminology of "Contract Results" and "Project Components" are used interchangeably in this report. The distinction lies in the fact that the R2RW Project is being implemented under a Contract with Associates in Rural Development, and the contract contains specific results that are to be achieved. As the same time, the Project is being implemented through a series of Strategic partners to whom no such contract applies, and hence the term component is a more accurate definition of intent.

SUMMARY OF PROJECT ACHIEVEMENTS

The reporting period covers the project inception in April 2001 to the end of September 2001. Major accomplishments during this period can be summarized as follows:

- Conducting of a Strategic Action Planning Workshop for the Great River Watershed at the Knockalva Agricultural High School, in Ramble, Hanover in June 2001.
- Establishment of the Great River Watershed Management Committee in July 2001 incorporating stakeholders from the public sector, the private sector, Community Based Organizations and Non-Governmental Organizations.
- Formation of subject matter task forces under the GRWMC to address specific issues and problems. Four task forces were formed in the GRW: Production and Marketing; Water and Sanitation; Public Awareness; and Compliance and Enforcement.
- Initiation of a pilot sanitation demonstration project in Retrieve, Westmoreland to develop low-cost, water based, household septic systems suitable for rural communities.
- Development of a draft proposal to address community wide sanitation programs under a contract with the Construction Resources Development Center.
- Conducting of a feasibility study on the establishment of a vegetable, timber, and fruit tree crop nursery at Montpelier in St. James.
- Functioning and operation planning, coordination and monitoring mechanisms with Project Staff and Clients including:
 - Project Implementation Committee
 - Inter-Agency Steering Committee
 - Joint CWIP/R2RW Senior Management Team
 - Bi-weekly Project Team Meetings
 - Bi-weekly NEPA Senior Managers Meeting
- Continued support to the National Integrated Watershed Management Council.
- Production of public awareness materials including a R2RW newsletter, project reports, articles, press releases and radio interviews.
- Expanding close working relationships with relevant branches of NEPA (the SWB, the PPPC, and the C&RS) and staff of USAID so as to ensure smooth project implementation.
- Production of a Gender checklist for use to assess project initiatives, and a draft gender strategy for incorporation of gender considerations.
- Establishment of a public awareness strategy for the Great River Watershed and national activities.
- Preparation of a draft 'Policy and Legislative Framework for Watershed Management in Jamaica - A Review of Existing Laws and Regulations.

ACRONYMS

ARD	Associates in Rural Development
ASC	Administrative and Support Center
COP	Chief of Party
CTS	Cargill Technical Services
CWIP	Coastal Water Improvement Project
EE&C	Environmental Education & Communication
EJASP	Eastern Jamaica Agricultural Support Project
GNRS	Governance and Natural Resources Specialist
GOJ	Government of Jamaica
GRW	Great River Watershed
ISC	Inter-Agency Steering Committee
JAS	Jamaica Agricultural Society
MLGYCD	Ministry of Local Government, Youth and Community Development
NEEC	National Environmental Education Committee
NEPA	National Environment and Planning Agency
NIWMC	National Integrated Watershed Management Council
NGO	Non-Governmental Organization
NRCA	Natural Resources Conservation Agency
PAPAS	Participation and Public Awareness Specialist
PDC	Parish Development Committee
PIC	Project Implementation Committee
PMP	Performance Monitoring Plan
RADA	Rural Agricultural Development Authority
R2RW	Ridge to Reef Watershed Project
SAPW	Strategic Action Planning Workshop
SAR	Semi Annual Report
SDC	Social Development Commission
SO2	Strategic Objective number 2
SOW	Scope of Work
SWB	Sustainable Watersheds Branch
TAP	Targeted Appropriate Practices
TOR	Terms of Reference
USAID	United States Agency for International Development
WM	Watershed Management
WMS	Watershed Management Specialist

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INTRODUCTION

This SAR covers the period April 1, 2001 to September 30, 2001. This period represents the last half of the first year of planned 5-year Ridge to Reef Watershed (R2RW) Project. The R2RW Project built on the start given during the first 6-months to consolidate a solid and productive start-up period that lays the foundation for project implementation. A First Year Work Plan and Performance Monitoring Plan (PMP) were developed, and work methodically undertaken to achieve as many of the outcomes as possible.

Watershed Management is complex. There are a host of environmental, economic and social issues to be addressed by a large number of stakeholders. These include more than 10 Government of Jamaica (GOJ) agencies, many non-governmental organizations (NGOs), a host of community-based organizations (CBOs) and a number of active and concerned private sector agencies. The legal framework is complicated by some 14 laws many of which are out-dated, and limited enforcement of these laws.

The core team has coalesced into a functioning, structured entity capable of leading the R2RW Project over the next 4 years. The core team meets regularly and has had spirited dialogue on a variety of issues facing the Project including:

- What is a strategic partner;
- How do we enhance community involvement;
- What are the best Targeted Appropriate Practice (TAPs); and
- How do we devise joint solutions to watershed issues?

R2RW is focused on enhancing sustainable environmental practices, improving compliance and enforcement, and strengthening the capacities of organizations involved in watershed management. But more than just simply achieving these goals, R2RW is also about the **process** of achieving these goals. In addressing economic issues such as productivity and income generation, social issues such as gender and public awareness, and environmental issues such as poor sanitation and soil erosion, the R2RW simultaneously works to develop functioning coordination mechanisms that will sustain Project interventions through our strategic partners. This process orientation affects the pace of implementation in that it takes longer to develop projects while forging joint program initiatives through a Watershed Management Committee (WMC). Work during the reporting period to build the Great River Watershed Management Committee (GRWMC), its four issues oriented task forces, and the National Integrated Watershed Management Council (NIWMC) serve as the foundation on which to build a feasible integrated watershed management model.

The first four sections of this Second Semi Annual Report (SAR) highlights progress on the three R2RW Project components, as well as the crosscutting themes that comprise the Ridge to Reef Watershed Project. The three components are:

Component 1: Through targeted organizations, sustainable environmental management practices by resource users identified and supported.

Component 2: Incentives for and obstacles to enforcement of targeted existing environmental regulations identified and solutions supported.

Component 3: Capacity of Jamaican government agencies, international donors, and private sector and civil society organizations to implement effective watershed management programs enhanced.

Crosscutting Themes: The three themes examined are Gender Considerations, Grant Program; and Public Awareness.

The first four sections of this document assesses progress on each of the above components and cross-cutting themes for the period April 1, 2001 to September 30, 2001, according to the Life of Project Strategy and First Annual Work Plan. Section 5 examines Project Management aspects including project operations, project management and oversight, monitoring and reporting, and staffing. Section 6 presents an update of the Performance Indicators that were originally set out in the Performance Monitoring Plan. Section 7 proposes performance benchmarks for the next six months. Finally, Section 8 presents a summary of program expenditures for the reporting period.

1.0 COMPONENT 1: THROUGH TARGETED ORGANIZATIONS, SUSTAINABLE ENVIRONMENTAL MANAGEMENT PRACTICES BY RESOURCE USERS IDENTIFIED AND SUPPORTED.

1.1 Introduction

Since 1944 Jamaica has had a series of projects with the basic objective of facilitating adoption of technologies that reinforce resource conservation while enhancing income generation and improving the well being of small farmers especially those cultivating marginal hillside lands. However, results varied and sustainable management for efficient production and resources conservation remains illusive. In many cases the projects were unsuccessful because of over reliance on engineered structures such as terraces, contour bunds and drains that farmer were not taught to maintain or were unable to maintain, over emphasis on “farmer groups” that were not linked to the wider development effort and dependence on free or subsidized inputs to encourage farmer participation.

Lessons learned from these projects indicate that where end user stakeholders were not involved in the planning of project activities technologies introduced were not fully understood and if inappropriate were not accepted. Often, agents promoting resource conservation technologies were not part of an integrated community approach, or were unable to deliver project interventions in a sustainable manner

Consequently, Component 1 will not only concentrate on introducing and extending Targeted Appropriate Practices (TAPs) but will focus on previously missing components – strengthening the capacity of community based organizations to facilitate effective transfer and integration of new technologies into production systems and development of sustainable practices.

Working with community-based organizations, private organizations and individuals, NGOs and government agencies, Component 1 has embarked on a search for appropriate technologies that are environmentally and economically sustainable. Its activities over the past six months are presented below.

1.2 Baseline Assessment of the Great River Watershed (GRW)

A baseline assessment was considered essential to establish benchmarks, the social and economic situation of stakeholders and the capacity of partners with which R2RW will work. The Rapid Rural appraisal to establish this baseline was completed during the first SAR reporting period. The findings on the biophysical as well as the socio economic states are summarized in the report entitled “Rapid Rural Appraisal of the Great River Watershed. The information was generated from review of literature, documents, maps, limited interpretations of aerial photography, field reconnaissance, surveys and interviews of leaders of community-based organizations, NGOs, officers of government agencies, farmers and residences of the Great River Watershed. Also, during the first reporting period, the R2RW compiled a profile of some 25 other watershed management projects and initiatives that were completed or are on-going in Jamaica.

The Great River Watershed is in a state of environmental and economic decline. Agriculture, the major economic activity, faces many challenges, and as returns to investment decline management is reduced. With reduced management comes less attention to natural resource conservation. A large number of squatters that recently moved into the area have established communities without adequate facilities for garbage and excrement disposal and have created sanitation crises and threats to environmental stability. It is against the background summarized above that R2RW has begun to initiate watershed management activities in the Great River Watershed.

During the reporting period, the R2RW Project focused on the collection and assessment of gender dis-aggregated data to serve as a basis for making project interventions. A background paper on gender considerations and guiding principles for the development of a gender strategy was presented for the project. In addition, a gender-disaggregated data from secondary sources was compiled to provide a general gender profile of both project areas.

A compilation of lessons learned on experience of Jamaican and International watershed management projects was prepared and presented at the Strategic Action Planning Workshop (SAPW) for the Great River Watershed in June 2001. The document summarizes lessons learned in six categories: technology generation; soil conservation; participation and community development; governance; project management and environmental policy. Appendix 1 contains the document presented to the SAPW.

The assessment of the capacity of strategic partners to engage in watershed management programs continued during the reporting period. The key strategic partners R2RW will be working with are listed in Table 1:

Table 1: Key strategic partners of R2RW

GOJ	Private Sector	NGOs	CBOs
NEPA	Sandals	Sanitation Support Unit	Retrieve Watershed Management Committee
SDC	Montpelier Citrus Company	Construction Resource Development Center	Bethel Town
RADA	Cool Runnings	Montego Bay Marine Park	Chester Castle
Forest Department	Jamaica Hotel and Tourism Association	Recycle for Life	Mafoota
Public Health Department	Eco-tourism Operators		Seven Rivers
National Water Commission	Round Hill		

Other organizations that have a role to play in the R2RW include JAMAL, the JSDNP, the Jamaica Information Service, the Tourism Product Development Company, the Coffee Industry Board, and the Jamaica Memory Bank.

The specific extent of existing practices to establish benchmarks for monitoring and evaluation was advanced during the reporting period. A list of 19 target communities was identified in the four parishes contained in the Great River Watershed (See Appendix 2). Building on the work of both the RADA to assess these target communities, and the SDC to develop community profiles, a formal request was made to both organizations for access to detailed data to adequately assess project progress over the life of the Project.

1.3 Support Communication and Public Awareness in the Great River Watershed

In the last six months, the project has initiated a step-wise process to develop a communication and public awareness strategy with the partners the R2RW will be working with in the GRW. The R2RW has not yet begun work in the Rio Grande Area, and therefore, the report for this component focuses primarily on what has been achieved at the GRW level only. Achievements at the national level are described later in the report.

To date, in the GRW, the project has clearly identified both its strategic partners and its key audiences to be reached through public awareness efforts. Key audiences have been listed in Table 2:

Table 2: Key audiences for public awareness activities

Primary Audiences	Secondary Audiences
<ul style="list-style-type: none"> ▪ Farmers ▪ Youth ▪ Upper Watershed Households ▪ Lower Watershed households ▪ Older folk with Indigenous Knowledge ▪ Private Sector in the Watershed ▪ Community leaders ▪ CBO leaders ▪ School Children 	<ul style="list-style-type: none"> ▪ Private Sector on the coast ▪ Police ▪ Judiciary ▪ Political Representatives ▪ Civil Service ▪ NGOs ▪ Tourists ▪ Media

The subject areas where further information is needed on specific watershed management techniques have been identified in Table 3:

Table 3: Primary subject areas for public awareness activities

Priority Subject Areas for Public Awareness Activities	
▪ Sanitation	▪ Forestry
▪ Solid waste management	▪ Agro-forestry/tree crop production
▪ Water quality	▪ Biodiversity Protection
▪ Land husbandry and soil conservation	▪ Environmental health
▪ Organic farming	▪ Eco-tourism
▪ Coral reef protection	▪ Cultural heritage development
▪ Compliance and enforcement	▪ Local action and community involvement
▪ Integrated pest management	▪

During the reporting period, the Public Awareness accomplishments for this component have been:

- Formalization of the Public Awareness Task Force in the GRW.
- Formalization of strategic partnerships in the GRW.
- Draft of an initial communication and Public Awareness strategy for the GRW.
- The development of a partner database that identifies the capacity and training needs of the partners to be involved in public awareness activities.
- An initial inventory of existing materials that could be used in education for watershed management.

- Training sessions for partners in audience assessment and video training.
- Partnership with SSU and the development of a specific communication approaches.
- Tour of the GRW by public awareness partners.
- Initiation of a video on the GRW to be used for community outreach and mobilization (part of the video training initiative) along with accompanying print materials (brochure or booklet).
- Participation in public awareness events in Retrieve organized by the Sanitation Support Unit and assistance to the SSU with the development of basic introductory materials.
- Initiation of oral environmental history documenting indigenous environmental knowledge and participatory community documentation or environmental audits as part of the audience/community assessment and video training initiative.

The specific achievements for this component have been:

- Specific training materials;
- Specific training reports;
- Minutes of the PA Task Force meetings;
- Partner database report;
- Inventory report; and
- Initial photographs and video documentation on the GRW.

Finally, a series of maps of GRW showing topography, land use, infrastructure, soils and rainfall were prepared for use at the SAPW. The maps were also used for that display at Denbeigh, and other promotional events.

1.4 Support the Development Targeted Appropriate Practices (TAPs)

TAPs are defined as known technologies with potential for improving productivity and income without requiring resources or inputs not available to users and will not increase environmental degradation. Based on the knowledge base formed from studies in the Great River Watershed (GRW) and contacts made through local and foreign institutions Component 1 was able to develop a comprehensive list of technologies deemed appropriate to the watershed. This list was presented to stakeholders at a Strategic Action Planning Workshop held at Knockalva Agricultural High School in the GRW (see Appendix 2).

These technologies were well received by the stakeholders. Based upon discussions of the proposed TAPs, stakeholders in the GRW were asked to prioritize their top areas for action to be taken to improve the GRW. Sanitation facilities for a better environment in the upper watershed area ranked highest and a crop nursery to support improved farm production was ranked number two. Other needs that could benefit from improved technologies and ranked in the top priorities are soil and water conservation practices, crop cultivars with genetic resistance to known economic diseases, e.g. black Sigatoka disease in plantain and banana, and IPM practices for insects as well as vector transmitted diseases especially viruses, e.g. virus in hot and sweet peppers. The priority action areas for the development of projects in the GRW are listed in Table 4:

Table 4: Priority action areas for the GRW

Priority	Action Area
1	Sanitation Projects in Upper Watershed Areas
2	Establish Nursery at Montpelier to Produce Vegetable, Orchard, Ornamental and Timber Seedlings
3a	Sanitation projects in the Lower Watershed Area
3b	Develop a Public Education Strategy
3c	Establish Great River Watershed Management Council
4a	Introduce New Technologies in Land Management
4b	Integrated Pest Management Plan in Specific Areas
4c	Provide Seedling to Farmers on a cost sharing basis
4d	Establish a Centralized Storage and Distribution Center for Products and Information
5	Promote Adoption of Sound Environmental Practices Via Use of Incentives such as Competitions
6	Develop Water Quality Baseline Data
6	Implement an Ongoing Water Quality Monitoring Program
7	Host Workshops for the Development and Implementation of a Tourism Plan for GRWA
7	Develop an Inventory of Sites of Natural and Historic Importance

Partners and Priority Projects

The Strategic Action Planning Workshop led to identification of Strategic Partners and formation the Great River Watershed Management Committee (GRWMC) to guide development of the priority action areas in the watershed. This GRWMC established four task forces to direct and monitor sub-project activities. Of these four taskforces three, Production and Marketing Sanitation and Water Quality, and Public Awareness task forces are focused on sustainable environmental practices in Component 1, and are presently planning and prioritizing sub-projects. Key partners in these three task forces are identified in Table 5:

Table 5: Key partners in GRWMC task forces

Key Partners in GRWMC Task Forces		
Production & Marketing	Water and Sanitation	Public Awareness
NEPA	NEPA	NEPA
RADA	National Water Commission	Public Health Department
Forest Department	Sanitation Support Unit	RADA
TPDCo	Public Health Department	Sanitation Support Unit
Coffee Industry Board	Water Resources Authority	Montego Bay Marine Park
Jamaica 4-H Clubs	Social Development Commission	Recycle for Life
CBOs	CBOs	CBOs

During the reporting period, the task forces began work on four of the top five priority areas (only the development of sanitation projects in the lower watershed was not specifically addressed)

identified at the SAPW. This demand driven approach to Project management is in keeping with the R2RW strategy of the Project to design and implement projects through strategic partners.

Other TAPS

In addition to the above, the WMS also participated in the following activities that contributed towards meeting the Component 1 objective:

- Black Sigatoka resistant plantain and banana cultivars identified and imported into Jamaica. In addition, a nursery for propagating black Sigatoka disease resistant plantain (FHIA -20) and banana FHIA-25 established.
- Consent of targeted partners to assist in multiplication Jamaica Producer Group (JPG) and distribution Ministry of Agriculture, RADA, Banana Export Company (BECO) and Eastern Jamaica Agricultural Support project (EJAS) obtained.
- IICA has agreed to assist R2RW in the identification of sources and the importation of tropical and low-chill temperate fruits to expand fruit production and marketing.
- University of Florida is assisting R2RW to acquire low-chill requiring temperate fruits that will facilitate efficient exploitation of the cooler highlands of the watersheds and open new markets of farmers in these locations

1.5 Enhance Community Involvements

The R2RW Project is striving to foster *community-based environmental stewardship* with respect to community involvement in project activities. Given that the GRW contains in excess of 40 communities and the RGW contain more than 20 communities, it is clear that in the scope of the project's timeframe, it will not be able to initiate specific mini-projects in all of the communities in both watersheds. Nevertheless, it can encourage programs that foster localized watershed stewardship initiatives in each of these areas.

During the reporting period, the R2RW was engaged in the following activities to enhance community involvement.

- Identified community members and youth representatives to serve on the various task forces in the GRW.
- Initiated the collection of baseline information from secondary sources in order to fully understand the existing physical, social and economic realities in the GRW.
- Initiated an audience assessment process that will help to identify the key environmental issues and level of environmental awareness in a wide cross section of GRW communities.
- Held initial public awareness meetings in the community of Retrieve in order to sensitize the community to the sanitation demo project and to mobilize them for further community action.
- Through the video training, started to document oral histories of the GRW from among the communities to use as a community education tool.
- Initiated the production of an introductory video and print materials to profile the GRW and to inform communities about the project.
- Completed a short "think piece" paper on community stewardship initiatives to inform the project of potential strategies.

- Developed a draft strategy for community involvement that includes a program for “training trainers” to conduct strategic action planning workshops within GRW communities for the development of stewardship initiatives.

These activities need to be expanded to incorporate projects that engender community stewardship programs. Ideas advanced by stakeholders include the staging of community competitions on cleanest communities.

1.6 Encourage Private Sector Participation

Private Sector Organizations (PSOs) active in the Great River Watershed area were identified, and attempts were made to reach out to these organizations to encourage their participation in project activities. Invitations were made to agricultural, eco-tourism, eco-manufacturing and mainstream tourism companies to participate in stakeholder meetings, the GRWMC and task forces. However, it was found that participation by PSOs in these meetings tended to be low as most companies prefer to participate directly in projects that address problems, rather than meetings to design solutions. Specific activities to encourage private sector participation in the reporting period included:

- Two major private companies (Jamaica Producers Group and Montpellier Citrus Company) have agreed to work with R2RW in multiplying important crops.
- A list of technologies deemed appropriate for Improved income generation and resource conservation within context of local situation have been compiled.
- The Montpellier Citrus Company has indicated a willingness to work with R2RW to develop organic citrus production for the Great River watershed. In addition, they have indicated their willingness to cooperate with R2RW in the setting up of a plant nursery to produce healthy seedlings.

1.7 Summary Table

Table 6: Summary Progress on Component 1 – April 2001 to September 2002

Activity	Year One Tasks	Status	Comments
Conduct Baseline Assessment	Identify priority geographical areas	Completed for the Great River Watershed	Nineteen communities for priority attention identified in the GRW. Identification of communities in the Rio Grande will take place during Year 2
	Produce Rapid Appraisal of the Great River Watershed	Done	Agriculture in decline, new squatter communities pose threat to environment
	Conduct Inventory of other past and present watershed projects	Done	Report presented in SAR 1 appendix.
	Assess gender disaggregated data in review process	Done	Preliminary gender framework drafted
	Prepare lessons learned document on experience of Jamaican and International WM Projects	Done	See Appendix 1
	Assess capacity of strategic partners	On-going	Capacity is dynamic and can change with government needs and donor contributions

Activity	Year One Tasks	Status	Comments
Conduct Baseline Assessment (cont'd)	Identify extent of existing practices to establish benchmarks for monitoring and evaluation	On-going	Request made to RADA and SDC to develop comprehensive community profiles
Support Communication and Public Awareness Activities	Review capacity of strategic partners for public awareness activities	Done	This has been completed in the GRW. Partner database exists
	Prepare education materials (brochures, newsletter, PowerPoint presentations) to inform communities about the project	On-going	Three newsletters produced. Video on the GRW started
	Prepare maps of GRW showing topography, land use, and infrastructure	Done	1:50000 maps of the GRW prepared showing infrastructure, soils, and land use
	Link with national NEEC mechanisms	On-going	Use of NEEC mailing list for mascot competition. Regular consultations with secretariat take place
	Identify partners to support local public awareness objectives	Done	PA task force established. Public Awareness strategy identifies lead and supporting agencies for specific activities
	Build capacity of strategic partners	Started, but will be on-going.	Training in video skills, audience needs assessments completed. Additional training needs identified
Support the Development of TAPs	With strategic partners, define and identify process and TAPs	Done	TAPS identified
	Determine existing knowledge and awareness levels of TAPs	On-going	Knowledge base is lower than anticipated, awareness not much higher especially among farmers
	Establish criteria for TAP selection and validation	On-going	Some selection criteria developed, validation awaits field-testing
	Identify partners for TAP promotion	On-going	Joint projects being developed under Production and Marketing task force
Enhance Community Involvement	With strategic partners, develop an approach to community involvement	On-going	Strategy drafted. Roles and responsibilities to be confirmed
	Conduct participatory community needs assessment of identified communities	Started.	Discussions on-going with the SDC on developing community profiles
	Identify vulnerable groups	Done	Youth, rural women clearly identified

Activity	Year One Tasks	Status	Comments
Encourage Private Sector Participation	Identify PSOs in watershed areas	On-going	If small farmers are classified as private sector the potential for private sector participation is good
	Identify ways to involve PSOs and other relevant organizations in watershed management	On-going	More small farmers groups outside of traditional community organizations are being identified
	Develop research, mentoring and credit programs	Not done	Project implementation stage not yet begun
	Establish linkages between Economic and environment committees of PDC and target communities	Not done	PDC and sub-committees not active in GRW where R2RW has been most active. Situation complicated by watershed being in 4 Parishes

1.8 Issues and Resolution

Issue

Making connections with partners, especially RADA's extension workers became problematic as field activities commenced. Field officers visit the regional office once a week, but this is not sufficient to coordinate project activities. The suggestion was made for R2RW to purchase cell phones for field agents, but this was rejected because it is not standard practice for other GOJ ministries, who would then demand similar treatment.

Resolution

The affected RADA officers eventually purchased cell phones at their personal expense.

Issue

The community involvement process within the GRW has perhaps been slower than anticipated. It was expected that the SDC would take a lead role in the process of community mobilization. However, it is becoming increasingly clear that this may not happen as the SDC is presently also focusing on the Local Government Reform Planning process and may no longer be as available.

Resolution

To explore the involvement of STTA in lieu of SDC at this point in time

Issue

Additional editorial support was needed to ensure that all outputs from the project have been properly vetted, written and edited.

Resolution

Based upon a staffing function assessment, a new position of Project Assistant will be hired to assist with editorial work. Also, the project will adopt the guidelines of USAID to ensure that proper procedures are followed.

Issue

There has also been a need to promote the component's accomplishments and to give the project a higher profile. This has not been done to the degree desired because the project has not yet had its official launch and because the effort was first made on strengthening partnerships.

Resolution

Now that these are much stronger, a higher profile for the component's activities will be sought. A goal of at least 2 public relations features per quarter has been established.

1.9 Projections for the next six months

The following are some of the main activities that Component 1 will concentrate on during the next six months

- Hold Strategic Action Planning Workshop in Rio Grande Watershed based on RRA select communities for priority activities in the Rio Grande watershed;
- Build capacity of strategic partners in the GRW and Rio Grande;
- Continue to seek and develop TAPs for improving practices and productivity;
- Enhance community involvement in project interventions;
- Increase private sector participation, encouraging small farmers to participate and larger farmers take on mother farm responsibilities; and
- Continued training in effective communication skills and the implementation of the public awareness strategy for the GRW.

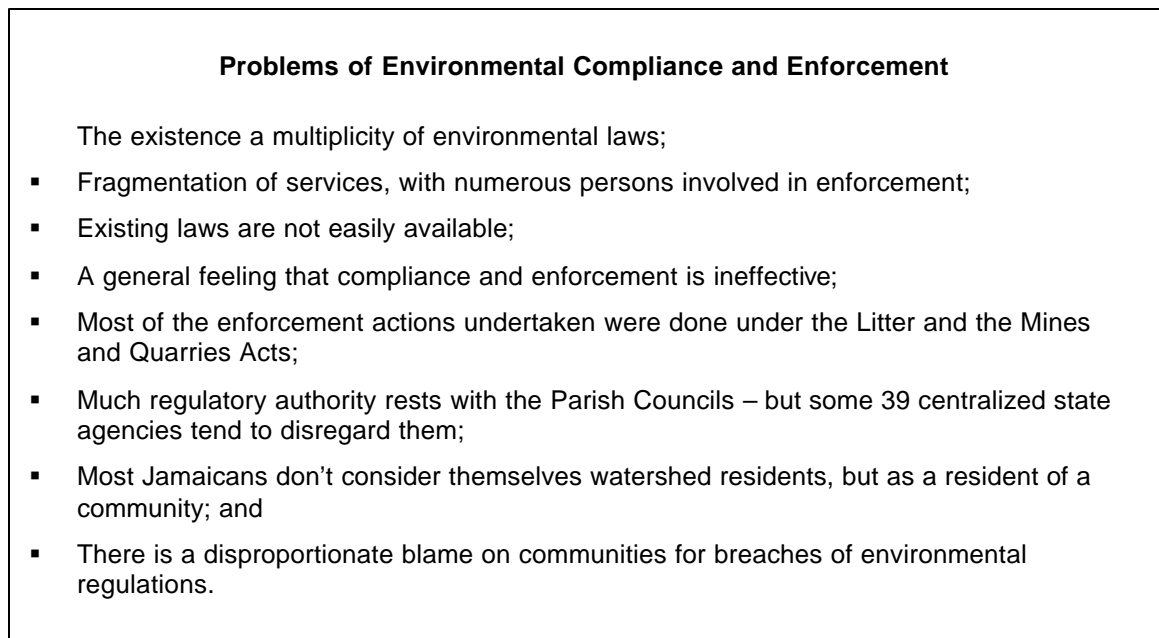
2. COMPONENT 2 - INCENTIVES FOR AND OBSTACLES TO ENFORCEMENT OF TARGETED EXISTING ENVIRONMENTAL REGULATIONS IDENTIFIED AND SOLUTIONS SUPPORTED.

2.1 Introduction

Component 2 is built on the assumption that improving enforcement must begin with understanding the reasons why individuals and organizations do not currently obey prevailing policies and regulations. Subsequently, the judicial services must be engaged to determine the issues that prevent them from adequately supporting enforcement decisions. From dialogue, strategic actions will emerge that will, undoubtedly, involve increasing the awareness of stakeholders of existing regulatory systems and the roles individuals and organizations would play in an improved system. Activities under this component should result in improved effectiveness of policy implementation and increased certainty of enforcement when infractions occur. Major accomplishments under Component 2 during this reporting period are highlighted below.

The national situation impacting on R2RW implementation of the Component 2 activities are presented in the Figure 1 below:

Figure 1: Problems of environmental compliance and enforcement



Seven activities areas were identified in the First Annual Work Plan to address the above problems:

- Targeted Regulatory Inventory Framework
- Advise NEPA on legal reform
- Policy Improvement
- Improve Legal Enforcement Capacity
- Implement Economic Incentives
- Public Awareness
- Promote Advocacy Mechanisms

2.2 Targeted Regulatory Inventory Framework

The R2RW Project undertook to produce a draft “*Policy and Legislative Framework for Watershed Management in Jamaica: A Review of Existing Laws and Regulations relating to Watershed Management in Jamaica*”. This review provided a background to the conceptual framework for enabling policies and legislation for local governance and watershed management in Jamaica, and a listing of 14 of the acts, relevant to watershed management. The review also highlighted a number of lessons from the international and national context.

The Study has been circulated to NIWMC, GRWMC, and its Compliance and Enforcement Task Force, as well as to several individuals. Besides seeking written feedback, a Breakfast Meeting was held with Lawyers and Policy Specialists. A meeting is also scheduled for obtaining feedback from the GRWMC, and the related Task Force.

2.3 Advise NEPA on legal Reform

A number of environmental laws, impacting on watershed management is currently under review. The completed Study of existing laws and regulations affecting watershed management will assist to determine which Policies, Acts, and Regulations need to be reformed. In addition, the wide vetting of the document before legal experts and individuals concerned with compliance and enforcement will serve to inform the focus for activities in legal reform in Year 2 of the Project.

2.4 Policy Improvement

Green Paper No 2/99, ‘Towards a Watershed Policy for Jamaica’ was prepared by Natural Resources Conservation Authority, and the then Ministry of Environment and Housing, and approved by Parliament in 1999. The Watershed Branch of the NRCA then held public consultations in each parish on the Green Paper. The COP/Manager and the GNRS for R2RW, along with staff from the then Watershed Planning and Management Branch, completed a review of the Watershed Policy, including the incorporation of recommendations from the parish consultations.

Changes to the previous draft included adding language on linkages between upstream and downstream users, background and challenges inherent in enforcement and compliance of environmental regulations, and information on the impact of a weak system of land tenure on watershed management. Additional sections were added on the National Integrated Watershed Management Council, linkages with NGOs, CBOs and local government, proper land use, and incentives. Finally, the section on institutional mandates was updated to reflect more accurately the present situation in Jamaica.

The new draft will now go through a participatory process, including a review by the NIWMC. It is expected that the current Green Paper will move to a White Paper status in the next three months.

2.5 Improve Legal Enforcement Capacity

There is placid agreement that limited enforcement of environmental laws and regulations are taking place and where this is being done, it is not being effective. A prerequisite to enforcement is an awareness of what laws exist, and which ones are being violated. This would also assist in determining if the present polices are adequate. With the review process underway, attention must also be given to the capacity of enforcement mechanisms and personnel.

There are also indications that communities are experiencing a breakdown of core values, and that compliance with these laws are limited, and very little enforcement of violations are taking place. There is a need to include community input into sanctions against environmental breeches. Special studies of community stewardship models could be applied to Jamaica. For

example, how to link with “Burial Society” networks and with “Garden Club” networks – to determine their role as some of the oldest community based networks in the country. In addition, the role of churches and their role in community networks for communication could be explored. This process will expand on the social marketing and leveraging approach that is to be part of an overall public awareness and community involvement strategy.

The Great River Compliance and Enforcement Task Force (GRWC&ETF) have been established. This Task Force will focus on a watershed level - but there are implications for national level and these will be fed into NEPA and the NIWMC.

2.6 Implement Economic Incentives

This area was identified by early consultations undertaken by the project as essential to achieve community support for compliance and enforcement of environmental laws. Fines for cases going before the Courts are coming out at the bottom end of the fines allowed. In some instances the maximum fines allowed under an old law is not more than \$100. This is causing much frustration for environmental officers. A review of present fines associated with violations needs to take place in order to inform any actions. STTA will assist early in 2002 to undertake a review of current situation.

A participatory stakeholder forum will then assess the findings and establish follow up actions.

2.7 Public Awareness

The Stakeholders in the GRW have identified the need for public awareness of current Laws and Regulations as a major constrain to enforcement of environmental breaches. It is generally accepted that many enforcement officers do not know the regulations by which they should prosecute environmental violations, and many who violate these laws are not fully aware that they are breaching those regulations. When cases do reach the Courts they are given low priority, and fines usually come out at the lower end of the scale, leaving enforcement officers less than enthusiastic to pursue such cases.

Following the review of laws impacting on the environment, a popular version of those laws will be looked at, to facilitate greater awareness of these laws by communities. An attempt will also be made to sensitize enforcement officers to a better understanding of these laws. This will include working closely with ENACT, to move the Field Guide forward. During the reporting period, the R2RW began the process of examining the laws, and identifying actions to enhance public awareness of these laws. The GNRS, worked with the PAPAS, and the PA Task Force to examine communication tools for enhancing public awareness.

2.8 Develop Community Based Enforcement

The R2RW Project, through studies undertaken, has identified a governance gap in engaging communities in supporting enforcement. Indications are also pointing to community residents baring an unequal share of the blame for environmental violations, but not necessarily being the main beneficiary of those natural resources. Stakeholders have also identified a real need for community residents providing information on violations in a culture were such ‘informants’ are outlawed.

No specific activities took place during the reporting period to support community-based enforcement.

2.9 Promote Advocacy Mechanisms

Very few NGOs, ENGOs, and CBOs exist in the GRW. These have weak capacity to lobby for changes. The State Agency present dominates in the watershed. On the other hand there are

expectations that civil society organizations will play a greater role in the management of watersheds.

The project has developed a Terms of Reference to undertake an inventory of Advocacy Mechanisms currently used by civil society groups to lobby for changes affecting the environment, and to assist in building the capacity of those organizations to improve their advocacy skills.

2.10 Component 2 Summary Table

Table 7: Summary progress on Component 2 – April 2001 - September 2001

Activity	Year One Tasks	Status	Comments
Inventory of regulatory framework	Undertake a review of existing laws and regulations	Draft completed	Getting feedback to finalize document
	Consult with selected legal and national experts	Breakfast Meeting completed	Report being prepared, and feedback to be included in document
	Consult with GRW/RGW stakeholders	Meeting with GRW stakeholder completed. Meeting with RGW stakeholders to be scheduled	RGW stakeholders meeting to be held in November. Report to be finalized
Advise NEPA on legal reform	Develop strategies	On going	Strategies discussed with stakeholder groups
	Evaluate role of Environmental Court	Not Done	Idea discussed at Compliance Task Force but requires further development
	Implement policy reform strategies	Not Done	This will be a year 2 activity
Policy Improvement	Work with SWB to move Green Paper on Watershed Policy forward	Draft completed	Current Green Paper to move to White Paper in early 2002
Improve legal enforcement capacity	Assess capacity and constraints to enforcement of existing laws and regulations	On-going	Two meetings of GRWMC C&ETF held
	Conduct inventory and analysis of training programs for compliance/enforcement personnel	On-going	Discussions with ENACT on how to improve existing Field Guide
	Develop curriculum for training compliance/enforcement personnel	On-going	Continue to coordinate with ENACT
Implement Economic Incentives	Identification and SWOT Analysis of Economic Incentives	Not Done	Activities scheduled to commence in December 01
	Support an initiative for increased fines	Not Done	Legislative Review identified existing fines
	Document cost-effective pollution control mechanisms	Not Done	Scheduled for Year 2

Activity	Year One Tasks	Status	Comments
Public Awareness	Identify and assess current PA programs for policies and regulations	Not Done	Activities scheduled to commence in November 01
	Develop PA strategy for enforcement and compliance	On-going	Public Awareness Strategy for the GRW developed
	Enhance & design communication tools	On-going	Video, audience assessment, etc.
Develop Community-Based Enforcement	Determine role of communities in compliance and enforcement of legal framework	On-going	Discussed in the GRWMC Task Force
	Develop strategy to enable community compliance and enforcement	On-going	Discussed in the GRWMC Task Force
Promote Advocacy Mechanisms	Assess existing advocacy practices	On-going	Scope of Work Developed

2.11 Issues and Resolution

The following issues were identified during the reporting period, with some thoughts for possible resolutions

Issue

There exist a multiplicity of environmental laws, with numerous regulations, and several officers involved in enforcement, as well as several governance mechanisms to service these laws. There is latent agreement that inspite of this, compliance and enforcement is not being effectively carried out.

Resolution

There is a need to present the current realities in a way that informed decisions can be taken at the policy level to rationalize, and consolidate the laws and regulations related to environmental management.

Issue

Several participatory processes are intervening at the Parish Level. This has lead to fragmentation and duplications including how Local Forestry Management Committees, and Local Watershed

Management Committees will relate with each other. The planning processes do not adequately deal with the role of the PDCs, and the role of communities in enforcement.

Resolution

R2RW contracted Dr. Kenn Ellison to look at governance and watershed issues. His Report is expected to assist NEPA and the Project to address the issue of local governance. The project is also working closely with the different PDCs in the targeted watersheds, and the SDC, to build civil society and community involvement in the project.

Issue

Existing laws are not easily available, nor are they in a form that is easy to be disseminated. It is also widely believed that several of the enforcement officers need to develop greater knowledge of the laws, as well as procedures to deal with violators.

Resolution

On the completing of the study on environmental laws, attempts will be made to develop user-friendly versions for the public, and to develop public awareness strategies. Training for enforcement officers, and legal and court personnel, as well sensitization programs for judges will be developed and implemented.

2.12 Projections for the Next 6 Months

Listed below are the projected activities and their related task for the period October 2001 to March 2002:

- Final report of Policy and Legislative Framework issued, and popular public education materials based on the report developed;
- Develop strategies to involve communities in joint management of watershed resources, and to support Community-based enforcement;
- Move Watershed Policy Green Paper into a draft White Paper;
- Implement priority activities of the GRWMC Compliance and Enforcement Task Force;
- Develop a C&E Task Force for the Rio Grande;
- Review and make recommendations for adjusting fines associated with violations;
- Stage competitions on improved community C&E; and
- Support information provision to judges, police, JPs, and administrative staff.

3. COMPONENT 3 - CAPACITY OF JAMAICAN GOVERNMENT AGENCIES, INTERNATIONAL DONORS, AND PRIVATE SECTOR AND CIVIL SOCIETY ORGANIZATIONS TO IMPLEMENT EFFECTIVE WATERSHED MANAGEMENT PROGRAMS ENHANCED.

3.1 Introduction

The threats to Jamaica's natural resources, particularly in the watersheds, cannot be overcome by the direct efforts of a few agencies. Diminishing these threats requires that effective partnerships, at both national and local level, are established and supported. It is through the participation of stakeholders that more effective natural resource management can evolve. Promoting the formation and strengthening of stakeholder groups and providing information and coordination necessary for sound environmental management will contribute to long-term, comprehensive environmental improvement.

Many aspects of watershed management are best implemented by local government, NGOs or private sector entities. However, coordination, oversight and regulatory responsibilities for watershed programming must remain the responsibility of GOJ agencies. The newly renamed Sustainable Watersheds Branch of NEPA is expected to play a lead role in policy, information management and monitoring of watersheds. It is expected that the ability of all partners to implement watershed management programs will be enhanced through better cooperation, capacity strengthening and coordination of activities.

Component 3 focuses on enhancing NEPA's capacity, particularly the Sustainable Watersheds Branch (SWB), in watershed management programs. Key to this capacity strengthening will be improving dissemination and use of information to promote more effective coordination of programs and collaboration of organizations; improving the coordination and effectiveness of data collection, use and sharing; improving mechanisms for involving the private sector, public sector and civil society; and supporting special studies to meet emerging needs, such as a study of the impact of land tenure on adoption of conservation practices, among others.

3.2 Enhance NEPA capacity in Watershed Management

The SWB is involved in the review of development applications and participates in both internal and technical review committees; conducts monitoring of environmental conditions in the watersheds including post-permit monitoring; collects and analyzes information on physical parameters of watersheds such as soils, rivers and land use; and participates in limited public education activities.

In the transformation of the NRCA to NEPA, the old Watershed and Protection and Management Branch was renamed as the Sustainable Watersheds Branch. The aims and objectives of the SWB are to:

- Ensure retention of rainfall in watersheds to replenish water resources for domestic, irrigation, industrial and other social and economic needs
- Achieve a pattern of land use that is balanced and environmentally sound
- Reduce the destructive effects of rain due to soil erosion, tree cutting and other loss of vegetation
- Integrate watershed management through participation in the National Integrated Watershed Management Council
- To promote public awareness of watersheds and watershed related issues.

In order to assess the capacity of the SWB in watershed management, a team building exercise was held with all branch staff. An assessment of the strengths and accomplishments of the SWB included the following:

- Close interaction with communities
- Support for participatory systems
- Formation of local groups
- On the ground knowledge to inform policy
- Monitoring of environmental conditions, and
- Dissemination of information

Table 8 identifies the actions needed in order for the Branch to operate more effectively

Table 8: Actions needed for an effective SWB

Actions needed for an effective SWB			
Proactive decisions on staffing	Training in needed skills	Detailed job descriptions	Generation of new ideas
Public Education programs ongoing	Increased interaction between divisions of NEPA	Establishing of LWMCs in every Watershed	More integrated approach in the structure of NEPA
Initiate corrective actions	Adequate information available	Farmers Training Days	Team Work
Team Approach	Integration with R2RW Project	Delimiting Sub-Watershed Areas	Working with NGOs to bring about sustainable Development

Finally, based upon a needs assessment of equipment requirement, the procurement of equipment was begun during the reporting period. The equipment list included computers, training materials and a range of field equipment including digital cameras, altimeters, clinometers, compasses, and measuring tapes.

3.3 Increase Public Sector Involvement

As stated in Section 1.6, private sector involvement in Project activities, particularly with the GRWMC and its task forces, has been limited. Furthermore, there has been limited progress on the 2 main activities identified in the First Annual Work Plan under this heading. The Rapid Rural Appraisal for the GRW indicated that it was likely that some 20% of the GRW was public sector land, however, no further work was done during the reporting period to map or quantify these lands. The primary reason for a lack of attention to this activity area was that this activity was not deemed to be a priority by the stakeholders in the Strategic Action Planning Workshop, and hence focus was paid to other areas. Similarly the review of the public land management strategy was not undertaken as planned.

3.4 Develop EE&C Programs for Watershed Management

To assess the existing EE&C programs, during the last six months the project has undertaken a step wise process of working with our partners to assess existing EE&C programs and to determine the capacity of our partners to do public awareness and outreach. The following steps and resulting reports have been prepared:

1. An inventory report of existing public awareness materials dealing with various aspects of watershed management or related topics. This was done using materials that are currently in

use in the watershed and in use by the NEEC. A preliminary framework paper was prepared to provide an overview of activities at the national level.

2. Both the framework paper and the inventory report revealed a number of gaps in EE&C programs, but also identified important partners and opportunities for collaboration. In this regard, some key areas where R2RW can make important contributions are in the areas of adult education linked to literacy programs, lobbying and advocacy training, and in participatory communication methodologies, such as in the use of participatory video training.
3. To assess the capacity of potential partners for public awareness, at the watershed level, the project has developed a detailed partner database that includes information on all skills, media used, and equipment capacity of our partners. At the national level, the project has worked with the SWB to determine staff training needs and has had meetings with the NEEC to determine how the project should interface or assist partners working at that level.
4. As a result of the capacity analysis and inventory reports, specific training sessions have been held in the Great River watershed and reports prepared on these sessions which so far have included video training and training in skills for assessing levels of audience awareness of environmental issues.
5. Workshops have also been held with members of the public awareness task force to develop a communication and public awareness plan/strategy for the Great River Watershed. Minutes of these sessions are available.
6. A draft communication strategy for the GRW has now been completed and will be ratified by the task force in early December.
7. At a more national level, another public awareness strategy has also been drafted with input from the stakeholders and from the SWB. This strategy also needs to be ratified by the SWB, by NEPA's Public Education Department and by both clients – USAID and NEPA.
8. In addition, in terms of some specific public awareness activities that the project has initiated at the national level include:
 - Production of two newsletters.
 - Coordination of a “watershed mascot competition” for National Wood and Water Day and publication of the competition in the Gleaner newspaper.
 - Preparation of an article on the care and planting of trees, plus a second article on “what is a watershed” also for National Wood and Water Day. Both articles were published in the Gleaner.
 - And participation by the project in the NEPA booth for Denbigh.

3.5 Facilitate Coordination Mechanisms

The R2RW has made great strides during the reporting period on the establishment of coordinating mechanisms at both the watershed and the national level. In the last six months, the project has successfully:

- Facilitated the formation of the NIWMC
- Established the Great River Watershed Management Committee
- Established a Water and Sanitation Task Force in the GRW
- Established a Production and Marketing Task Force in the GRW
- Established a Compliance and Enforcement Task Force in the GRW and

- Established a Public Awareness Task Force in the GRW.

The NIWMC grew out of initiatives taken by the Cabinet to establish an entity that could coordinate and guide watershed management initiatives at the national level. The NIWMC held three meetings during the reporting period, and has made much progress on clarifying its mandate, setting up subject matter sub-committees, and beginning to inventory watershed related resources of its component members.

In addition, regular weekly reporting to NEPA has facilitated coordination between R2RW staff, SWB staff and NEPA overall.

The development of the Gender Checklist will also be used to set gender equity targets for NEPA as a whole and to coordinate gender equity targets within the project.

3.6 Assess and Integrate Training Programs

During the reporting period, progress was made on a preliminary training needs assessment for the staff of the SWB. Further, an initial training activity was carried out on effective report writing for the staff of the SWB. (See Appendix 4) Based upon a request from the SDC, a preliminary one-day training curriculum was designed as an introduction to watershed management for Community Development Officers and community leaders.

Progress on the other aspects of this activity area to examine national level training needs and to prioritize training needs was not made during the reporting period. This was due to the workload on the Project team, and the delays caused by the transition from the NRCA to NEPA.

3.7 Support for Special Studies

The concept of having a special studies fund was clarified during the period to be a mechanism to provide solid scientific information and documentation for issues of current concern. An important aspect of building capacity of governmental agencies in watershed management is the provision of factual information. Key to this capacity strengthening is:

- Improving the dissemination and use of information to promote more effective coordination of programs and collaboration of organizations
- Improving the coordination and effectiveness of data collection, use and sharing
- Improving mechanisms for involving the private sector, public sector and civil society
- Supporting special studies to meet emerging needs.

3.8 Summary Table

Table 9: Summary progress on Component 3 – April 2001 to September 2001

Activity	Year One Tasks	Status	Comments
Enhance NEPA's Capacity in watershed management	Assess NEPA & SWB's capacity, for the watershed management	On-going	SWB staff hired in July – August.
	Develop needs assessment for information requirements	On-going	Needs assessment begun with team building exercise

Activity	Year One Tasks	Status	Comments
Increase public sector involvement	Identify public sector resource users in watershed	Not done	Postponed until Year 2
	Review public land management strategy	Not done	Postponed until Year 2
Develop EE&C Programs for Watershed Management	Assess existing EE&C programs	Done	PAPAS met with NEEC to introduce R2RW
	Identify gaps, opportunities, and partners	Done	Preliminary public awareness framework drafted
	Capacity of EE&C partners assessed	Done	Contained in Draft Public Awareness Strategy for both the GRW and the national level
	Conduct workshops to develop strategies	Done	A series of training workshops held in the GRW
	Complete national watershed public awareness strategies	Done	National public awareness strategy drafted
Facilitate Coordination mechanisms	Conduct study of governance and watershed management	Done	Draft Study complete, comments of strategic partners being incorporated
	Clarify role and mandate of NIWMC	On-going	TOR for NIWMC developed. R2RW assisting WPMB in secretariat function
	Determine partner roles & responsibilities	On-going	Initial outline of roles and responsibilities contained in Second Annual Work Plan
	Develop approach for watershed management planning	On-going	Initial approach outlined in Second Annual Work Plan
Assess and Integrate training programs	Assess current WSM training programs	On-going	Initial training needs articulated
	Examine National level training needs	Not done	Not yet undertaken
	Prioritize training needs	Not done	Not yet undertaken
Support for special studies	Develop criteria for selection of special study topics	On-going	Criteria of CWIP Project considered
	Conduct special studies to meet critical or emerging problems and needs	On-going	No new special studies contracted in reporting period, but follow-up done on Governance and Watershed Management study

3.9 Issues and Resolution

Issue

The transition from the NRCA to NEPA caused some uncertainties during the reporting period. This was due to the fact that staff positions were to end with the closing up of NRCA that was originally scheduled for April 1, 2001, but didn't actually take place until July 1, 2001.

Resolution

It was decided to wait until all staff positions were hired and new staff took up their positions to undertake needs assessments and design training activities. Although this caused a delay in progress on this component, it was deemed that this delay was necessary to begin institutional strengthening activities.

3.10 Projections for the Next 6 Months

In the next six months, the project expects to:

- Complete procurement of field equipment;
- Complete training needs assessment and undertake training events for SWB staff;
- Hold an official launch for the R2RW Project;
- Support the branch to develop a general video and other educational materials related to sustainable watershed management;
- Develop a watershed CD-Rom of important facts and information;
- Work out a watershed stewardship program to enhance community involvement;
- Work with students at CARIMAC to develop a logo for the branch; and
- Identify a suitable watershed mascot.

4.0 CROSS CUTTING ISSUES

4.1 Gender Considerations

In Jamaica to date, much of the gender training and discussion around gender issues has emphasized the vulnerability of women in Jamaican society, but has perhaps under-estimated the vulnerability of other “at risk” groups, such as unemployed youth and marginalized males. First, the equation of “gender” with “women” (whether intentional or not) has put off a number of both men and women who are needed to be involved in the process of addressing gender inequalities. R2RW will inherit some of this sentiment and will therefore need to make careful efforts to ensure that its discussions and efforts are inclusive. Steps to rectify some of the past misunderstandings may also be required with certain partners.

Secondly, and more importantly, while recognizing that the emphasis on women has meant that insufficient attention has been paid to strategies for involving youth and at risk males in many projects and programmes, R2RW cannot afford to make similar oversights in its own work. But neither can it afford to ignore the special requirements that women may need to be involved.

The approach further recognizes that there are specific change agents and social actors at the local level that may require differentiated efforts to become involved in the process, but that they in turn can help to positively affect the adoption of sustainable watershed management techniques in their own local constituencies. Such actors may be special groups – such as church leaders, “obeah” men, the German community in Seaford Town, and so forth. Sound gender analysis, coupled with a social marketing approach to the design and development of project activities, will help to ensure their involvement.

In short, R2RW is not in a zero-sum game, but is pursuing an inclusive, win-win process that seeks to encourage the sustainable management of watershed resources while balancing consideration for the “differentiated people” that depend on these resources. As a result, a “gender mainstreaming” approach is being adopted that will incorporate the considerations for each of these special groups in all activities to be adopted by R2RW.

Steps achieved to date:

1. Preparation of a background paper on gender considerations and guiding principles for the development of a gender strategy for the project.
2. Compilation of gender-disaggregated data from secondary sources to provide a general gender profile of both project areas.
3. Review of the PIOJ Gender Equity Mechanism with a view to using it as given or adapting it for R2RW purposes.
4. Drafting of a gender checklist for sub-project preparation in the GRW that can be used for all “gender” groups (youth, women, older people and so forth).
5. Development of a list of suggested, gender-sensitive “Targeted Appropriate Practices” for watershed management.
6. Review of secondary data provided by the SSU, from a gender perspective.

4.2 Grant Management

Given the multiplicity of GOJ agencies, NGOs private sector organizations and Community-Based Organizations involved in watershed management, the R2RW Project needs to take a

comprehensive approach to grant management. Project activities in the watersheds should be seen as initiatives greater than individual grants – but rather as a bundle of activities that lead towards project initiatives. A Project initiative could include a grant, a STTA contract, direct procurement of equipment, TA directly from the team, or the staff time of our strategic partners. A Project initiative could also include a proposal to an external donor such as the EFJ or the JSIF to directly address an initiative of one of the task forces or sub-committees. Grant administration could take place either directly from the R2RW and ASC – or could take place through a strategic partner. But working through strategic partners means that they would need to become certified by USAID, complete with an approved accounting system and administrative systems.

The CWIP Project is planning to do an assessment of the experience of its grant program. CWIP grants were made through strategic partners who in turn handled the grant administration for smaller organizations. The assessment will look at the way grants were made operational, the technical aspects of grant implementation, the organizational strengthening activities, and other factors that impact the outcomes of the projects. The benefit of using strategic partners was that they offered some sustainability after the Project ended. However the “strategic partners” approach has certain limitations due to the sometimes-transient nature of NGO staff.

During the reporting period the options for grant management were discussed, and the decision taken to delay the design of the Grant management program until the first quarter of the second year of the Project. This will give sufficient time to incorporate lessons learned from the CWIP grants program, and to update information of other existing grant programs. The new grant program manual will incorporate a strategy for joint implementation of project initiatives, and an efficient mechanism for grant administration.

4.3 Public Awareness

Public awareness is a cross cutting activity in R2RW, but the project activities occur at two main levels: the national level and at the watershed level. In the last six months, the need to enhance public awareness was identified as a strong priority at the GRW level, not only as a cross-cutting activity.

At the national level, however, the project has pursued the following activities to foster increased public awareness about the project:

- Establishing a good working relationship with the new Public Education and Community Outreach office of NEPA;
- Completion of two newsletters;
- Support for National Wood and Water Day through a special advertorial in the Gleaner; and
- Participation in the Denbigh Show.

5.0 PROJECT MANAGEMENT

5.1 Project Operations

The consolidation of the administrative, technical and institutional aspects of the Ridge to Reef Watershed Project was a significant activity during the reporting period. The R2RW demonstrated administrative and managerial efficiency and responsiveness to the concerns of the clients, and flexibility to adjust to the programmatic priorities of the stakeholders.

- Procurement of necessary additional office furnishings and equipment;
- Conducting of a Staffing Functions Assessment to determine the optimal staffing plan given the priorities set by project stakeholders.
- Publication of a Policy and Procedural Manual for all staff.
- Efficient administration of project expenditures and compliance to donor regulations.

5.2 Project Management and Oversight

Five separate project oversight and coordination mechanisms operated during the reporting period. These mechanisms served to ensure that a high level of coordination take place between the Project Team, the Administrative Support Center, the primary clients and the wider GOJ agencies involved with watershed management. The level of oversight afforded by these committees served to keep project interventions on track, relevant to the present realities of the GOJ, and responsive to the changing institutional dynamics of the GOJ. The four primary oversight and coordination mechanisms are as follows:

- **Project Team Meetings:** A regular schedule of project team meetings has been instituted for bi-weekly core team members meetings to assess progress on on-going activities, strategize on interventions planned and make regular adjustments in work in progress. The COP, the WMS, the GNRS, the PAPAS and the Director of the WPMB attend these meetings.
- **Senior Management Team Meetings:** Brief weekly meetings take place with the R2RW COP, the CWIP COP and the Director of Administration of the ASC. Topics covered during these meetings include logistical support requirements, administrative issues, financial updates, and project management concerns.
- **Project Implementation Committee:** The PIC meets every 4-6 weeks to update the clients on project progress, address issues that need approval or resolution, incorporate client concerns into project implementation and to provide overall project management guidance. PIC meetings attended by are limited to the USAID Chief Technical Officer, the Director of the Conservation Division of the NEPA, a representative of the PPPC of NEPA, the Manager of the SWB, and the R2RW Chief of Party.
- **Inter-Agency Steering Committee:** The ISC consists of a broad membership of the wider GOJ agencies impacting on watershed management including the NEPA, the Forestry Department, the Ministry of Agriculture, the Ministry of Health, the National Water Commission, the Ministry of Health and the Ministry of Tourism among others. The ISC meets twice a year to review SARs, Performance Monitoring Plans, and Annual Work Plans.
- **NEPA Senior Managers Meeting:** The NEPA Senior Management Team meets every other week to discuss current administrative matters and technical issue. The meeting is attended by the Division, and Department Heads, and Project Managers.

In addition, a broader mechanism, the National Integrated Watershed Management Council, while not project specific, is being assisted by the R2RW team to allow for planning and monitoring of watershed interventions from a wider national perspective that incorporates GOJ, NGO and private sector concerns. This Council is more fully detailed in Component 3.

5.3 Monitoring and Reporting

The timely submission of reports, plans and performance monitoring plans continued during the period. The First Annual Work Plan and Life of Project strategy and the Performance Monitoring Plan were both submitted and approved at the Interagency Steering Committee Meeting in April 2001. The Project Team also prepared regular quarterly reports for NEPA management, as well as special reports as requested.

Monthly financial reports of expenditures in Jamaica are prepared by the ASC under the oversight of the COP. These reports are forwarded to the ARD head office in Burlington, Vermont where international expenditures are added, and a monthly voucher is prepared for submission to USAID.

5.4 Staffing

In order to ensure that the R2RW staff contain the necessary skills to adequately respond to the stakeholders and clients, a staffing function assessment was performed during the reporting period. The assessment showed the need for some modifications in the existing the staffing pattern of the R2RW Project. The recommended modifications included the following:

- R2RW hire a Project Assistant to provide technical and administrative assistance to the Chief of Party (COP);
- The position of Watershed Management Specialist be converted to a six month renewable contract with specific outputs;
- The position of Governance and Natural Resources Specialist be renamed as Governance and Environmental Enforcement Specialist;
- A Sanitation Specialist be retained on a consultant basis to provide greater focus on sanitation issues; and
- The Administrative Assistant from the Administrative Support Center is regularized in the R2RW staffing structure.

The process of implementing these recommendations has begun.

6.0 PERFORMANCE INDICATORS

The R2RW Project contributed to the following USAID's SO2 Indicators established for the following Intermediate Results, during the period under review:

1. **IR 1 - Increased adoption of environmentally sound practices**, by commencing the Inventory of Targeted Regulations, and reviewing the Watershed Policy, for incorporating into the legal framework,
2. **IR 2 - Adoption of policies for improved Environmental Management**, through undertaking an Inventory of Targeted Regulations. This should provide a summary of all policies impacting on watershed management. The Review of the Watershed Policy is expected to assist NEPA to move the Green Paper, to a White Paper status. This should also assist:
3. **IR 2.1 - Effective promulgation and enforcement of environmental regulations.** The establishment of the COMPONENT 2 Advisory Committee, as well as implementing recommendations from the Consultant's Report on 'Governance and Watershed Management', would also assist in getting greater participation in the enforcement of environmental regulations.
4. **IR 2.2.1 - Increased capacity of key GoJ agencies**, benefited/will benefit from the Inventory of Targeted Regulations, the Review of the Watershed Policy, the establishment of the COMPONENT 2 Advisory Committee, and the undertaking, and follow-up actions on the Consultant's Report on 'Governance and Watershed Management',

CONTRACT OBJECTIVE (CO) INDICATORS

6.1 Overall Project

Performance Indicator	Indicator Definition And Unit of Measure	Baseline Data		Project Year 1		Comments	Support to SO2
		Year	Value	Target	Value		
Contract Objective: Natural resources under improved and sustainable management in identified watersheds							
Percentage of land under sustainable management in targeted areas	<p><u>Sustainable Management:</u> Targeted appropriate practices and sustainable resource utilization principles applied</p> <p><u>Targeted Areas:</u> Geographic areas identified in work statement and prioritized for intervention following rapid reconnaissance and establishment of baseline data</p> <p><u>Unit:</u> Cumulative numerical</p>	2000	0	5	5	19 Communities were targeted for project interventions. A demonstration project was begun involving public education and testing of low cost household sanitation systems	SO2 Indicator

6.2 Component 1 Targets

Performance Indicator	Indicator Definition And Unit of Measure	Baseline Data		Project Year 1		Comments	Support to SO2
		Year	Value	Target	Value		
Contract Result: Through targeted, sustainable environmental practices by resource users identified and promoted							
Number of improved practices adopted by target populations	<p><u>Improved Practices Adopted</u>: Activities that improve environmental conditions and sustain resource base</p> <p><u>Unit</u>: Number of practices introduced that are applied and sustained by land managers. Cumulative numerical</p>	2000	0	2	4	4 practices were introduced and applied, however, it is too early in the Project to assess the extent to which they are sustainable. The new practices were introduction of 1. dwarf jew plums, 2. cherries, 3 new varieties of plantain, and 4. constructed wetlands for purifying septic effluents..	IR 1
Number of organizations demonstrating tangible results to beneficiaries in the field	<p><u>Organization</u>: formalized group operating in the field</p> <p><u>Results</u>: Provision of technical, program and financial services</p> <p><u>Unit</u>: Cumulative numerical</p>	2000	0	1	2	Sanitation Support Unit with demonstration project in Retrieve and RADA with new crop technologies.	IR 1.1
Number of Private Sector entities practicing or supporting environmentally friendly practices	<p><u>Private Sector</u>: Profit-making entities whether small, medium or large</p> <p><u>Unit</u>: cumulative numerical</p>	2000	0	2	2	Work was done with 2 entities: 1. Farmers in Catadupa, and 2. Farmers in Duckets.	IR 1 IR 1.2

6.3 Component 2 Targets

Performance Indicator	Indicator Definition And Unit of Measure	Baseline Data		Project Year 1		Comments	Support to SO2
		Year	Value	Target	Value		
Component 2 Result: Incentives for and obstacles to enforcement of targeted environmental regulations identified and solutions supported							
Number of new or revised regulations and policies drafted/developed	<u>New or revised regulations and policies</u> : Regulations and policies developed that promote sustainable environmental practices. <u>Unit</u> : Cumulative numerical	2000	0	0	1	Draft Watershed policy reviewed, and comments from national consultations incorporated into document. This will proceed to a white paper in the next reporting period.	IR 2 IR 2.1
Number of incentives in place to support compliance with and enforcement of environmental regulations	<u>Incentives</u> : payment or concessions in place promoting sustainable environmental practices and resource use <u>Unit</u> : Cumulative numerical	2000	0	2	0	Focus during year 1 was on reviewing laws, and identifying stakeholders to lead the process and establish the governance framework in which to work. A study of incentives is planned for year 2.	IR 1.2 IR 2.1
Increased compliance and enforcement of environmental regulations in targeted areas	<u>Increase Compliance and Enforcement</u> : A larger number of cases are brought to court <u>Unit</u> : numerical total	2000	0	2	3	3 activities undertaken to increase knowledge and understanding of environmental laws: 1 Study of Policy and Legislative Framework, 2. Meeting of GRW Task Force to review draft Policy and Legislative Framework, and 3. Meeting of legal and policy experts to review study.	IR 2 IR 2.1

6.4 Component 3

Performance Indicator	Indicator Definition And Unit of Measure	Baseline Data		Project Year 1		Comments	Support to SO2
		Year	Value	Target	Value		
Component 2 Result: Capacity of Jamaican Government Agencies, International donors, and private-sector and civil society organizations to implement effective watershed management programs enhanced							
No. of organizations participating in R2RW supported WM coordination activities	<u>Organization:</u> Group or institution <u>Participating:</u> Acquiring and sharing information at the local or national level <u>Unit:</u> Cumulative total	2000	0	4	9	R2RW assisted the SWB and the MOLE to facilitate the National Integrated Watershed Management Council. The GRWMC is supported by RADA, Forestry Department, NWC, Public Health Department, SDC, SSU and Montego Bay Marine Park	IR 2 IR 2.2
No. of activities promoting coordinated watershed management supported by R2RW	<u>Activities:</u> For a, workshops, seminars, special studies <u>Unit:</u> Numerical total	2000	0	4	11	1. Meeting of NIWMC 2. Revisions to the Watershed Policy 3. Report on Governance and WM 4. Meetings of GRWMC 5. Public Awareness training workshop 6. Water and Sanitation Task Force 7. Production and Marketing Task Force 8. Compliance and enforcement task force 9. Study to review environmental laws 10. Study on feasibility of establishing a nursery 11. National consultation on draft work plan	IR 2 IR 2.2

Performance Indicator	Indicator Definition And Unit of Measure	Baseline Data		Project Year 1		Comments	Support to SO2
		Year	Value	Target	Value		
Component 2 Result: Capacity of Jamaican Government Agencies, International donors, and private-sector and civil society organizations to implement effective watershed management programs enhanced (cont'd)							
No. of target institutions which move up the organizational ranking system (ORS) scale	<u>Target Institutions:</u> identified strategic partners receiving capacity building assistance <u>ORS Scale:</u> Established ranking system to monitor and quantify capacity development	2000	0	1	0	R2RW has yet to use the ORS scale	IR 1.1

6.5 Cross-Cutting Activities

Performance Indicator	Indicator Definition And Unit of Measure	Baseline Data		Project Year 1		Comments	Support to SO2
		Year	Value	Target	Value		
Cross-Cutting Activities							
Gender Equity Strategy Number of partners implementing gender equity considerations	<u>Gender Equity</u> : fairness and justice among men and women in accessing project benefits, participating in decision making and in undertaking project responsibilities <u>Unit</u> : Numerical annual totals	2000	0	1	1	Sanitation Support Unit is implementing gender considerations in the sanitation demonstration project	IR 1 IR 1.1 IR 1.2
Grant Fund Number and value of grants approved and implemented that promote adoption of sound environmental practices	<u>Environmental practices adopted</u> : activities that improve environmental conditions <u>Unit</u> : Cumulative number and value (US\$ thousands)	2000	0	2 \$40	1 \$10	Demonstration project in Retrieve although a contract is operating as a grant	S02

Performance Indicator	Indicator Definition And Unit of Measure	Baseline Data		Project Year 1		Comments	Support to SO2
		Year	Value	Target	Value		
Cross-Cutting Activities (cont'd)							
Public Awareness Number of public awareness activities conducted	<u>Public Awareness</u> : formal and non-formal education, information sessions, extension and environmental education <u>Unit</u> : Numerical annual totals	2000	0	4	14	<ul style="list-style-type: none"> ▪ 1 national stakeholders consultation ▪ 2 watershed level stakeholder consultations ▪ Tour of GRW ▪ Inventory of Materials ▪ Framework Report ▪ Training Session ▪ 1 task force meeting ▪ Newsletters ▪ Participation in Denbigh show 	IR 1

7. SEMI-ANNUAL PERIOD PERFORMANCE BENCHMARKS

This section reports on the semi-annual performance benchmarks as articulated in the First Semi Annual Review. Six performance benchmarks were articulated for the reporting period, and progress on each is explained. In addition, performance benchmarks for the period October 2001 to March 2002 are laid out.

- **Strategic Action Planning Workshop held in the Great River Watershed involving all relevant stakeholders in the selection, planning and design of R2RW interventions.**

A formal, professionally facilitated, strategic action planning workshop was held with all stakeholders in the Great River Watershed including Government Agencies, the Parish Councils, the PDCs, NGOs, CBOs, and the private sector at the Knockalva Agricultural School from June 5-6, 2001. The output of the Workshop included a vision for the Great River Watershed, and a set of prioritised actions for the R2RW Project to pursue. :

The outcomes of the workshop included:

- Introduce technologies and practices to reduce watershed degradation;
- Improve sanitation and waste management practices;
- Promote organic practices;
- Initiate community tourism development projects and activities;
- Expand sustainable agro-forestry practices;
- Enhance public awareness of environmental and watershed management practices;
- Establish partnership for the sustainable development of the Great River Watershed;
- Improve collaborative water resources management; and
- Organize marketing strategies for Great River Watershed products.

- **Target communities in the Great River Watershed selected, assessed, and activities commenced.**

Based upon the Rapid Rural Appraisal conducted in March to April of 2001, as well as input from the SAPW, an initial set of 19 communities in the Great River Watershed were selected for Project interventions. A formal request was made to the Social Development Commission and the Rural Agricultural Development Authority to assist in the provision of community profiles for these areas. The communities identified were as follows:

- **Map/Matrix of existing laws and regulations regarding environmental management issues related to watershed management completed.**

A study was completed during the report period on the "Policy and Legislative Framework for Watershed Management in Jamaica" by Trevor Spence, the Governance and Natural Resources Specialist on the core technical team. The study contains

- **National Integrated Watershed Management Council established and fully operational.**

Assistance was provided to the Sustainable Watersheds Branch of NEPA to fulfil their role as the Secretariat for the NIWMC. This included the development of terms of reference, draft agendas, background documents and strategizing on conducting of effective meetings.

Proposed Benchmarks For The Next Period

Activity Benchmarks for the period October 2001 to March 2002

Component 1

- The GRWMC and its task forces are functioning smoothly and addressing priority issues in the GRW.
- 3 projects implemented to address production and marketing issues identified by the task force.
- 3 projects implemented to address water and sanitation issues identified by the task force.
- A program to enhance public awareness of priority issues implemented.
- Gender considerations being incorporated into project initiatives.
- Rapid Rural Appraisal for the Rio Grande Watershed.
- Strategic Action Planning Workshop in the Rio Grande Watershed held.
- Rio Grande Watershed Management Committee formed.

Component 2

- Obstacles to compliance and enforcement identified and being addressed at both the community and national level.
- Watershed Policy white paper submitted for adoption.
- Amendments to Watershed Protection Act identified and incorporated.
- Materials to inform public on environmental policies, rules and regulations are designed.
- Compliance and enforcement issues being addressed by task forces in both the GRW and the RGW.

Component 3

- SWB Staff trained in 5 new skills as per training plan and are using these skills to improve watershed monitoring.
- NIWMC retreat held, and clear mandate developed.
- Formal project launch of R2RW held in GRW.
- R2RW web site operating and providing current information to partners.

- Gender checklist being routinely utilized in assessing projects.
- Lobbying and Advocacy training course held.
- 2 special studies undertaken.

8. PROGRAM EXPENDITURES

On the following page, a summary of program expenditures incurred during the period April 1, 2001 to September 30, 2001 is provided. The expenditures are listed by key support areas, with a breakdown of expenditures by project Components, which partially correspond to USAID-required Contract Line Item Numbers (CLINs). The expenditures relate to the projected fiscal plans submitted in the R2RW Life of Project Strategy and First Annual Work Plan. The key support areas in the expenditure summary also correspond to NEPA's code accounts for fiscal reporting to the GOJ. The figures show an underspending of the estimated amounts in the First Annual Work Plan. This underspending is as a result of a slow down in the rate of usage of local short-term technical assistance due to budgetary limitations in the first half of the reporting period. Now that budget amounts are secure, and much of the initial process of establishing priorities through coordinating committees has been completed for the Great River, the rate of expenditure is expected to increase to originally planned budgetary allocations.

ARD, Inc.
Ridge to Reef Watershed Project
 Period April 1, 2001 to September 30, 2001

***** Inception to Date *****

	CLIN 1	CLIN 2	CLIN 3	CLIN 4	CLIN 5	CLIN 6	TOTALS
Project Management & Admin	117,418	53,947	35,591	0	9,072	7,765	223,792
Travel, Transportation & Per Diem	13,050	7,688	1,585	0	834	476	23,633
Equipment & Supplies	3,959	1,988	497	0	262	0	6,705
Operating Costs	10,082	7,730	2,228	0	1,312	0	21,352
Subcontracts & STTA	35,423	20,798	712	0	375	0	57,308
Grants	0	0	0	0	0	0	0
Training							
- Study Tours	0	0	0	0	0	0	0
- In-Country	2,999	1,687	688	0	0	0	5,375
Totals	182,930	93,837	41,301	0	11,854	8,241	338,164

LESSONS LEARNED FOR WATERSHED MANAGEMENT IN JAMAICA

Technology Generation

- ❑ Technologies must be appropriate to the circumstances of the farmer. Positive results are most likely to be achieved when beneficiaries are already familiar with the technologies, and adoption doesn't require major changes. Technologies should be cost effective and easily replicated.
- ❑ Financial incentives may be the most important factor in the achievement of voluntary implementation of appropriate technologies – these can include cost share funds, tax relief, concessions, payment transfers and subsidies.
- ❑ Technology generation should focus on developing new ideas for production techniques, crops, marketing and promotion to improve the commercial viability of enterprise.
- ❑ *Technologies* are the application of methods and techniques for production that can be introduced or adapted by farmers, while *practices* are situation specific activities dictated by the resources available to the farmer.
- ❑ Projects should concentrate on introducing technologies that can be integrated into existing production and conservation systems. Local modifications of existing technologies will lead to efficient practices.

Soil Conservation

- ❑ Physical engineered structures (bench terraces, check dams, river training, etc) can be constructed rapidly and can be effective in controlling erosion in limited areas, but are expensive and rarely cost effective on either public or private lands.
- ❑ Vegetative barriers (gully plugs, alley cropping, etc) take longer to construct, can control erosion, and are less costly.
- ❑ Farmers need incentives to encourage implementation of soil conservation practices. In the absence of incentives, Jamaican farmers are unlikely to practice soil conservation.
- ❑ Jamaican farmers are generally unwilling to move large amounts of soil needed for bench terraces and hillside ditches. In past projects, farmers generally could not afford the costs of establishment and maintenance of expensive engineered structures that were built by projects.

Participation and Community Development

- ❑ In order for project initiatives to be sustainable, beneficiaries need to be involved in the selection, identification, establishment of priorities, financing, design, approval and management of activities in their areas. Too often, community groups cease to function after the project has ended.
- ❑ Types of participation include: manipulative; passive; consultation; participation for material incentives; functional; interactive and self-mobilization. Attendance at meetings (passive participation) is rarely sufficient to engage participants, achieve project goals or sustain initiatives.

- ❑ In order for activities to be sustainable, training needs to be targeted at both the community level and at the level of government/NGO implementing agents.
- ❑ The use of subsidies to induce participation in project initiatives must be carefully considered to ensure that success is not simply purchased in the short-term interest of the Project.
- ❑ Effective participation can only be achieved when participants are provided with the information required to make decisions.
- ❑ Initiatives that incorporate all relevant stakeholders from the outset are likely to be the most enduring.

Governance

- ❑ Enhancing participation and involvement in project design is not sufficient to ensure local ownership and management.
- ❑ The focusing of many projects in an area or a parish does not mean that local authorities actually control the resources for management and implementation.
- ❑ Decentralization is limited if it doesn't provide for greater local control over resources.
- ❑ Because so many of the problems and solutions being addressed have their roots in local activities, the participation and cooperation of local authorities is a determining factor in fulfilling objectives. (Chapter 28.1 of Agenda 21).
- ❑ The laws relating to planning and land use in Jamaica provide for central control over decision-making, and even when local authorities have authority; it is usually with the approval of the Minister.
- ❑ The commitment to empower local authorities must be expressed in terms of enabling and supporting them to assume their statutory responsibilities.

Project Management:

- ❑ Flexibility must be designed into project mechanisms before and during implementation to adapt to unforeseen circumstances.
- ❑ To maximize programmatic results, resources and technical activities need to be focused on targeted interventions that address critical constraints.
- ❑ Projects that appeal to the motivations (most often economic) of the stakeholders are most likely to secure their participation.
- ❑ Trying to do too many activities in one community at the same time doesn't work very well. Integrated Rural Development Programs are complicated to administer and can overwhelm potential beneficiaries and distract project agents.
- ❑ Project leadership that is interested in and committed to project objectives is an essential aspect of motivating participants to achieve success. The enthusiasm of managers helps to build widespread support and participation.
- ❑ Transparency, integrity and accountability are key core values of good project management.

Environmental Policy

- ❑ Environmental policy design must be linked to economic development and alleviation of specific problems that the policies can address.

- ❑ The policy process is necessarily multi-disciplinary and must recognize cross-sectoral and gender linkages.
- ❑ Commitment of key decision makers is required throughout the policy process.
- ❑ Sustainable development principles should be reflected in environmental laws. In Jamaica most environmental laws were drafted prior to the application of sustainable development principles.
- ❑ Policy change is not a one-shot event, but a continuing process.
- ❑ Enforcement of environmental regulations needs to be accompanied by community education programs.

TARGET COMMUNITIES IN THE GREAT RIVER WATERSHED

1.	Montpelier	St. James
2.	Cambridge	St. James
3.	Catadupa	St. James
4.	Mafoota	St. James
5.	Seven Rivers	St. James
6.	Haselymph	St. James
7.	Anchovy	St. James
8.	Ramble	Hanover
9.	Great River	Hanover
10.	Lethe	Hanover
11.	Chigwell	Hanover
12.	Shettlewood	Hanover
13.	Retrieve	Westmoreland/St James
14.	Seaford Town	Westmoreland
15.	St. Leonard's	Westmoreland
16.	Bethel Town	Westmoreland
17.	Berkshire	St. Elizabeth
18.	Flagstaff	St. Elizabeth/St. James
19.	Pisgah	St. Elizabeth

LIST OF TARGETED APPROPRIATE PRACTICES

Technology	Income Generation	Resource Conservation	Remarks
Plant propagation nursery	A +	A	Ideal for disease free planting material, hardening of tissue culture plantlets, and preservation of genetic stock
Disease resistant plantain and banana cultivars that are compatible with organic production.	A +	A +	The cultivars are resistant to black Sigatoka the disease that has been destroying plantain and banana over the last six years. The fingers are smaller but the bunches are bigger than the normal horse plantain. Ideal for organic production
Small plant fruit orchards. (Guava, Dwarf Jew Plum, WI Cherry, etc)	A+	A +	Ideal for fragile land where heavy trees may initiate erosion, also for the fruit juice trade where the small size of the fruit is not important.
Egusi melon seed	A	A	A highly nutritious delicacy in Africa where it seasons and adds nutrient to stews eaten with yam. Should be popular in Jamaica
Low-chill temperate fruits	A +	A	Suitable for high elevations where nights are cold during winter. The good local market enjoyed by imported alternatives indicate good economic potential
Other tropical fruits	B +	A	There are many tropical fruits that are only sample tree in Jamaica but our soils and climate are suitable for them. These include lychee, rambutan. Durian and mangosteen
Clean dasheen and coco production	A +	B	Dasheen and coco production has declined in many parts of Jamaica because of 1) a soil disease that kills coco and 2) long dry periods that hinder dasheen development. There is a Market for heart leaves of these crops but there is no production.
Domestication and production of wild medicinal and plant species	A+	A	There are Many wild plant species that are harvested as medicine or food. Their economic potential can be improved by domestication and cultivation.
Alley cropping: uses nitrogen fixing shrubs in hedge-row on contours to reduce soil erosion and supply nitrogen rich leaves for green – manure.	B +	A +	Developed in Africa this technology reduces soil erosion as well as facilitate green manuring for improved soil fertility. Provides windbreak for vegetables and firewood. As well.

Technology	Income Generation	Resource Conservation	Remarks
In-situ mulch: formed in place by residue of creeping cover crop legumes that are killed or allowed to die.	Good + +	Excellent + + +	Provides organic mulch without the high labour input associated with conventional organic mulching.
Conventional soil con. Tech.	B	A	These conventional methods may be necessary in some instances
More effective systems for supporting yam vines	A	A +	Supporting yam vine is an essential component of yam production as this support increases yield by over 50 %. More efficient vine support system are required to reduce production cost
More effective yam propagation.	A +	A +	The mini-set yam propagation method presented in Jamaica has not been adopted by farmers because it is not cost effective. The mini-sett seed yam method as used in Africa has better potential.
Water harvesting and management	A	A +	For every inch of rain 27154 gallon of water accumulate on 1 acre (43560 sq. ft. therefore if you roof is 100 sq. ft. you could; collect 62 gal/in or 3720 gal. if 60 in of rainfall in a year.
Covered vegetable production during the rainy season	A+	A	Vegetables grown undercover in the tropics has less diseases and produce up to 100 % more than those in the open under high rainfall conditions.
Three types of hot pepper	A +.	B	The yellow Scotch bonnet pepper with its distinctive flavour is most popular but there are red and purple –green types that are more pungent but less flavorful. These are also required for processing.
Small scale production of ornamental plants and flowers	A +	A	The close proximity of Montego Bay and Negril resorts indicate reasonable demands for flowers and ornamental plants that can be produced intensively in small units.
Organic technologies for small farmers, (composting Mulching, Green manuring	A +	A +	A growing preference for products grown without organic fertilizers and other agro-chemicals indicate better income for small farmer who produce using organic techniques.
Fruit: Cluster production among small farmers for more effective management, transporting and processing	A	A	Isolated farmers cannot produce fruit crop for agro –industry on small plot, but if the farmers are in clusters cooperate management should facilitate economic transportation and marketing.
Organic techniques for fish, Goat, and poultry production	A	A	Organic techniques are not restricted to crops but can be applied to fish, cattle, goat and poultry.

Technology	Income Generation	Resource Conservation	Remarks
Tourist attractions (farmers market and attractions for Montpellier)	A	A	Historical, natural and heritage sites as well as traditional activities or practices unique to the area should be preserved. Improved and maintained for display to tourists. Artistic development of new facilities should help to make localities attraction for tourists.
Water hose level for tracing contours.	B	A	This technique for contour tracing is easier and quicker than the A-frame, however it requires two persons for effective operation.
VIDPL (Ventilated improved double pit latrines)	C	A	A sustainable pit latrine with reduced odor and insect nuisance and devoid of polluting seepage.
Organic decomposition for VIDPL	B	A +	Research aimed at identifying suitable organisms and organic chemical to facilitate rapid decomposition of residue in VIDPL.
Composting	B	A	Technique for collecting composting and utilizing organic household waste.
Recycling	C	A	Initiate projects to facilitate recycling of paper plastic and glass especially glass and plastic that are not biodegradable.

NEPA - SUSTAINABLE WATERSHED BRANCH MINI-TRAINING MODULE

Principles of Report Writing

This document gives practical advice on the mechanics of effective report writing. It covers the rationale for why report writing is important, the mechanics of writing, style, and other practical considerations for writing good reports.

Rationale – Why Report Writing is Important

- Written records are necessary to **document present conditions and environmental situations** in the watersheds. This documentation will or could be used by:
 - Branch Manager
 - Director Conservation Division
 - Other NEPA Senior Staff
 - Other conservation and environmental officers
 - Staff of other organizations
 - In the preparation of enforcement actions and court cases.
- Written reports (monthly, trip or other reports) serve multiple functions including: serving as a record of your work; documentation of violations to environmental laws; establishing a record that others can follow-up on; and providing information to managers, directors and policy makers on how to improve situations you encounter in the field.
- Simply witnessing something or having a discussion with someone is not sufficient – constructing a written record allows others to also become involved in understanding the issues, as well as identifying and devising actions or solutions to address the problems encountered. In the absence of a written record, what was done or seen is simply talk - or part of your memory. But putting it in writing makes it **official** and **actionable** and underlines the importance of the information.
- Writing reports serves as a written record to **document work accomplishments**. This is critical to performance appraisal, advancement and taking pride in work accomplished.

How to Write Effective Reports

Mechanics:

1. While in the field, officers should strive to take **detailed notes** of situations encountered. These may be done in a diary, notebook or other appropriate organized format - and should be done on site so as to not forget items, and to accurately reflect details. Include time, names, locations, contacts, and other details to help you construct your report later. These notes will be the basis for writing your reports.
2. When you are ready to write the report – first develop **a mental image** of what you need to communicate, and come up with a mental plan for how to tackle it. Allocate sufficient time to draft the report, and strive to be efficient and businesslike in your approach to writing.

3. Using your field notes, create an **outline** of what you want to write – this is applicable whether you are writing a 2-3 page monthly report, a 5 page trip report, a 10 page proposal, or a 60 page formal project report.
4. Refine the outline into the **ideas** that you want to communicate. The general rule is that one idea equals one paragraph.
5. Take the ideas, and use them to formulate **topic sentences** that explain the subject matter for each paragraph. A paragraph should develop one idea only – and should not try to cover multiple topics, as this is confusing to the reader.
6. From the topic sentence – **flesh out the paragraphs** by writing sentences that expand and provide detail to the idea/topic sentence for that paragraph.

Style:

1. Use the following simple **formula**:
 - a. Tell the reader what you plan to tell them (introduction)
 - b. Tell them the detail (body)
 - c. Tell them what you just said (conclusion or summary)
2. Strive to be **concise** and to the point. Readers – especially busy people - generally do not like to read lots of background or superfluous material to get to the point.
3. **Avoid the use of excessive or unnecessarily flowery language**. It can be annoying – and turn off a reader.
4. While acknowledging the above points, at the same time one should **strive to be comprehensive** and ensure that as much detail as is deemed relevant is included.
5. Use **headers, section titles, and bold font** to break-up text wherever possible. These make the document more reader friendly and serve as signposts to help the reader navigate the document.
6. Consider the use of **tables or graphics** to convey information wherever possible. These are very helpful to the reader, tend to catch their attention, and highlight information that you want to convey.
7. Pictures can be “worth a thousand words” and carefully selected **digital pictures** greatly add to the attractiveness and readability of a report.

Practical Considerations:

1. **Very few writers ever get it right on the first try**. It is critical to read what you have written, ask yourself did I convey the information that was needed, and to make the necessary corrections. It is also useful to show your work to others and get feedback on how to improve your work.
2. **Always consider your audience** – i.e. those who will read the report and what information they need. It is not sufficient to say that you visited a particular place without also telling the reader the purpose of the visit and what was learned and observed. Also, other details are important to some readers such as dates, times, weather conditions, physical parameters, etc.

3. Effective writing takes **practice, practice and more practice**. Very few people are natural writers, it is a skill that one develops and sharpens by practice. It is necessary prepare drafts, review them, make corrections and then strive to see if you can do better next time.
4. If at all possible, **use a computer** and word processing program. This greatly facilitates the making of changes to improve your final product. It also serves to keep an electronic record of what you have done. If you are not computer literate, strive to become so.
5. The most efficient way of **transmitting written reports is through email** – if possible. The investment of time to learn email – will pay off dividends in saved time in the future. It is also more environmentally friendly.
6. **Read** reports written by other persons to see what you can learn of the style of others.
7. **Be proud** of what you write. It is a permanent record of you and your work. Strive to ensure that it reflects positively on your work and accomplishments.

R2RW

Ridge to Reef Watershed Project