

R2RW

**Policy and Legislative
Framework for Watershed
Management in Jamaica**

Ridge To Reef Watershed Project

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

Policy and Legislative Framework For Watershed Management In Jamaica

A Review of Existing Laws and Regulations

November 27, 2001

Prepared for the:

Government of Jamaica's
National Environment and Planning Agency

And the

United States Agency for International Development

Implemented by:

Associates in Rural Development, Inc. (ARD)
P.O. Box 1397
Burlington, Vermont 05402

TABLE OF CONTENTS

| | |
|--|----|
| Preface | 5 |
| 1 Background | 6 |
| 1.1 Expected Outcomes | 9 |
| 1.2 Definitions of Key Terms | 10 |
| 1.3 Procedures for Legislation | 11 |
| 1.4 Methodology used to undertake Study | 11 |
| 2. Conceptual Framework for Enabling Policies and Legislation for Local Governance and Watershed Management in Jamaica | 13 |
| 2.1 The International Operational Context for Watershed Management | 13 |
| 2.2 The Jamaican Operational Context for Watershed Management | 15 |
| 3. Listing Of the Acts Relevant to Watershed Management in Jamaica | 26 |
| 4. Documenting the Current Policy and Legislative Framework Governing Watershed Planning and Management | 49 |
| 5. Analysis of Tables, Inventory, and Other Reports | 50 |
| 6. Relevant Findings and Recommendations | 60 |
| 7. Bibliography | 62 |

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 United States Agency for International Development (USAID). Three distinct, but interrelated activities, associated with improving the management of Jamaica's watersheds, will be carried out to form a synergy of interventions contributing to the achievement 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) are implementing R2RW with assistance from Cargill Technical Services, Inc. (CTS).

The preparation of this discussion paper is timely for the obvious reason that it can contribute to the implementation strategy, activities, and tasks which R2RW will follow to address the Work Statement in USAID Contract No. 532-C-00-00-00235-00, as well as the NEPA and the Local Government Modernization Processes.

It will offer a unique cross-sectoral perspective given that its parameters must touch on issues related to Policies and Management of Natural Resources, Watershed Management, Participatory Decentralization, Local Governance, Local Government Reform, Integrated Community Development, and National Planning and Management for Sustainable Development.

The Natural Resources Conservation Authority (NRCA) has recently undergone a merger with Town Planning Department (TPD) and Land Development and Utilization Commission (LDUC). The new organization is called National Environment and Planning Agency (NEPA). In this document, NEPA will be used.

1. BACKGROUND

Jamaica's awareness of the need for soil conservation and watershed protection dates back to the 1930s and the first annual report of the Soil Conservation Division (1944) stressed this need. With reference to watershed degradation, an Economic Policy Committee Report in 1945 stated that, "steps must be taken to meet this grave and widespread menace before it is too late."

Two land authorities (Yallahs Valley and Christiana) were established in the early 1950s, by the Land Authority Act (1951), with the main tasks - to rehabilitate land, check soil erosion and improve farming. However, success was limited due to inappropriate land use and poor maintenance (Division of Economics and Statistics 1961).

The 1960s saw several important developments in watershed protection. The first was the promulgation of "The Watershed Protection Act, 1963" which created the Watershed Protection Commission and empowered the Minister to declare Watershed Areas. With the conservation of water resources as its primary focus, the Commission was empowered to make regulations, prohibit and regulate land use and supervise and undertake improvement schemes. Under the Commission, Watersheds Areas were declared, demonstrations setup, improvement schemes initiated, and small farmers assisted in carrying out conservation work.

During the 1970's, however, the Commission was dissolved, and its functions transferred to the newly created Natural Resources Conservation Department, of the Ministry of Mining and Natural Resources.

With the promulgation of the Natural Resources Conservation Act in 1991, the NRCA was created with several divisions including a Watershed Protection and Management Branch (WPMB). However, due to staffing and funding limitations, the Branch has over the years focused primarily on regulatory and public education activities.

In 1995, the Watershed Management and Fuel Wood Production Committees were formed to promote action aimed at managing the nation's watersheds and to develop strategies to address deforestation.

In response to growing concerns about the continued deterioration of the nation's watersheds, the Prime Minister appointed a Watershed Task Force in 1998, which was chaired by the Senior Advisor to the Prime Minister on Land Policy and Physical Development. As part of this initiative, various Sub-Committees were formed to make recommendations on a number of areas pertinent to the development of the Integrated Watershed Programme, including: policy and institutional arrangements, planning, public education and training, eco-tourism, incentives, commercial forestry and fuel wood plantations.

These initiatives over the years now have an accumulative focus on:

- (a) The establishment of the Sustainable Watershed Branch (SWB) in the Conservation and Protection Division of NEPA, replacing the Watershed Protection Management Branch (WPMB) under NRCA. There are expectations that with a new Manager, filling of staff vacancies, and the procurement of much needed equipment, the SWB will provide the required leadership for the effective and efficient management of Jamaica's 26 watersheds.
- (b) NEPA has also established a Compliance and Regional Services Division, (under a new Director), to:
 - Monitor compliance with relevant laws, regulations and standards,
 - Undertake enforcement actions where necessary, and

- Implement NEPA's programs and services at the regional level.
- (c) The establishment of the National Integrated Watershed Management Committee (NIWMC), chaired by the Permanent Secretary in the Ministry of Land and Environment, (MLE) in the Office of the Prime Minister (OPM). The NIWMC is expected to:
- Co-ordinate and promote an integrated approach to watershed management to allow for the sustainable use of natural resources and the minimization of undesirable environmental impacts,
 - Design and implement a National Watershed Programme, which will specify the activities to be undertaken to protect and manage the nations watersheds, and the roles of the agencies involved,
 - Design, plan, and implement watershed management interventions for the benefit of the communities concerned - upstream and downstream, and all sectors, and
 - Establish required operational and governance structures - Committees and Task Forces.

The SWB will provide secretarial and technical support to this new co-ordination body.

- (d) The implementation of the R2RW Project between the GoJ, through NEPA, and the GoA, through USAID. This project is located in the SWB of NEPA, and is expected, among other things to:
- Through targeted organizations, identify and support sustainable environmental management practices by resource users. This strategy will focus on the Great River, and the Rio Grande Watersheds,
 - Incentives for and obstacles to compliance and enforcement of targeted existing environmental regulations identified, and solutions supported, and
 - Undertake institutional strengthening of Jamaican government, civil society and private sector organizations to implement and enhanced effective watershed management.

However, there remains a need to research and document a body of knowledge on the current legislative and policy frameworks impacting watershed management. There is further need to analyze this information to identify enabling factors, and gaps in current legislative and policy frameworks and conclude recommendations contributing to ongoing reform processes.

A number of initiatives have already been undertaken. These include:

1. An initial mapping of legislation related to sustainable development in Jamaica was prepared in 1998 under the auspices of the interim, SDC-J in a series of discussion papers.
2. More recently ENACT undertook a 'Policy and Legislation Frameworks for Sustainable Development: Considerations and Recommendations for Jamaica'.
3. ENACT also undertook on behalf of NEPA, a 'Compliance and Enforcement Field Guide'
4. The MLGYCD has carried out a review of One Hundred Laws affecting Local Government.

The diversity of policies and regulations that are important for effective watershed management necessitate interaction with a broad range of stakeholders. At the national level, legislation

relevant to watershed management includes, at a minimum:

1. The Country Fires Act (1942)
2. The Wildlife Protection Act (1945)
3. The Mining Act (1947)
4. The Town and Country Planning Act (1958)
5. The Flood-Water Control Act (1958)
6. The Watersheds Protection Act (1963)
7. The Land Development and Utilization Act (1966)
8. The Quarries Control Act (1984)
9. The Public Health Act (1985)
10. The Litter Act (1986)
11. The Rural Agricultural Development Act (1990)
12. The Natural Resources Conservation (NRCA) Act (1991)
13. The Water Resources Act (1995)
14. The Forest Act (1996)

This Paper is expected to complete a targeted inventory of existing laws, in order to consolidate impact, and to eliminate overlap. This approach will include:

- Undertaking a review of existing laws and regulations;
- Assessing relevant initiatives and reports; and
- Reviewing existing policies.

Building on this broad mapping, an **Inventory of Legislation impacting on Watershed Management in Jamaica** will be prepared.

The parameters of the documentation will include:

1. An Inventory of the policy and legal framework governing Natural Resources Management, in particular Watershed Management. Special attention will be given to civil society's participation and sustainable development issues, and
2. A description of NEPA, FD, SDC, MLGYCD, and other key agency legal and policy modernization processes, as it relates to Watershed Management.

1.1 EXPECTED OUTCOMES

The R2RW Project is expected to deliver the following:

- I. A Background to the conceptual framework for enabling policies and legislation for local governance and watershed management in Jamaica. This would include:
 - i. Existing international operational context for watershed management,
 - ii. The national operational context for watershed management, and
 - iii. An examination of other reviews and studies undertaken in this area.
- II. A Listing of the different acts, relevant to watershed management. An attempt will be made to obtain copies of all acts, included in this 'Inventory'. These would be available to the Watershed Branch and the Project Team.
- III. A Table, documenting the current policy and legislative framework governing watershed planning and management. This Table will highlight the main areas of impact.

- IV. An analysis of the Inventory, the Table, and other Studies and Reports arising from the work completed, and
- V. Recommendations, including some possible Next Steps.

This exercise is expected to build on, update and supplement the initial 1998 mapping exercise, as well as other works undertaken since. It is also expected to establish a good understanding of the existing operational environment for watershed management, allowing for a deeper analyzing of the output.

It is expected that this document will contribute to the achievement of Component 2 of the Ridge to Reef Project: “Incentives for and obstacles to enforcement of targeted environmental regulations identified and solutions supported”. The Component 2 strategy is built on the assumption that improving compliance and 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.

It is expected that activities under the R2RW should result in improved effectiveness of policy implementation and increased certainty of enforcement when infractions occur. A two-pronged approach is proposed to strengthen implementation and enforcement:

1. Increasing popular and official awareness and understanding of the importance of enforcing environmental rules for watersheds, and
2. Involving local government, civil society, and GOJ officials, including NEPA Wardens, in backstopping community-based compliance/enforcement.

1.2 DEFINITIONS OF KEY TERMS

This paper considers it helpful to define and outline the process required for undertaking legislative changes.

Listed below are definitions for the following terms:

Act: a decree of a legislative body.

Compliance: the state of obedience or conformity with a legislation, law, or regulation.

Enforcement: ranges of actions that may be taken to induce, encourage, or compel observance of an act, legislation, law, or regulation.

Green Paper: preliminary report of Government proposals for discussions.

Inspection: general monitoring against set standards.

Investigation: general reactive monitoring conducted in response to a known or suspected non-compliance. Investigations are typically undertaken when there are reasonable grounds to suspect non-compliance has occurred, and enforcement measures may be necessary.

Law: a rule or body of rules enacted in a community, and recognized as commanding or forbidding certain actions.

Legislation: laws collectively.

Order: a system of rules and procedures.

Policy: course of action adopted by government.

Procedure: way of acting or advancing in legal action.

Regulation: prescribed rule.

Rule: compulsory principle governing action.

White Paper: A statement of Government policy.

1.3 PROCEDURE FOR LEGISLATION

The procedure towards establishing legislation involves the following steps:

1. Government, on agreeing on a policy, usually prepares a Green Paper, for discussion. In the case of the Watershed Policy, the Green Paper has been taken to the parishes, as well as to different Interest Groups.
2. The public input would then be integrated into the report, and a White Paper prepared. This is the status of the Watershed Policy.
3. The White Paper would then be taken through a legal process, until it is place before the House of Parliament for approval as an Act.

1.4 METHODOLOGY USED TO UNDERTAKE THIS STUDY

In order to undertake this review of existing laws and regulations, related to watershed management, a number of steps were undertaken:

1. The R2RW Project Technical Team, under the direction of it's Chief of Party, Mark Nolan, and with Trevor O. Spence leading the research, build a TORs, and a strategy for undertaking the study. This included:
 - Deciding on which acts were to be included in the review,
 - Deciding what were the key documents to be reviewed,
 - Developing a Procurement Plan,
 - Deciding on the key issues to be highlighted, and
 - Developing a draft *Table of Contents*
2. All related acts and documents to be reviewed were sourced. Sources that were used included:

- The former Government Printry (now being operated by ex-employers). This proved to be the most helpful source,
 - NEPA's Documentation Centre,
 - NEPA's SWB,
 - ENACT's Documents, and
 - RADA's Office.
3. A number of individuals in key organizations were interviewed, These included:
- Stewart Forbes of ENACT, who worked with NEPA on the Field Guide, and other initiatives,
 - Fred Campbell (outgoing Director), and Basil Forsythe (new Director) of NEPA's Compliance and Regional Services Division,
 - Thera Edwards, the new Manager of the SWB, and
 - Lloyd Service, Theodore Rhone, and Linton Chambers of the Environmental Warden Service (EWS).
4. A review was then undertaken of all the relevant acts and documents. This included writing, preparing and reviewing several drafts.
5. The R2RW Team then printed a draft for review by stakeholders. The review process included:
- Over 75 copies of the draft document were circulated to key agencies and individuals, in order to obtain their feedback individually or by organization,
 - A Breakfast Meeting of Lawyers and Policy Specialists to review the draft Document held at the Alhambra Inn on October 23, 2001,
 - A Special Meeting of the Compliance and Enforcement Task Force held at the Catherine Hall Offices of RADA, Montego Bay, on October 30, 2001, to review the draft document,
 - Mark Nolan and Trevor Spence also participated in an ENACT sponsored workshop and Compliance and Enforcement, held in Portland.
6. The feedback from # 5 above is now included in the final document.

2. CONCEPTUAL FRAMEWORK FOR ENABLING POLICIES AND LEGISLATION FOR LOCAL GOVERNANCE AND WATERSHED MANAGEMENT IN JAMAICA

This section will highlight the conceptual framework for enabling policies and legislation for local governance and watershed management in Jamaica.

A summary of **Policy and Legislative Framework for Sustainable Development consideration and recommendations for Jamaica**, was done by Prabha Khosla and Beverly Pereira for GoJ/CIDA and ENACT in April 2001, to set the context for international legislative framework for Sustainable Development (SD). Some of the research here would help to inform the international and national legislative framework for natural resource management.

The **New Watershed Policy** speaks to early watershed programmes and projects in developing countries concentrating on soil conservation and erosion control work. However, since 1980s, greater emphasis has been placed on utilizing an integrated approach, which combines soil conservation and rural development elements with strategies to improve both land and people.

This section deals more specifically with:

1. The international operational context for watershed management, and
2. The Jamaican operational context for watershed management.

2.1 THE INTERNATIONAL OPERATIONAL CONTEXT FOR WATERSHED MANAGEMENT

1. An important impetus for legislation to enable or implement environmental protection by national governments and international governmental and non-governmental agencies has come from various UN initiatives; Most of these are over the last 30 years.

Some highlights of these initiatives are:

- **1972** - The Stockholm Conference on the Human Environment, that put the issue of environmental degradation and protection, and resource depletion on the global stage;
- **1980** - The World Conservation Union (IUCN) published its World Conservation Strategy, further stimulating the development of National Conservation and Environmental Protection Policies and Laws;
- **1987** - Report of the World Commission on Environment and Development (Brundland Commission) outlined the many crises facing humanity and urged actions;
- **1991** - The IUCN document 'Caring for the Earth' sought to define actions for sustainability in a range of sectors;
- **1992** - Documents and conventions of the Earth Summit in Rio de Janeiro firmly established the urgency of planetary environmental rehabilitation with an agenda for economic and social justice.

This Conference put forward a set of principles which has resulted in a greater emphasis being placed on alleviating poverty and improving living standards, protecting tropical forests and other natural resources and promoting people's participation. Given these principles, interventions have tended to address simultaneously, issues of development, sustainable resource management and poverty eradication. One of the main strategies employed to

facilitate participation of communities in the sustainable management and protection of natural resources has been the empowerment of local and community groups through the delegation of authority and accountability. **This could include authority to manage specific designated areas, and authority to enforce some environmental laws and regulations.**

2. A number of governments have pushed ahead with national initiatives, these include:
- (a) **The New Zealand Natural Resource Management Act of 1991** is regarded as the first one-stop resource management law in the world. It:
 - Replaces over 50 former policies and statutes which guided natural resources development and urban and rural planning,
 - Is the primary statute for the management of natural resources, and
 - Attempts to reform the State Agencies to support this process, including the separation of environmental protection and management from resource development
 - (b) **Sustainable Development Act, Manitoba, Canada.** The 1998 Act is the first comprehensive act of its kind for provincial governments. It:
 - Creates a framework for implementing SD in the provincial public sector, and promotes this in private industry and society in general,
 - Develops a SD strategy with component strategies for specific sectors,
 - Created multi-sectoral mechanisms (roundtable and co-ordination unit - secretariat) for participation, codes of practices and monitor indicators,
 - (c) **A number of local government/city management experiences are also relevant.**

These include:

- The new Local Government Act, British Columbia, Canada,
- Hamilton - Vision 2020 - The Sustainable Community,
- Santa Monica - Sustainable City Program, and
- American Planners Association - Policy Guide on Planning for Sustainability

Collectively these processes seek to:

- Decentralized decision-making,
- Greater participation of citizenry,
- Change existing laws governing planning,
- Use taxes as economic instruments to foster change,
- Use sustainable indicators to influence city planning, and
- Use of eco-system planning.

2.2 THE JAMAICAN OPERATIONAL CONTEXT FOR WATERSHED MANAGEMENT

The Jamaican context has been working on several fronts.

Initiatives include:

- Establishment of a Sustainable Development Council of Jamaica (SDC-J) to build and drive the National Programme,
- The Green Paper on Local Government Reform, which saw the growth of Parish Development Committees (PDCs), a parish partnership of all streams to strengthen the input and capacity of stakeholders at the parish level,
- The Parish Infra-structure Development Program (PIDP) and the Government Modernization Program - both geared towards building the capacity of local authorities and state agencies,
- Development of a Local Sustainable Development Framework articulating a vision and set of principles along with the selection of Portland as the demonstration project,
- The amalgamation of all environmental and planning themes under one unit with the recent establishment of National Environment and Planning Agency (NEPA), and
- The development of a Compliance and Enforcement Field Guide by NEPA/ENACT,
- The establishment of a National Strategy and Action Plan on Biological Diversity in Jamaica,
- The preparation of a draft "National Forest Management and Conservation Plan, and
- The preparation of a new Watershed Policy
- The Ridge to Reef Project.

The area review includes:

1. The new Watershed Policy

The Watersheds Protection Act (1963) is the law governing watersheds in Jamaica and is administered by the Natural Resources Conservation Authority. The primary focus of the Act is the conservation of water resources by protecting land in or adjoining the watersheds.

The Act is intended to:

- Ensure proper land use in vital watershed areas;
- Reduce soil erosion;
- Maintain optimum levels of groundwater; and
- Promote regular flows in waterways.

The Act relies heavily on prohibiting and regulating to protect the declared watersheds, and lacks provisions for incentives, public education and the involvement of local communities. The Act had not benefited from any substantial revision since its promulgation.

The Watersheds Protection Act and many related acts have a number of gaps and overlaps in terms of areas and responsibilities. For instance, both the Forest Act and Natural Resources Conservation Authority Act have stipulations for managing "Protected Areas" but the clear distinctions between them and the jurisdictions of each are to be defined and agreed upon. The

same is true of the lands in the declared watersheds and the rural areas under RADA's jurisdiction, with respect to the responsibility for soil conservation work in watersheds.

In view of:

- These legislative gaps and jurisdictions with parallel or contending powers,
- Objective requirements for protection of watersheds,
- Participatory approaches,
- Division of the island into 26 Watershed Management Units, and
- NRCA's role in this process, the decision was arrived at to update the existing Watersheds Protection Act and by instituting, appropriate Regulations under the Act.

The new policy deals with:

- (a) The division the island into 26 Watershed Management Units (WMUs) comprising all the land from the mountains to the sea and containing over 100 streams and rivers. These WMUs are essentially composites of **watershed**, which fall within ten (10) hydrological basins (regions). Steep slopes usually in excess of 20 degrees characterize the land in the upper part of the WMUs. Limestone derived soils cover about 65% of the watersheds and the remaining areas are composed of soils derived from weathered igneous and metamorphic rocks.
- (b) Addresses Watershed conditions and problems including:
- Natural conditions of instability - landslides and slope failures due to the presence of steep slopes, and thin or erosive soils, heavy and high intensity rains in the upper watershed areas, often leading to soil erosion, and susceptibility to earthquakes,
 - Aggravated by the inappropriate farming activities on the slopes, with upwards of 170,000 farmers cultivating just under 245,000 hectares, and using unsuitable agricultural practices have contributed to massive soil loss through soil erosion, siltation of drains and rivers and destructive flooding downstream. Depending on crops and practices, the average soil loss reaches approximately 30 tons per hectare per year according to some statistics (NRCA, 1997),
 - Increased industrial and agricultural activities (crop expansion, increased use of industrial and agro-chemicals, urban run-off and the improper disposal of sewage effluents) have brought pressures on land and water resources and have lead to greater water pollution,
 - The growing demand for water has not been adequately matched by an increasing societal awareness and understanding of the important linkages between land uses in upper watershed areas and water production,
 - Rivers, beaches and harbours have become polluted and coral reefs degraded adversely affecting local residents and the tourism industry,
 - The large-scale removal of trees for **mining, quarrying, urbanization, housing programmes, squatter settlements**, and the illegal removal of forest cover for lumber charcoal production and yam sticks have greatly contributed to the relatively high rate of deforestation,
 - Forest fires have been contributing more and more to deforestation due to the extended periods of drought, and
 - All of the above-mentioned factors have resulted in heavy siltation of rivers, reservoirs, irrigation canals and water intakes, as well as harbours. Surface runoff is greatly

increased due to excavation of slopes, diminished vegetation cover, compacted soils, and many other activities that reduce water intake to the soils. During heavy rains and hurricane seasons, floods become more frequent and severe, whereas in dry seasons, water shortages become a serious problem. Over the last two decades, the incidence of serious floods has increased significantly resulting in considerable losses in life and property.

(c) Examines the **Effects of Watershed degradation**, including:

- Reduced tree and vegetative cover;
- Reduced water **storage**, availability and quality;
- Reduced productivity of land, increased siltation of gullies, rivers and reservoirs due to soil erosion;
- Increased marine and coastal contamination and degradation adversely affecting the tourism **and fishing** industries;
- Increased flooding resulting in loss to human life, property, roads and agricultural crops; and
- Loss of habitat for important flora and fauna.

(d) Identifies the institutional framework, which gives the NRCA and the Forestry Department the main responsibilities for management of watersheds.

The areas identified are:

- Regulatory;
- Custodial
- Technical information, advisory, extension and research bodies;
- Ad hoc coordinating committees; and
- Non-governmental organizations; and External funding agencies.

2. A Review of the 'Study' undertaken for the R2RW Project by Dr. Ken Ellison

A Report on Governance and Watershed Management that was undertaken by Kenneth H. Ellison, Ph.D., ARD's Senior Associate specializing in local governance, decentralization and institutional development, assisted in setting the conceptual framework relating to policies and legislation for local governance and watershed management.

The purpose of the Consultancy was to assist USAID/Jamaica, the National Environment and Planning Agency (NEPA), the R2RW Project, and other key organizations to assess the impact of local government reform and to analyze appropriate institutional models for devolved governance of natural resources, especially watershed management.

Dr. Kenn Ellison was asked to:

- Review governance reforms, and their role in managing watershed;
- Examine various structures, laws, committees, mechanisms, and processes relevant to watershed management; and
- Consider options and strategies that maybe considered for watershed management.

Below are highlights of this Report:

- (a) Local government has existed in Jamaica for over three hundred years, since first being established in 1664 along the lines of the British colonial Vestry model. The system here is two-tiered, comprising of central (national) government and local (sub-national) authorities. Currently, local government is composed of twelve Parish Councils and the greater Kingston and St. Andrew Corporation.
- (b) It is evident that Jamaica is organized as a centralized system with respect to most activities, with devolution just beginning in a few areas confined to conventional local government responsibilities. Local authorities have been delegated responsibility for delivery of a limited number of specific services, but a great deal remains subject to review and approval from Central Ministries so that there exist effectively a veto power and a centralized control mechanism. Significantly, local government is not enshrined in the Jamaican constitution. They essentially exist at the pleasure of the Minister who may suspend or remove them at will (of course subject to cause).
- (c) To enable reform of local government, a general policy was set forth in Ministry Paper No. 8/93 'On Local Government Reform' and was established as a formal programme within the lead Ministry of Local Government, Youth and Community Development (MLGYCD) in 1994. It would appear that while the reform effort is oriented toward restructuring, strengthening and revitalizing *some* powers of local authorities and aggressively increasing citizen participation, it cannot be typified as a decentralized system.
- (d) The reform effort has not sought to restructure the mandate and role of central institutions by **devolving** responsibility for most services now controlled by other Ministries, such as, environmental monitoring and enforcement, specific resource management areas (coastal environments, watersheds), agricultural extension, or community organization.
- (e) Concurrent with the effort to reform local **government** structures, is an attempt to reform the processes of **governance** involving citizen participation. Participatory processes are valued and utilized in a number of Ministries, and the notion of soliciting greater involvement of citizens in support of local development is definitely a value integrated into many activities of Ministries with responsibilities directly effecting local communities. Various policy documents make frequent mention of 'participation', 'participatory governance', 'co-management' and the like (e.g., both the Watershed Green Paper 2/99 and the National Forest Management and Conservation Plan 1999 mention these values prominently).
- (f) From the perspective of watershed management, choices favoring one or the other of these modes of decentralization can be significant; it is vitally important that we do not think we are doing one when we are actually doing another. If deconcentration or delegation is chosen, local authorities will have relatively smaller roles in managing environmental issues such as watershed conservation because they are relegated to a supportive and secondary role. That is, they are just one of the 'stakeholders'. Whereas if devolution is chosen, local authorities must be moved to the center of the environmental management decision-making process, with a concomitant assignment of expenditure authority lodged at the local level.

3. **The Compliance and Enforcement Field-guide prepared by ENACT for NEPA in April 2001**

The Compliance and Enforcement Field-guide prepared by ENACT for NEPA in April 2001 is 'designed to assist Field Wardens and Technical Officers engaged in performing the work of NEPA' with the necessary information and skills for performing their work under the authority defined through the various Acts administered by NEPA. Acts, Policies, Standards and Regulations include:

- **NRCA** - NRCA Act, Beach Control Act, Wildlife Protection Act, Watersheds Protection Act, and Town Planning Act;
- **Delegated Authority Regulations** - Marine Park Regulations and National Parks Regulation (Forest Act);
- **Other Agency Acts** - Forest Act, Fishing Industry Act, Litter Act, Public Health Act, Country Fires Act, The Quarries Act, Exclusive Economic Zone Act, Pesticide Act, Factories Act, and Maritime Areas Act;
- **Standards and Regulations** - Permit and Licensing Regulation, Air Monitoring Regulation, and Trade Effluent - and,
- **Policies** - Beach Policy, Protected Areas, and Watershed Policy.

It highlights that an Officer carrying out duties must know the following:

- What are the specific legislation under which he/she is citing;
- The powers of arrest;
- Legal procedures including:
 - Jamaica's Criminal Justice System,
 - Conditions concerning the arrest of persons,
 - Procedures for laying charges,
 - Procedures for serving summons,
 - Writing and serving Cessation Orders, Enforcement Notice, and Warning Letters,
 - Obtaining a Warrant, and
 - Carrying out an arrest.
- Investigative Procedures including:
 - Monitoring environment to check compliance and identify possible violations,
 - Responding to complaints,
 - Stopping moving conveyances - e.g. vehicles and boats,
 - Undertaking inspections to identify illegal methods and equipment,
 - Conducting searches and seizure,
 - Taking of legal samples,
 - Identifying, collecting, securing, and preserving evidence,
 - Using investigative aids,
 - Making accurate notes and completing rough sketches,
 - Identifying, interviewing and taking statements from witnesses and violators,
 - Conducting surveillance and covert operations,
 - Collecting 'proof' for criminal cases, and
 - Knowing the difference between principal and accessories to a crime.
- Case preparation including:
 - Organizing and evaluating evidence,
 - Preparing documents, reports and exhibits,
 - Determining and recommending a course of action, and
 - Consulting and advising legal staff.

- Knowledge of Court Procedures including:
 - Understanding and following court rules and protocol,
 - Presenting evidence in court,
 - Introducing and identifying evidence in court, including how to speak when giving evidence, and
 - Disposing of Evidence.
- Knowledge of Environment Issues:
 - Objectives and concerns in Jamaica,
 - Know the national history of Jamaica's wildlife,
 - Identify habitat protection requirements,
 - Knowledge of agricultural, forestry, food preparation, industrial, manufacturing and health procedures,
 - Trading public concerns,
 - NEPA, and other key organizations, administrative and functional requirements
 - Equipment to be used, and
 - Concept of personal safety.

4. Towards a National Strategy and Action Plan on Biological Diversity in Jamaica

The Convention Biological Diversity (CBD) was opened at the Rio 'Earth Summit' for signature. Jamaica became a signatory along with 167 countries to this legally binding agreement requiring member countries to:

- Conserve bio-diversity
- Use biological resources in a sustainable manner, and
- Fairly and equitably share the benefits derived from the use of genetic resources

Jamaica's strategy that was launched in April 2001 includes:

- Background to Jamaica,
- Jamaica's Bio-diversity, Biological and other natural resources, including Forestry and Watersheds,
- Legal and Policy frameworks for the conservation and sustainable use of Bio-diversity,
- The major challenge and gaps affecting the conservative and sustainable use of Jamaica's bio-diversity, and
- A national bio-diversity strategy and action plan.

This Green Paper 3/01 indicates twenty-six (26) watershed management units exist in Jamaica of which ten are in need of rehabilitation. Several ecosystem rehabilitation programs are being undertaken to increase the quality and quantity of water for human consumption. The report points to 'at least 52 pieces of legislation that have aspects that directly relate to the management of the environment'. It provides a summary of most of the Acts included in the R2RW Review.

5. Regulatory Impact Assessment Statement (RIAS)

NEPA, in building its capacity to influence the behaviours of Jamaicans with emphasis on standards and regulations and enforcement resources, commenced using RIAS in 1998 for project planning.

RIAS is an analytical tool for producing effective standards and regulations that deliver maximum compliance in the most cost-effective manner. This tool is specific to regulatory planning, was adapted, tested and applied to the Jamaican context. This emphasis on effective monitoring and enforcement calls for a shift towards public education and self-monitoring by regulated community.

The element of RIAS includes:

- Identifying the problem and alternatives to the regulatory route,
- Consultation with all concerned stakeholders,
- Cost-benefit analysis of alternatives such as economic incentives, and
- Compliance and Monitoring Plans.

The RIAS tool identifies that successful compliance relies on the co-operation of many agencies in the public sector, the support of other NEPA Divisions and Branches, and community-based knowledge.

6. Interviews between R2RW Technical Team and

- Stewart Forbes of ENACT,
- Fred Campbell and Basil Forsythe of NEPA's Compliance and Regional Services Division, and
- Lloyd Service, Theodore Rhone and Linton Chambers of Environmental Wardens Service (EWS)

These interviews all took place in June 2001. Written submissions have been made in some cases.

The following issues were highlighted:

- There have been great limitations in using 'hunters' to be Game Wardens. It was unlikely that one hunter would report on another. This practice has been discontinued by the NRCA.
- Forest Officers who were part-time and live in the communities that are being called upon to enforce laws in their communities face limitations, and maybe placed in compromising situations, due to their familiarity with local residents who are violating forest laws. Additionally, all have not been security processed - fingerprints, background checks, and the nature of part-time occupations (many are considered to be shopkeepers) undertaken, neutralizes their effectiveness. There were strong views expressed that given the high levels of deforestation being carried out by a vast number and variety of illegal loggers, that there needs to be an urgent review of the present terms and conditions under which Forest Wardens are employed and deployed.
- The major environmental enforcement activities in Jamaica were being undertaken by EWS. Since its inception in 1997 until June 2001, this 30-person organization operating from four locations undertook over 420 arrests relating to three Acts:
 - Litter Act - 326
 - Quarrying Act - 90
 - Wildlife Act - 7

Some 423 arrests were made under these Acts with \$687,000 fines paid into the courts. In addition, 179 vehicles (mostly trucks) were seized. The EWS arrest for breaches under the

Litter Act - covering mainly dumping of commercial waste and garbage, is quite different from the enforcement undertaken by the Parish Council Wardens under the same Act. These usually cover displaying of goods, throwing of paper, and small quantity of litter. EWS also highlighted the need for adequate mobility, and for two additional bases in Manchester (southern) and Port Antonio (eastern), to compliment the existing coverage in Kingston, St. Ann, St. James, and Hanover.

- The need to identify the enforcement challenges in the Great River Watershed, which should include:
 - Cutting down of trees
 - Sensitization of the judiciary, and
 - Illegal quarrying
- EWS Officers undertook a two-month training program on environment issues, and court procedures. Concerns were expressed about bringing the Island's Special Constable Force into one unit with the EWS. Since the ISCF had limited culture and competence in environmental enforcement, and maybe at a different educational levels, specialist environmental wardens would be deployed to deal with general areas, and general enforcement group would be called upon to deal with specialist environmental areas.
- Build partnership of all state agencies, NGOs, and CBOs involved in compliance and enforcement,
- Include incentives to encourage compliance and to support enforcement,
- Work alongside other initiatives already in place, such as ENACT,

All the interviews undertaken point to the urgent need to develop a trained, uniformed, capable, and properly equipped cadre of Enforcement Officers at the national level, and a similar empowered Municipal or Parish Wardens at the parish level.

7. Meetings with Stakeholders

Two major activities were held to facilitate stakeholders providing input into the draft document. These activities included:

- (a) A Breakfast Meeting of Lawyers and Policy Specialists held at the Alhambra Inn on October 23, 2001, and
- (b) A Special Meeting of the Compliance and Enforcement Task Force held at the Catherine Hall Offices of RADA, Montego Bay, on October 30, 2001.

There was very little feedback on the information presented. That related input has been integrated into the study. The issues raised at both meetings are captured here under their related headings:

(a) Policy and Institutions

1. The need to make the environment a higher priority on the national agenda was highlighted.

This included:

- National awareness and focus on Compliance and Enforcement,

- Building consensus to identify major issues,
- Balancing compliance and enforcement,
- Greater emphasis on management system,
- Finding the numbers to inform decisions, and
- Holding the right people accountable

There was also the need to consider how issues fit within the national level context. The GRWMC can show case solutions on a local level that should be brought back to the national level.

2. There needs to be a national level statement of policy and commitment that states that all Government Agencies must coordinate their programs at the community, parish and regional levels. **(Long-term)**

Some Ministries are already going this way with their Regionalization programs e.g. NEPA is establishing a western regional office. However, this decision needs to be established from the highest level of all agencies.

Attention must be given to the building of partnerships at the national (among state agencies and through the National Integrated Watershed Management Committee), regional and parish (The Great River Watershed Management Committee and its related Task Forces), and community (Local Management Committees) levels.

The need to streamline to eliminate overlapping jurisdictions is extremely urgent.

3. Lead Agency or Committee to be responsible for local area coordination of existing resources **(short-term)** should be established. This could be NEPA or GRWMC) the coordination between the NIWMC (for national policy), and the GRWMC (regional activities), and NEPA as the coordinating agency should be developed.

A slogan, motto, or jingle that promotes coordination needs to be developed.

4. A plan of action, an audit of resources, the better utilization of the police in environmental enforcement and compliance, giving the enforcement officer more power of arrest, and better packaging of training information, are needed to assist in determining a way forward. A consensus on sharing of resources to carry out enforcement also needs to be reached.
5. Networking tools for use **(immediate)** should be developed. These would include contact list with phone numbers of all stakeholders, and basic procedure guidelines.
6. MOU be signed by heads of agencies that specifies the roles and programs of respective departments **(medium to long term)**

(b) Regional and Local Issues

1. Ensure that all parishes play an important and equal part in the GRW management – all parties must come to the table and feel a part of it.
2. Ensure that there are benefits to be derived from the program by all stakeholders.
3. Ensure that there is transparency between local persons and agencies. This can be done with greater emphasis on education and coordination and collaboration with GoJ and NGOs. All parties must share their programs and plans.

4. Ensure that GRWMC has inputs into the PDCs for each parish to enhance governance – e.g. the GRWMC needs to inform the PCs/PDCs of plans and gain representation on each related PDC, and invite the appropriate representation on the GRWMC, and its Task Forces.
5. Local residents are made to be part of the planning, implementation and control mechanisms of all projects. Community residents must be involved in local level committees to give feedback on what is happening in their communities.

However, there are limited civil society organizations identified in the targeted watersheds to support community-based compliance and enforcement.

(c) Legal Reform

1. Legal assessment needs to be done to see which laws supercede which other laws. There are over 100 pieces of legislation and 60 agencies involved in environment management.

The Cabinet is aware of the problems/constraints plaguing the enforcement agencies, including lack of personnel, equipment such as cameras, and those to enhance communication. The NIWMC was established to facilitate co-ordination. The Cabinet had also established a Special Force to undertake enforcement, which has proven to be inadequate and lacking in co-ordination.

2. The role of national authorities as opposed to local authorities should be defined, along with a definition of the local planning process.
3. An investigation of the possibility of drafting a single piece of environmental legislation, and/or looking at a more gradual process - piece-by-piece consolidation, should be undertaken.

The New Zealand model of unifying environmental legislation under one policy, and how that could be applied to the Jamaican situation could provide some useful lessons.

We could also draw on other experiences, for example British Columbia for using voluntary compliance.

This model highlights:

- Provincial Government production of material,
 - Officers being instructed to talk with Local Groups and submit annual reports on frequency of meetings, and numbers in attendance,
 - The removal of approaches that are heavy-handed, to those that encourage compliance, and
 - Better coordination, and where possible amalgamation of interventions between agencies.
4. There was an identified need to undertake sensitizing of the judiciary, and training for members of the JCF on environmental issues. Work done in this area to date has been inadequate, and lacking sustained information.

(d) Enabling Institutions and Individuals

1. A review of the recommendation for a specialized Environmental Court should be undertaken, and operationalized if considered appropriate.

This would include:

- a. Developing a clear understanding of each agency role,
 - b. Reviewing and modernizing present fines and sanctions including the use of community service,
 - c. Giving wider discretion on fines to the judiciary, and
 - d. Forming a Technical Task Force to examine and review existing Acts
2. Establish national educational campaign on the importance of environmental stewardship:
- Develop a component that specifically deals with the judiciary since they are not necessarily aware of the latest laws,
 - Undertake an inventory of existing environmental materials, design information packages, and develop and implement dissemination strategies,
 - Combine enforcement with education, and provide more training. Training should include case preparation.
 - Environmental matters should be included in the curriculum at the Police Training School, and
 - Compliance should be taught from the school, and at the community level.
3. Strong governance systems in communities to inform national policies - Work with established environmental NGOs, and CBOs to have within communities, capacitated Committees or Sub-Committees concentrating on environmental issues and solutions.

Representatives should also be selected to the PDCs from communities for lobbying and advocacy reasons. This would allow for movements from local level to regional level, and on to a national level – so that it all fits within a national framework.

Planning capacity should also be developed at all levels with emphasis on sustainability

4. Further empowerment of present enforcement systems, such as the EWS. The EWS provided a natural core to build a cadre of enforcement officers on, with its cadre of already trained officers. However, it lacks resources, and needed better co-ordination between the JCF, and itself.

One Officer from NEPA, who is responsible for environmental protection, should collaborate with EWS, other Central Government and Municipal Officers, in order to allow for better co-ordination.

There is also the need to develop a pocketsize Field Guide that is easy to understand and use by these enforcement officers.

5. Establish an environmental ticketing system where an accumulation of offences would result in prosecution.
6. In a culture that makes it dangerous to be informers, strategies need to be devised for utilizing the public as informants.
7. There was a belief that a number of enabling things are already in place to deal with environmental issues - personnel, vision, and while the inability of the government to provide the resources exists, we have the regional and international environmental bodies to draw strength from.

What can be done will depend on the political will.

3. LISTING OF THE ACTS RELEVANT TO WATERSHED MANAGEMENT IN JAMAICA

Listed below, in chronological order, is a summary of the different acts relevant to watershed management. This Inventory of the current policy and legislative framework-governing physical and development planning and management related to watershed management should be taken with the section following, which provides **a number of Tables** on the same subject.

For each of 14 acts considered, each is examined in terms of 8 separate aspects.

- (a) Water Resources and Forest Resources
- (b) Agricultural and Soil Conservation Practices
- (c) Mining and quarrying
- (d) Settlement & Sanitation
- (e) Wildlife and Parks and Protected Areas
- (f) Governance, Compliance & Enforcement
- (g) Summary of Fines/Penalties relating to Watersheds
- (h) Power to Enforce under the Act

1. THE COUNTRY FIRES ACT (1942)

The Country Fires Act enacted in March 1942 deals with:

- Setting fire to crops,
- Setting fire to trash and/or lands, and
- Setting fires during the night or unattended fires.

(a) Water Resources and Forest Resources

There is no reference in this Act to issues relating to Water and Forest Resources.

(b) Agricultural and Soil Conservation Practices

The issues relating to Agricultural and Soil Conservation Practices mentioned under this Act are:

- Prohibit the setting of fires to crops, trash during nights or unattended
- Setting fire contrary to order or permit
- Allow for fire to plant or trash for the purpose of eradicating, or preventing the dissemination of disease
- Allow for fire to any lime or charcoal kiln

(c) Mining and quarrying

There is no specific mention of Mining and quarrying issues under this Act.

(d) Settlement & Sanitation

The Settlement and Sanitation issues covered here are:

- Negligent use or management of fire in any place,
- Smoking in any plantation, except within a dwelling-house,
- Failure to assist in extinguishing a fire, when asked to do so, and
- Causes, permits or assist to commit an offence.

(e) Wildlife and Parks and Protected Areas

There is no specific mention of Wildlife and Parks and Protected Areas issues under this Act.

(f) Governance, Compliance & Enforcement

The following are the Governance, Compliance and Enforcement issues addressed by this Act:

- Prohibit the carrying of lighted torch that is insufficiently guarded,
- Provides penalties for negligence in use of fire,
- Control the smoking in any plantation, except within a dwelling-house,
- Failure to assist in extinguishing a fire, when asked to do so
- Provides penalties for causes, permits or assist to commit an offence, and
- Offence against this Act attracts fines.

(g) Summary of Fines/Penalties relating to Watersheds

An offence against this Act attracts fines of up to \$2000 or imprisonment with or without hard labour of up to 3 months.

(h) Power to Enforce under the Act

Power to Enforce under the Act includes:

- The Police,
- Forest Officer, and
- Agricultural Warden

2. WILDLIFE PROTECTION ACT (1945)

The Wildlife Protection Act was established in September 1945 to regulate:

- Hunting for animals in a Game Sanctuary, Game Reserve, or exclusive Economic Zone,
- Hunting protected animals and protected birds,
- Shooting Season,
- The taking of immature fish,
- The usage of dynamite or other explosive substance, poison, lime or noxious materials for fishing,
- Using any traps in river, stream, or canal, and
- Protection of waters containing fish from trade effluents.

The NRCA has power, with the approval of the Minister to make regulations.

(a) Water Resources and Forest Resources

The issues relating to Water and Forest Resources mentioned under this Act are:

- Protect against damage or destruction from dams, floodgates or sluice to take kill or injure fish,
- Prevent the use of dynamite and other noxious materials to take kill or injure fish, and
- Prevent the usage in river, streams or canals any traps other than ones authorized, and
- Protection of waters containing fish from trade effluents.

(b) Agricultural and Soil Conservation Practices

There is no specific mention of Agricultural and Soil Conservation Practices issues under this Act.

(c) Mining and quarrying

There is no specific mention of Mining and quarrying issues under this Act.

(d) Settlement & Sanitation

The only Settlement and Sanitation issue dealt with here relates to the protection of waters containing fish from trade effluents - breeches attracting fines of up to \$50,000 and/or imprisonment of up to 2 years

(e) Wildlife and Parks & Protected Areas

Issues relating to Wildlife and Parks and Protected-Areas dealt with under this Act are:

- Establishment of Game Sanctuaries and Reserves,
- Control the hunting of protected animals, birds, and immature fish, and the taking of turtle eggs, and
- Regulate hunting season.

(f) Governance, Compliance & Enforcement

The following are the Governance, Compliance and Enforcement issues addressed by this Act:

- Protection of waters containing fish from trade effluents,
- Control the hunting of protected animals, birds, and immature fish,
- Regulate hunting season,
- Taking of or permitting of dogs in a Game Sanctuary,
- Carrying of gun, catapult or other weapons in a Game Sanctuary,
- Power of Game Warden to undertake search and arrest,
- Provide penalties for assaulting an officer (Game Warden, Fishery Inspector or Constable) or any other offences,
- Persons may also forfeit goods and/or equipment seized, and
- Jurisdiction over offences committed at sea (Jamaica's territorial limit).

(g) Summary of Fines/Penalties relating to Watersheds

The Fines relating to Watersheds under this Act are:

- The protection of waters containing fish from trade effluents - breeches attracting fines of up to \$50,000 and/or imprisonment of up to 2 years
- Control the hunting of protected animals, birds, and immature fish - fine of up to \$2000 or 1 year imprisonment for failure to give information,
- Any other offences shall attract fines of up to \$10,000 and/or imprisonment of up to 1 year,
- Possible forfeit goods and/or seizure of equipment

(h) Power to Enforce under the Act

Enforcement is undertaken with the assistance of:

- Game Wardens,
- Fishery Inspectors, and
- The Constabulary.

3. THE MINING ACT (1947)

The Mining Act of October 1947 deals with:

- Mining and prospecting (does not apply to oil),
- Payment of royalties,
- Lands excluded from prospecting or mining,
- Land under mining lease that is required for public purposes,
- Prohibiting the prospecting for specified minerals,
- Disposal of minerals,
- Granting of prospecting/mining right, licence, and lease,
- Interference with and or pollution of public water,
- Water right, and
- Passageways.

The Mining Act should be taken with:

- The Mining Regulations, 1947
- The Mining Regulations, 1961, and
- The Mining (Safety and Health) Regulations, 1977

(a) Water Resources and Forest Resources

The issues relating to Water and Forest Resources mentioned under this Act are:

- Grant water rights,
- Protect against pollution of public water, and
- Removal of minimum amount of timber to facilitate operation.

(b) Agricultural and Soil Conservation Practices

The Agricultural and Soil Conservation Practices issues covered in this Act are:

- Right to exclude lands, and
- Grant rights of passage-way,

(c) Mining and quarrying

The following are the Mining and quarrying areas looked at by this Act:

- Grant mining licence or lease, (but exclude oil),
- Collect royalties,
- Power to take clay,
- Make appropriate regulations, and
- Transfer licence.

(d) Settlement and Sanitation

The Settlement and Sanitation issues covered here are:

- Rights of passage-way,
- Right to exclude lands,
- Power to revoke and pay compensation when land required for public use, and
- Power to remedy dangerous practice.

(e) Wildlife and Parks and Protected Areas

There is no specific mention of Wildlife and Parks and Protected Areas issues under this Act.

(f) Governance, Compliance & Enforcement

The following are the Governance, Compliance and Enforcement issues addressed by this Act:

- Payment of Royalties,
- Payment of fines,
- Forfeiture of mineral,
- Make Regulations, and
- Grant prospecting rights.

(g) Summary of Fines/Penalties relating to Watersheds

The Fines relating to Watersheds under this Act are:

- Contravention of Act attracts fines of up to \$2,000 or imprisonment with hard labour of up to 12 months, and possible forfeiture of minerals already mined,
- Removal of minimum amount of timber to facilitate operation - breach lead to a maximum fine of \$200 and/or up to 6-months imprisonment with hard labour, and
- \$40 fine for failure to cooperate with an Inquiry,
- Restrictions on export of minerals, with breaches leading to fines of up to \$10,000, or to imprisonment of up to 2-years, with up to \$10,000 for each day of continuous breaches, and
- A general breach attracts fines of up to \$1,000 and/or imprisonment with hard labour of up to 12 months.

(h) Power to Enforce under the Act

Power to Enforce under the Act includes an Officer under the Commissioner of Mines, supported in specific cases by:

- Medical Officer,
- Resident Magistrate/Justice of the Peace,
- Marine Officer,
- Public Health Inspector

4. THE TOWN AND COUNTRY PLANNING ACT (1958)

The Town and Country Planning Act, established in February 1958 to:

- See to the appointment of a Town and Country Planning Authority,

- Prepare in consultation with any local authority, provisional development order/s,
- Recommend confirmation of development order/s,
- Undertake amendment of confirmed development order/s,
- Process applications to local planning authorities for permission to develop lands,
- Enforcement of planning control,
- Make orders for the preservation of trees and woodlands,
- Control advertisements,
- Require proper maintenance of wastelands, and
- Allows Minister to make interim development order.

The Town and Country Planning Act also includes:

- An Act to amend the Town and Country Planning Act, of March 1999,
- The Town and Country Planning Authority (Composition, Powers and Duties) Order, 1988,
- The Town and Country Planning (Tree Preservation) Regulations, 1967, and
- The Town and Country Planning (Control of Advertisements) Regulations, 1978.

(a) Water Resources and Forest Resources

The issues relating to Water and Forest Resources mentioned under this Act are:

- The preservation of trees and woodlands,
- The protection of agricultural lands (including afforestation) from being used for buildings, and
- Protecting the right in relationship to public water.

(b) Agricultural and Soil Conservation Practices

The Agricultural and Soil Conservation Practices issues covered in this Act are:

- The protection of agricultural lands (including afforestation) from being used for buildings, and
- The power to require proper maintenance of wastelands.

(c) Mining and quarrying

The only direct reference to mining and quarrying in this Act relates to usage or compensation regarding lands to which mining licenses has been granted.

(d) Settlement & Sanitation

The Settlement and Sanitation issues covered here are:

- Preparation, confirmation and modification of development orders,
- Controlling the development of the land in the area to which the order applies,
- Securing proper sanitary conditions and conveniences,
- Co-ordination of roads and public services,
- Protecting and extending amenities,
- Local Authorities to maintain register of applications for development of lands,
- Pay compensation, when applicable for non-granting of permit, and
- Control advertisement.

(e) Wildlife and Parks and Protected Areas

Issues relating to Wildlife and Parks and Protected-Areas dealt with under this Act are:

- The conservation of resources, and
- The preservation of trees and woodlands.

(f) Governance, Compliance and Enforcement

The following are the Governance, Compliance and Enforcement issues addressed by this Act:

- Process applications to Local Authorities (LA),
- Local Authorities to maintain register of applications for development of lands,
- Power of Local Authorities to revoke or modify planning permission,
- Control advertisement, and
- Make Regulations.

(g) Summary of Fines/Penalties relating to Watersheds

The Fines relating to Watersheds under this Act are:

- Preservation of trees and woodlands - offences attracting fines of up to \$100 or imprisonment of up to 3-months with continuity of the offence, attracting a \$4 per day fine,
- Contravention of enforcement notice re development, attracts fines of up to \$25,000 or imprisonment with hard labour of up to 12 months, with continuity attracting a \$5000 per day fine and eventually forfeiture, and
- Miscellaneous power to enter land for inspection; obstructing attracting fines of up to \$10000 or imprisonment with hard labour up to 12-months.

(h) Power to Enforce under the Act

Power to Enforce under the Act includes:

- The Authority,
- The Local Planning Authorities (inclusive of Parish Councils and KSAC), and
- NEPA (The Government Town Planner)

5. THE FLOOD-WATER CONTROL ACT (1958)

The Flood - Water Control Act of March 1958 allows the Minister by order to:

- Declare any area defined in such order to be a flood-water control area,
- Appoint undertakers for a Scheme, who will
- Establish provisional floodwater control schemes.

(a) Water Resources and Forest Resources

The issues relating to Water and Forest Resources mentioned under this Act are:

- Alter or regulate the course of any watercourse,
- Bring upon, make or maintain any tool/equipment,
- Clean and clear any watercourse, and
- Declare public streams.

(b) Agricultural and Soil Conservation Practices

The Agricultural and Soil Conservation Practices issues covered in this Act are:

- Define lands to alter any watercourse,
- Offer to purchase or compulsorily acquire lands,
- Declaration of flood-water control area/schemes, and
- Amend/modify confirmed schemes.

(c) Mining and quarrying

There is no specific reference to mining and quarrying under this Act.

(d) Settlement and Sanitation

The Settlement and Sanitation issues covered here are:

- Declaration of flood-water control area, including emergency declaration - floods, hurricanes etc,
- Amend/modify confirmed schemes,
- Determine and pay compensation, and
- Purchase of land in lieu of compensation.

(e) Wildlife and Parks and Protected Areas

The only issue relating to Wildlife and Parks and Protected-Areas dealt with under this Act is the cleaning and clearing of any watercourse of vegetation, trees etc, in any locations.

(f) Governance, Compliance and Enforcement

The following are the Governance, Compliance and Enforcement issues addressed by this Act:

- Declaration of flood-water control area/schemes,
- Amend/modify confirmed schemes,
- Utilize Valuation Board to settle compensations, and
- Make appropriate regulations.

(g) Summary of Fines/Penalties relating to Watersheds

The only fine referred to under this Act is, fines of up to \$50 or imprisonment with hard labour of up to 3-months for any breaches of this Act.

(h) Power to Enforce under the Act

Power to Enforce under the Act relates exclusively to Undertakers of Floodwater Control Scheme.

6. THE WATERSHEDS PROTECTION ACT (1963)

The Watersheds Protection Act of April 1963, regulates:

- Programmes for the protection of those areas which constitutes or adjoin the watersheds,

- The declaration of watershed areas,
- The proper, efficient and economic utilization of lands, with a vision to promoting the conservation of water resources, and
- Entering into agreements for carrying out of improvement works

The NRCA is the designated authority under this Act.

The declaration of watershed areas shall relate to be the same area as deemed by the Country and Fires Act.

(a) Water Resources and Forest Resources

Relating to Water and Forest Resources, this Act allows the NRCA to make regulations for the proper, efficient and economic utilization of land in watershed areas, with a view to promoting the conservation of water resources.

(b) Agricultural and Soil Conservation Practices

The Agricultural and Soil Conservation Practices issues covered in this Act are:

- NRCA may prohibit, regulate, or restrict the planting of any crop, or the adoption of any practices on any land for any purpose specified in the regulations, and
- Prohibit the felling, barking or destruction of any trees or the clearing of vegetation.

(c) Mining and Quarrying

NRCA may prohibit, regulate, or restrict the use of any land for any purpose specified in the regulations. This is the major mining and quarrying issue dealt with under this Act.

(d) Settlement and Sanitation

The Settlement and Sanitation issues covered here is that the NRCA can enter 'assisted improvement agreements', prepare, publish, process objections, and approve provisional compulsory improvement schemes with the owner of any construction parcel, and other persons having an interest.

(e) Wildlife and Parks and Protected Areas

There is no specific reference to Wildlife and Parks and Protected-Areas in this Act.

(f) Governance, Compliance and Enforcement

The following are the Governance, Compliance and Enforcement issues addressed by this Act:

- NRCA has the power of inspection - provided due notice - re condition of land, crops being cultivated, and for soil sampling,
- Negotiate agreements, compensations, and undertake work,
- Appoint Watershed Protection Committees to assist in the performance of its functions - with the exceptions of making regulations, and entering agreements,

(g) Summary of Fines/Penalties relating to Watersheds

The Fines relating to Watersheds under this Act are:

- Fine of \$200, or 12 months with or without hard labour upon conviction before a RM, for assaulting or obstructing an agent; or \$400 - recoverable by distress - or 12 months, in default of distress, for the destruction of or damage to any work.
- Possible greater penalties under regulations, but
- Maximum fine of \$5000 or 12 months with or without hard labour for an offence under sections 8 (Power to make regulations).

(h) Power to Enforce under the Act

The designated Authority for the Watershed Protection Act is NRCA, who manages watersheds through the Watersheds Branch - coming under the Conservation and Protection Division.

Watershed Protection Officers are placed in the major regions.

7. THE LAND DEVELOPMENT AND UTILIZATION ACT (1966)

The Land Development and Utilization Act was enacted in December 1966 to:

- Allow for the designation of agricultural lands,
- Establish responsibilities of the occupier of such lands, including requiring development plans, and
- Declaration and acquisition or lease of idle lands, where it appears the occupier is not fulfilling his responsibilities.

The responsibility for implementing this Act, now resides with the newly formed NEPA.

(a) Water Resources and Forest Resources

There is no specific Water and/or Forest Resources issues dealt with under this Act.

(b) Agricultural and Soil Conservation Practices

The Agricultural and Soil Conservation Practices issues covered in this Act are:

- Designation of agricultural lands - consult with RADA,
- Monitor the farming undertaken,
- Develop data base on lands,
- Make appropriate regulations,
- Restrict disposal,
- Power to declare idle lands,
- Power to require development plan, and
- Power to compulsorily acquire or to lease.

(c) Mining and quarrying

The only mining and quarrying area looked at by this Act relates to dealing with lands that are under the control of bauxite or alumina producers.

(d) Settlement & Sanitation

The Settlement and Sanitation issue covered here is the power to compulsorily acquire or to lease lands for public purpose.

(e) Wildlife and Parks and Protected Areas

The designation of agricultural lands- in consultation with Water Protection Commission is the issue relating to Wildlife and Parks and Protected-Areas dealt with under this Act.

(f) Governance, Compliance and Enforcement

The following are the Governance, Compliance and Enforcement issues addressed by this Act:

- Establishment of LDUC to farm and utilize agricultural lands,
- Power to declare idle lands for parcels over 10 acres, to request development plans, and to dispossess owner,
- Penalty on occupier if fail to comply,
- Power to compulsorily acquire or to lease, and
- Power to make regulations.

(g) Summary of Fines/Penalties relating to Watersheds

The Fines for an offence under this Act attracts fines of up to \$200 or imprisonment with or without hard labour of up to 12 months.

(h) Power to Enforce under the Act

The power to enforce under the Act rests exclusively with the Commission, which now resides with the new NEPA.

8. THE QUARRIES CONTROL ACT (1984)

The Quarries Control Act came into effect in January 1984 to:

- Control the declaration, and establishment of Quarry Zones,
- Establishment of a Quarries Advisory Committee to monitor policies, and the issuing of licenses,
- Monitoring the Payment of taxes, and
- Establish regulations.

(a) Water Resources and Forest Resources

There is no specific Water and/or Forest Resources issues dealt with under this Act.

(b) Agricultural and Soil Conservation Practices

The Agricultural and Soil Conservation Practices issue covered in this Act relates to Security Deposit that can be used upon failure to rehabilitate lands.

(c) Mining and Quarrying

The following are the Mining and quarrying areas looked at by this Act:

- Declaration as a specified area any area in which quarry zones are to be established,
- Establish quarry zones within any such specified area, and
- Impose a Quarry Tax, based on quarterly returns, assessment open to review by Revenue Court.

(d) Settlement & Sanitation

The Settlement and Sanitation issues covered here are:

- The establishment of Quarries Advisory Committee,
- Power to inspect re safety, welfare, and health of persons employed, storage of explosives, and records for tax purposes, and
- Power to remedy dangerous practices.

(e) Wildlife and Parks & Protected Areas

There are no specific issues relating to Wildlife and Parks and Protected-Areas dealt with under this Act.

(f) Governance, Compliance and Enforcement

The following are the Governance, Compliance and Enforcement issues addressed by this Act:

- The establishment of Quarries Advisory Committee,
- Control the declaration, and establishment of Quarry Zones,
- Monitor policies, and the issuing of licenses,
- Monitoring the Payment of taxes, and
- Establish regulations.

(g) Summary of Fines/Penalties relating to Watersheds

The Fines relating to Watersheds under this Act are:

- Offence to operate quarry without license, conviction on first offence liable to a fine of up to \$30,000, and/or 12-months imprisonment,
- Second or subsequent conviction liable to a fine of up to \$50,000, and/or 12-months imprisonment, and up to \$10,000 per day and 2-years imprisonment for continued breaches. May include forfeiture of material and mineral at the Courts discretion. Fines may be used to rehabilitate illegally operated quarry,
- Penalty of 15% of amount due for failure to remit tax under section 14 (tax payment),
- Penalty of 1%, but not less than \$15,000 or more than \$30,000 of amount due for failure to remit tax under section 15 (quarterly returns),
- Penalty of up to \$1,000, and up to double of the amount due for attempts to evade or defraud the payment of tax,
- Penalty of up to \$40,000, and up to double of the amount due for attempts to evade or conspiracy to defraud the payment of tax,
- Penalty of up to \$2,000, per day for each day default continues,
- Fines of up to \$15,000, and 6-months imprisonment in default, for failure to comply with Court re accidents and industrial diseases, and
- Fines of up to \$15,000 and 6-months imprisonment in default, and up to \$10,000 for each day of continued general breaches.

(h) Power to Enforce under the Act

Power to Enforce under the Act includes:

- Quarries Control Officers
- Inland Revenue Officers
- Security Forces - Police,
- Medical Officers, and
- Resident Magistrates/Justices of the Peace.

9. THE PUBLIC HEALTH ACT (1985)

(a) Water Resources and Forest Resources

There are no specific references to Water and Forest Resources mentioned under this Act.

(b) Agricultural and Soil Conservation Practices

The Agricultural and Soil Conservation Practices issues covered in this Act are:

- Use, and maintenance of premise, including slaughter houses, markets, dairies, and
- Inspection of cows and goats etc for milking, plus pigs, poultry for slaughtering.

(c) Mining and quarrying

There are no specific references to Mining and quarrying areas under this Act.

(d) Settlement and Sanitation

The Settlement and Sanitation issues covered here regulates:

- Use, and maintenance of buildings,
- Provision and maintenance of sanitary conveniences,
- Use, and maintenance of premises, including slaughter houses, markets, dairies,
- Inspection of sanitary conditions for places undertaking businesses,
- Sanitary collection and disposal of garbage and other waste matter,
- Importation, preparation, contamination prevention of foods and drinks,
- Investigation of diseases, and
- Control and destruction of rodents, mosquitoes, etc.

(e) Wildlife and Parks and Protected Areas

Inspection of sanitary conditions for bathing beaches and camps is the only issue relating to Wildlife and Parks and Protected-Areas dealt with under this Act.

(f) Governance, Compliance and Enforcement

The following are the Governance, Compliance and Enforcement issues addressed by this Act:

- Establishment of Central Health Committee,
- Establishment of Local Boards of Health,
- Establishment of Sanitary Districts, and
- Make Regulations.

(g) Summary of Fines/Penalties relating to Watersheds

The Fines relating to Watersheds under this Act are:

- Fines of up to \$2,000 or imprisonment with hard labour for 12-months, or fines under section 29, for breaches of regulations,
- Fines of \$100 per person, and 3-months imprisonment for default of payment for illegal assembly,
- Fines of \$2,000 per person, and 6-months imprisonment for default of payment, and up to \$500 per day, and 6 months imprisonment for default of payment, for illegal assembly, breaching the closure of schools and public places re diseases,
- Fines of up to \$1,000 or 12-months imprisonment for assaulting an officer or withholding information, and
- Fines of up to \$500 or 3-months imprisonment for default of payment, and \$100 per day or 3-months imprisonment for default of payment, for offence for which no penalty is prescribed.

(h) Power to Enforce under the Act

Power to Enforce under the Act includes:

- Medical Officer (Health), and
- Public Health Inspectors.

10. THE LITTER ACT

The 1986 Litter Act was established for preventing the defacement or obstruction by litter of public and other premises. It gives the local authority the power to:

- Enforce removal of litter,
- Right to undertake removal, and to request remedy from the Courts,
- Enter premises to undertake inspections,
- Appointment of authorized persons,
- Articulates the power of authorized persons,
- Specify the construction and design of litter receptacle,
- Designate litter collection area,
- Determine the nature, type, time, place and circumstances for disposal of litter, and
- Control the posting of signs in public places.

(a) Water Resources and Forest Resources

The Litter Act controls the disposal of litter in Water and Forest Resources.

(b) Agricultural and Soil Conservation Practices

This Act does not cover any specific issues relating to Agricultural and Soil Conservation Practices.

(c) Mining and quarrying

There are no mining and quarrying areas looked at by this Act.

(d) Settlement and Sanitation

The Settlement and Sanitation issues covered here are:

- The littering of public places,
- Littering of public places without consent,
- Willful breaking of bottles or glass in public places,
- Use of vehicles to deposit litter, and
- Power to enter premises.

(e) Wildlife and Parks and Protected Areas

The disposal of litter in parks is the issue issues relating to Wildlife and Parks and Protected Areas dealt with under this Act are.

(f) Governance, Compliance and Enforcement

The following are the Governance, Compliance and Enforcement issues addressed by this Act:

- Enforce removal of litter,
- Right to undertake removal, and to request remedy from the Courts,
- Enter premises to undertake inspections,
- Appointment of authorized persons,
- Articulates the power of authorized persons,
- Specify the construction and design of litter receptacle,
- Designate litter collection area,
- Deal with defacement of public places, and
- Make regulations.

(g) Summary of Fines/Penalties relating to Watersheds

The Fines relating to Watersheds under this Act are:

- Seizure of vehicle used to illegally dispose of litter,
- Fines of up to \$1000 and/or 6-months imprisonment with hard labour for general breaches of Act,
- Failure to comply with a notice, may lead to fines of up to \$2000, and \$400 for every day there is failure to comply, and/or up to 6 months imprisonment,
- Fines of up to \$2000 and/or up to 6 months imprisonment for interfering with an authorized person, and
- Punishment/Fines without persecution.

(h) Power to Enforce under the Act

Power to Enforce under the Act includes:

- Authorized Persons - Litter, Environmental, and Municipal Wardens,
- Traffic Wardens, and
- Police Officers.

11. THE RURAL AGRICULTURAL DEVELOPMENT ACT (1990)

Enacted in April, 1990, the Rural Agricultural Development Act (RADA), was charged with the responsibility for:

- Development of agriculture in rural areas, including:
 - Providing an efficient agricultural extension service,
 - Encourage the proper utilization of all lands in the rural areas,
 - Assist and/or participate in private enterprise in this area,
 - Promote the carrying out of such activities, and
 - Provide technical and advisory support.
- Repealing the Land Authorities Act

(a) Water Resources and Forest Resources

Afforestation is the only issue relating to Water and Forest Resources mentioned under this Act.

(b) Agricultural and Soil Conservation Practices

The Agricultural and Soil Conservation Practices issues covered in this Act are:

- Provide extension, research, training, and development services,
- Encourage the proper utilization of all rural lands,
- Encourage and/or participate in private enterprise,
- Develop and operate agricultural service centres, and
- Promote the above activities.

(c) Mining and quarrying

There are no specific mining and quarrying areas looked at by this Act.

(d) Settlement and Sanitation

The Settlement and Sanitation issues covered here are specifically in relation to crops and animal production.

(e) Wildlife and Parks & Protected Areas

This Act does not deal with any specific Wildlife, Parks, and Protected-Areas issues.

(f) Governance, Compliance and Enforcement

There are no Compliance and Enforcement issues under this Act. The following are the Governance issues addressed by this Act:

- Make regulations,
- Power of inspection, and taking of samples of soil, plants and carryout test on animals, and
- Undertake improvement work on private lands.

(g) Summary of Fines/Penalties relating to Watersheds

This Act does not allow for any enforcement, therefore there are no fines.

(h) Power to Enforce under the Act

There is no power to enforce under the Act. RADA Officers carry out technical support to farmers.

12. THE NATURAL RESOURCES CONSERVATION AUTHORITY (NRCA) ACT (1991)

The Natural Resources Conservation Authority (NRCA) Act dated July 1991 established the Natural Resources Conservation Authority with the following functions:

- Take such steps as necessary for the effective management of the physical environment of Jamaica so as to ensure the conservation, protection and proper use of its natural resources,
- Promote public awareness of the ecological systems of Jamaica and their importance to the social and economic life of the Island,
- Manage such national parks, marine parks, protected areas and public recreational facilities as may be prescribed,
- Advise the Minister on matters of general policy relating to the management, development, conservation and care of the environment, and
- Perform such other functions pertaining to the natural resources of Jamaica as may be assigned to it by the Minister or by or under this Act or any other enactment.

All authority previously vested in the Beach Control Authority and the Watershed Commission is now vested in the NRCA.

The NRCA may delegate any of its functions (excepting power to make regulations).

Other related documents are:

1. The Natural Resources Conservation (Permits and Licences) Regulations, 1996
2. The Natural Resources (Montego Bay Marine Park) Order, 1992
3. The Natural Resources (Marine Parks) Regulation, 1992
4. The Natural Resources (National Parks) Regulation, 1993, and
5. The Natural Resources (Blue and John Crow Mountains National Park) Order, 1993

(a) Water Resources and Forest Resources

The issues relating to Water and Forest Resources mentioned under this Act are:

- Work with WRA re licences to abstract and use water,
- Preventing pollution, and
- Manage the physical environment to ensure its conservation, protection, and proper use.

(b) Agricultural and Soil Conservation Practices

This Act identifies working with Minister responsible for Agriculture on related areas has the only Agricultural and Soil Conservation Practices issue covered in this Act.

(c) Mining and Quarrying

The NRCA has a general monitoring role as it relates to mining and quarrying areas.

(d) Settlement and Sanitation

The Settlement and Sanitation issues covered here are:

- Granting of licence where effluents are being discharged,
- Monitoring of sewage and industrial waste treatment plants,
- Monitoring the discharge of waste in general,
- NWC excused in certain circumstances re the discharged of effluents,
- Importation, collection, storage, recycling, recovery and disposal of substances hazardous to the environment,
- Planning permission still required under Town and Country Planning Act when necessary, and
- Promoting public awareness of the ecological systems

(e) Wildlife and Parks & Protected Areas

Issues relating to Wildlife and Parks and Protected-Areas dealt with under this Act are:

- Designation with JNHT parks and protected areas,
- Promote public awareness of ecological systems,
- Manage parks, and protected areas,
- Develop, implement and monitor environmental plans and policies,
- Report on local conditions endangering the environment,
- Undertake measures to counter destruction or degradation of the environment, and
- The protection of particular species.

(f) Governance, Compliance and Enforcement

The following are the Governance, Compliance and Enforcement issues addressed by this Act:

- Establishment of NRCA for the effective management of the physical environment to ensure the conservation, protection, and proper use of natural resources
- Grant permits for prescribed activities,
- Authority to request EIAs,
- Use of JCF and Environmental Warden Services (EWS) to ensure compliance, and to assist with enforcement,
- Serve enforcement notices - breaches can attract a maximum fine of \$50,000, and/or 2-years imprisonment.
- Undertake supplementary steps to enforcement
- Collect, borrow, invest, transfer, and apply resources to perform its functions

(g) Summary of Fines/Penalties relating to Watersheds

The Fines relating to Watersheds under this Act are:

- Preventing pollution - with recovery of amounts reasonable incurred or fines not exceeding \$10000 or term not exceeding 1-year,
- Breaches relating to sewage and industrial waste treatment plants attracts fines of up to \$20,000 and/or imprisonment of up to 2 years,

- Undertake measures to counter destruction or degradation of the environment - obstructions attracting fines of \$10,000 and/or imprisonment of up to 1 years,
- Grant permits for prescribed activities - breaches can attract a maximum fine of \$50,000, and/or 2-years imprisonment. Defaults in payment may attract 1-year imprisonment and a continuing fine not exceeding \$3,000 per day,
- Authority to request EIAs, with breaches attracting fines up to \$30,000,
- Use of JCF to ensure compliance with a maximum fine of \$10000 or 1-year imprisonment for obstruction,
- Serve enforcement notices - breaches can attract a maximum fine of \$50,000, and/or 2-years imprisonment, and
- Undertake supplementary steps to enforcement.

(h) Power to Enforce under the Act

Power to Enforce under the Act includes:

- Police Officers,
- Compliance Officers,
- Environmental Wardens,
- Forest Officers, and
- Local authorized persons.

13. THE WATER RESOURCES ACT (1995)

The Water Resources Act of November 1995 was enacted to:

- Provide for the management, protection and controlled allocation and use of water resources (regulate, allocate, conserve, and otherwise manage the water resources of Jamaica),
- Provide for water quality control and for the establishment and functions of a Water Resources Authority. The Water Resources Authority may:
 - Obtain, compile, store and disseminate data concerning water resources,
 - Exercise such planning functions relating to the Master Plan and Water Quality Control Plans, and
 - Provide to any department or agency of Government, at its request, technical assistance in respect of any projects, programmes or activities that relate to the development, conservation and use of water resources.
- Repeal the Water Act and the Underground Water Control Act,
- Make consequential amendments to certain enactment, and
- Provide for matters connected with or related to all the foregoing.

(a) Water Resources and Forest Resources

The issues relating to Water and Forest Resources mentioned under this Act are:

- Obtain, compile, store, and disseminate data,

- Identifies objectives for the development, conservation, and use of water resources, including economic efficiency, protection and enhancement of the environment, and the protection of health, safety and welfare of persons,
- Allocate water resources,
- Control the quality of water resources,
- Provide technical assistance to State Agencies in respect to the development, conservation and use of water resources,
- Collect, borrow, invest, transfer, and apply resources to perform its functions
- Perform other related management functions, and
- Inventory uses of water for Water Quality Control Areas.

(b) Agricultural and Soil Conservation Practices

The Agricultural and Soil Conservation Practices covered in this Act is to Inventory controlled land uses for Water Quality Control Areas.

(c) Mining and quarrying

Drilling for searching for or extracting minerals, (Mining Act), must take into consideration the conservation of underground water sources is only reference to mining and quarrying issues.

(d) Settlement and Sanitation

The Settlement and Sanitation issues covered here are:

- Allows for abstracting and use of water, without a licence, with right of access, and for domestic use,
- Requires the simultaneous granting of licence from the NRCA where effluents are being discharged,
- Inventory and identify discharges of waste into water for Water Quality Control Areas, and
- Revoke or suspend licence to protect public health.

(e) Wildlife and Parks and Protected Areas

Issues relating to Wildlife and Parks and Protected-Areas dealt with under this Act are:

- Identify environmental and scenic values to be protected in Water Quality Control Areas, and
- Revoke or suspend licence to protect the environment.

(f) Governance, Compliance and Enforcement

The following are the Governance, Compliance and Enforcement issues addressed by this Act:

- Establishment of WRA to regulate, allocate, conserve, and manage water resources
- Establishment of Advisory Committee to advise on general policy, Master Plan, and Water Quality Control Plans,
- Prepare and coordinate with other Agencies the implementation of a National Water Resources Master Plan, taking into account the availability, quality and uses of water,
- Grant and/or revoke licences, and reserve sources for public purposes for abstracting and using water,
- Declaration of Water Quality Control Area,
- Suspend or revoke a licence,

- Collect fees and other charges,
- Make appropriate regulations,
- Modify the laws, and
- Negotiate Special Agreements.

(g) Summary of Fines/Penalties relating to Watersheds

The Fines relating to Watersheds under this Act are:

- Breaches of this Act can attract a maximum fine of \$50,000, and a continuing fine not exceeding \$10,000 per day or 2-years imprisonment,
- Breaches of 35, 36, 37 or 42 of this Act can attract a maximum fine of \$20,000, and a continuing fine not exceeding \$10,000 per day or 1 year imprisonment, and
- Suspend or revoke a licence.

(h) Power to Enforce under the Act

Besides the 'Authority', those with the power to enforce under the Act are not specified.

14. THE FOREST ACT (1996)

The Forest Act of October 1996 establishes a Forestry Department whose functions include:

- Sustainable management of forests in Crown lands or in forest reserves and the effective conservation of those forests,
- Directing and controlling the exploitation of forest resources,
- Preparing and implementing a national forest management and conservation plan,
- Promoting the development of forests on private lands,
- Promoting a forest research programme, and
- Establishing public education programmes.

(a) Water Resources and Forest Resources

The issues relating to Water and Forest Resources mentioned under this Act are:

- Develop appropriate systems to exploit forest resources,
- Prepare and implement a national forest management and conservation plan,
- Promote the development of forest on private lands,
- Establish a forest research programme,
- Ensure reforestation of suitable lands,
- Control and supervise the cutting, harvesting, milling and sale of timber and other forest produce,
- Develop programmes for the conservation of water resources, and
- Promote public education and awareness.

(b) Agricultural and Soil Conservation Practices

The Agricultural and Soil Conservation Practices issues covered in this Act are:

- Promote agroforestry programmes for the benefit of farmers,
- Develop programmes for soil conservation and preservation,
- Production of forage for livestock, and
- Regulate the clearing of lands for cultivation and the depasturing of cattle.

(c) Mining and quarrying

The only reference in this Act to mining and quarrying refers to control over the removing of sand and gravel from forest control lands.

(d) Settlement and Sanitation

The Settlement and Sanitation issues covered here are:

- Establishment of Local Forestry Management Committees,
- Establishment and maintenance of recreational facilities,
- Promoting social forestry programmes to farmers and schools, and
- Promotion of private lands that can be used in the national interest.

(e) Wildlife and Parks and Protected Areas

Issues relating to Wildlife and Parks and Protected Areas dealt with under this Act are:

- Sustainable management of forests in Crown lands or in forest reserves,
- Effective conservation of forest,
- Establish and maintain recreational facilities,
- Protect and preserve watersheds in forest reserves,
- Protect and preserve endemic flora and fauna,
- Production of forage for wildlife, and
- Declaration of protected areas.

(f) Governance, Compliance and Enforcement

The following are the Governance, Compliance and Enforcement issues addressed by this Act:

- Establishment of special forest officers,
- Grant licences and permits,
- Enforce compliance with the powers of a Constable to the Conservator and other forest officers,
- Declaration of forest management areas,
- Develop, implement, amend and review forest management plans,
- Appoint local forest management committees to monitor, advise, and propose incentives,
- Remission of property tax for private lands,
- Prohibiting cutting of trees in forest reserves,
- Make appropriate regulations,
- Prohibit fires, cultivation, removal of soil,
- Prohibits erecting buildings, pasturing cattle,
- Have power of arrest, and
- Establish Tribunal to hear appeals.

(g) Summary of Fines/Penalties relating to Watersheds

The Fines relating to Watersheds under this Act are:

- Prohibiting cutting of trees in forest reserves - offences attracting fines of up to \$500,000 and/or imprisonment of up to 2 years. Persons may also forfeit goods seized
- Prohibit fires, cultivation, removal of soil etc.- offences attracting fines of up to \$200,000 or imprisonment of up to 2 years,

- Prohibits erecting buildings, pasturing cattle etc.- offences attracting fines of up to \$100,000 or imprisonment of up to 12 months, and
- Have power of arrest.

(h) Power to Enforce under the Act

Power to Enforce under the Act includes:

- Forest Officers,
- Police Officer, and
- Other designated persons.

4. DOCUMENTING THE CURRENT POLICY AND LEGISLATIVE FRAMEWORK GOVERNING WATERSHED PLANNING AND MANAGEMENT

Listed below (Table I), is a presentation of the current policy and legislative framework governing watershed planning and management.

The 'Areas of Impact' listed numerically in Table I, are:

1. Water Resources and Forest Resources
2. Agricultural and Soil Conservation Practices
3. Mining and quarrying
4. Settlement & Sanitation
5. Wildlife and Parks & Protected Areas
6. Governance, Compliance & Enforcement

Table I - Analysis of Acts according to Areas of Impact

| NAME OF LEGISLATION | AREAS OF IMPACT | | | | | |
|--|-----------------|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 1. Country Fires Act | | | | | | |
| 2. Wildlife Protection Act | | | | | | |
| 3. Mining Act | | | | | | |
| 4. Town and Country Planning Act | | | | | | |
| 5. The Flood-Water Control Act | | | | | | |
| 6. The Watersheds Protection Act | | | | | | |
| 7. The Land Development and Utilization Act | | | | | | |
| 8. The Quarries Control Act | | | | | | |
| 9. The Public Health Act | | | | | | |
| 10. The Litter Act | | | | | | |
| 11. The Rural Agricultural Development Act | | | | | | |
| 12. The Natural Resources Conservation (NRC) Act | | | | | | |
| 13. The Water Resources Act | | | | | | |
| 14. The Forest Act | | | | | | |

5. ANALYSIS OF TABLES, INVENTORY, AND OTHER REPORTS

This section attempts to analysis the findings from the Narrative Map, as well as other relevant reports. A number of Recommendations are also included:

Fourteen Acts, impacting on Watershed Management in Jamaica have been summarized under the following areas:

1. Water Resources and Forest Resources,
2. Agricultural and Soil Conservation Practices,
3. Mining and Quarrying,
4. Settlement & Sanitation,
5. Wildlife and Parks & Protected Areas, and
6. Governance, Compliance & Enforcement.

1. Water and Forest Resources

Ten of the fourteen Acts deals with Water and Forest Resources. There is the potential for major overlaps among agencies involved in the conservation and use of water resources. This is without including the role and mandate of the National Water Commission.

Besides the Forest Act, only the Town and Country Planning Act highlights conservation of forest through its preservation of trees and its woodlands regulation.

2. Agricultural and Soil Conservation Practices

Twelve of fourteen Acts have some impact on Agricultural and Soil Conservation Practices. Five of these have overlapping responsibilities in regulating, monitoring or acquisition of agricultural lands.

The LDUC and RADA Acts could lead to major overlapping of responsibilities. The RADA Act does not provide for enforcement.

3. Mining and Quarrying

Eight Acts had any specific references to Mining and Quarrying. These include:

- The Mining Act that has the responsibility of granting licences and collecting royalties.
- The Watershed Protection Act giving the NRCA power to restrict the use of any lands, and
- The LDUC Act exempting lands being used by bauxite from being listed as agricultural lands

4. Settlement and Sanitation

All Acts deal with settlement and sanitation issues. Four of these relate to some specific sanitation issues. Only the Town and Country Planning Act speaks to sanitary solutions while the others deal with effluent contamination.

Most settlement issues address protection of public water supplies and/or the acquisition of lands for public purposes and the necessary compensations arising from those acquisitions. Others address rights of passageway, granting of licences, and power of inspections.

5. Wildlife and Parks and Protected Areas

Nine of fourteen Acts speak to Wildlife, Parks and Protected area. This existing legislation allows for the establishment of Special Areas including:

- Forest Reserves
- Games Reserves
- Games Sanctuary
- Water Quality Control Area
- Parks and Protected Area
- Watershed Management Unit

6. Government Compliance and Enforcement

Each of these Acts has numerous regulations, and interfaces with several other Acts, laws and policies. Through these Acts, several Committees, and Boards are established.

There is no shortage of Governance and Management Mechanisms to support this legislation. These include:

- Advisory Planning Committee
- Compensation Assessment Board
- Valuation Board
- Watershed Commission
- Land Development Utilization Commission
- National Parks Management Unit
- Local Forestry Management Committee
- Local Watershed Management Committee

(See Table II below)

Table II

| INSTITUTIONS/AGENCIES/OFFICERS REFERED TO | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|
| Commissioner of Lands/Mines | | | | | | | | | | | | | | |
| Ministry of Development/Environment | | | | | | | | | | | | | | |
| Minister of Agriculture | | | | | | | | | | | | | | |
| Medical Department/ Medical Officers | | | | | | | | | | | | | | |
| Public Health Department | | | | | | | | | | | | | | |
| Governor General | | | | | | | | | | | | | | |
| RM/Appeal/Supreme Courts/DPP | | | | | | | | | | | | | | |
| Ministry of Foreign Affairs | | | | | | | | | | | | | | |
| Minister responsible for Public Works | | | | | | | | | | | | | | |
| TPD/ Survey Department/ Record Office | | | | | | | | | | | | | | |
| Auditor/Accountant General Departments | | | | | | | | | | | | | | |
| Local Planning Authority | | | | | | | | | | | | | | |
| Inland Revenue/Revenue Court/MOF/Customs | | | | | | | | | | | | | | |
| Ministry of Health | | | | | | | | | | | | | | |
| Agricultural Warden | | | | | | | | | | | | | | |
| Conservator of Forests/Forest Officer | | | | | | | | | | | | | | |
| Agricultural Officer | | | | | | | | | | | | | | |
| Game Warden | | | | | | | | | | | | | | |
| Police -JCF/ISCF | | | | | | | | | | | | | | |
| Fishery Inspector | | | | | | | | | | | | | | |
| Marine Officer | | | | | | | | | | | | | | |
| Town Clerk/Secretary Manager | | | | | | | | | | | | | | |
| National Water Commission | | | | | | | | | | | | | | |
| Resident Magistrate/J.P/ Clerks of Court | | | | | | | | | | | | | | |
| Undertakers of Flood-Water Control Scheme | | | | | | | | | | | | | | |
| Quarries Control Officers | | | | | | | | | | | | | | |
| Inland Revenue Officers | | | | | | | | | | | | | | |
| Authorized Officer - Litter Warden | | | | | | | | | | | | | | |
| Town and Country Planning Authority | | | | | | | | | | | | | | |
| Advisory Planning Committee | | | | | | | | | | | | | | |
| Town and Country Appeal Tribunal | | | | | | | | | | | | | | |
| Compensation Assessment Board | | | | | | | | | | | | | | |
| Valuation Board | | | | | | | | | | | | | | |
| Watersheds Protection Committees | | | | | | | | | | | | | | |
| Watersheds Protection Commission | | | | | | | | | | | | | | |

| INSTITUTIONS/AGENCIES/OFFICERS REFERED TO | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|
| Land Development and Utilization Commission | | | | | | | | | | | | | | |
| RADA Board | | | | | | | | | | | | | | |
| Quarries Advisory Committee | | | | | | | | | | | | | | |
| Central Health Committee | | | | | | | | | | | | | | |
| Local Health Boards | | | | | | | | | | | | | | |
| Tribunal - NRCA/Forestry Acts | | | | | | | | | | | | | | |
| WR Advisory Committee | | | | | | | | | | | | | | |
| Local Watersheds/Forest Committees/Flood-water Zones/ Sanitary Districts/PA/WQCA | | | | | | | | | | | | | | |
| Jamaica National Heritage Trust | | | | | | | | | | | | | | |
| National Parks | | | | | | | | | | | | | | |
| The Consolidated Fund | | | | | | | | | | | | | | |

Several Officers interface with Communities to encourage compliance or undertake enforcement of Watershed Regulations. These include

1. Games Wardens
2. Fishery Inspectors
3. JCF Officers
4. Watershed Protection Officers
5. Forestry Officers
6. Agricultural Extension Officers
7. Public Health Inspectors
8. Medical Officers
9. Environment Wardens
10. Compliance Officers
11. Litter Warden,
12. Municipal Wardens
13. Traffic Wardens

Another cadre of Officers interfaces with communities to undertake training, public education, and to facilitate planning. These include:

- SDC Officers
- RADA Extension Service
- Planners from NEPA and PIOJ and UDC

Yet, others represent Civil Society including NGOs, Churches, and Political Parties.

There is an army of technical persons focusing on promoting their areas of competence impacting daily on how communities in the Watersheds respond to existing governance structures.

All Acts allow regulations to support enforcement. These are actively pursued.

7. References to Other Acts

All fourteen Acts examined in this research refer to other Acts.

There are over fifty-two (52) environmental related Acts, Policies, and Laws in existence in Jamaica. **See Table III below** for a naming of forty-eight (48) of those, and there references to the fourteen (14) under review:

Table III

| ACTS REFERED TO | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|
| 1. The Country Fires Act | | | | | | | | | | | | | | |
| 2. The Wildlife Protection Act | | | | | | | | | | | | | | |
| 3. The Mining Act | | | | | | | | | | | | | | |
| 4. The Town and Country Planning Act | | | | | | | | | | | | | | |
| 5. The Flood-Water Control Act | | | | | | | | | | | | | | |
| 6. The Watersheds Protection Act | | | | | | | | | | | | | | |
| 7. The Land Development and Utilization Act | | | | | | | | | | | | | | |
| 8. The Quarries Control Act | | | | | | | | | | | | | | |
| 9. The Public Health Act | | | | | | | | | | | | | | |
| 10. The Litter Act | | | | | | | | | | | | | | |
| 11. The Rural Agricultural Development Act | | | | | | | | | | | | | | |
| 12. The Natural Resources Conservation (NRCA) Act | | | | | | | | | | | | | | |
| 13. The Water Resources Act | | | | | | | | | | | | | | |
| 14. The Forest Act | | | | | | | | | | | | | | |
| 15. The Exclusive Economic Zone Act | | | | | | | | | | | | | | |
| 16. The Water Act | | | | | | | | | | | | | | |
| 17. The Parish Council Act | | | | | | | | | | | | | | |
| 18. St. Andrew Corporation Act | | | | | | | | | | | | | | |
| 19. The Labour Officers (Powers) Act | | | | | | | | | | | | | | |
| 20. The Tax Collection Act | | | | | | | | | | | | | | |
| 21. Revenue Administrative Act | | | | | | | | | | | | | | |
| 22. The Land Surveyors Act | | | | | | | | | | | | | | |
| 23. The Land Acquisition Act | | | | | | | | | | | | | | |
| 24. The Gunpowder & Explosives Act | | | | | | | | | | | | | | |
| 25. The Land Valuation Act | | | | | | | | | | | | | | |
| 26. The Road Traffic Act | | | | | | | | | | | | | | |
| 27. The Settled Land Act | | | | | | | | | | | | | | |
| 28. The Local Improvement Act | | | | | | | | | | | | | | |
| 29. The Irrigation Act | | | | | | | | | | | | | | |
| 30. The Bauxite and Alumina Industries (Encouraging Act) | | | | | | | | | | | | | | |
| 31. The Landlord and Tenants Act | | | | | | | | | | | | | | |
| 32. The Interpretation Act | | | | | | | | | | | | | | |
| 33. The Counties and Parishes Act | | | | | | | | | | | | | | |
| 34. The Praedial Larceny (Prevention) Act | | | | | | | | | | | | | | |

| ACTS REFERED TO | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|
| 35. The Plants (Protection from Disease) Act | | | | | | | | | | | | | | |
| 36. The Fire Brigade Act | | | | | | | | | | | | | | |
| 37. The Petroleum Act | | | | | | | | | | | | | | |
| 38. The National Water Commission Act | | | | | | | | | | | | | | |
| 39. The Kingston & St. Andrew Water Supply Act | | | | | | | | | | | | | | |
| 40. The Constabulary Force Act | | | | | | | | | | | | | | |
| 41. The Bark of Trees (Sale Prevention) Act | | | | | | | | | | | | | | |
| 42. The Defence Act | | | | | | | | | | | | | | |
| 43. The Mineral (Vesting) Act | | | | | | | | | | | | | | |
| 44. The Registrar of Titles Act | | | | | | | | | | | | | | |
| 45. The Parochial Roads Act | | | | | | | | | | | | | | |
| 46. The Main Roads Act | | | | | | | | | | | | | | |
| 47. The Towns and Communities Act | | | | | | | | | | | | | | |
| 48. The Underground Water Control Act | | | | | | | | | | | | | | |

8. Enforcement by Act and Relevant Fines - See Table IV below:

Table IV

| Name of Act | Relevant Fines |
|------------------------------------|---|
| The Country Fires Act | 1. An offence against this Act attracts fines of up to \$2000 or imprisonment with or without hard labour of up to 3 months. |
| The Wildlife Protection Act | 2. The protection of waters containing fish from trade effluents - breaches attracting fines of up to \$50,000 and/or imprisonment of up to 2 years 3. Control the hunting of protected animals, birds, and immature fish - fine of up to \$2000 or 1 year imprisonment for failure to give information, 4. Any other offences shall attract fines of up to \$10,000 and/or imprisonment of up to 1 year, 5. Possible forfeit goods and/or seizure of equipment |
| The Mining Act | 6. Contravention of Act attracts fines of up to \$2,000 or imprisonment with hard labour of up to 12 months, and possible forfeiture of mineral, 7. Removal of minimum amount of timber to facilitate operation - breach lead to a maximum fine of \$200 and/or up to 6-months imprisonment with hard labour, and 8. \$40 fine for failure to cooperate with an Inquiry, 9. Restrictions on export of minerals, with breaches leading to fines of up to \$10,000, or to imprisonment of up to 2-years, with up to \$10,000 for each day of continuous breaches, and 10. A general breach attracts fines of up to \$1,000 and/or imprisonment with hard labour of up to 12 months. |
| The Town and Country Planning Act | 11. Preservation of trees and woodlands - offences attracting fines of up to \$100 or imprisonment of up to 3-months with continuity of the offence, attracting a \$4 per day fine, 12. Contravention of enforcement notice re development, attracts fines of up to \$25,000 or imprisonment with hard labour of up to 12 months, with continuity attracting a \$5000 per day fine and eventually forfeiture, and 13. Miscellaneous power to enter land for inspection; obstructing attracting fines of up to \$10000 or imprisonment with hard labour up to 12-months. |
| The Flood-Water Control Act (1958) | 14. The only fine referred to under this Act is, fines of up to \$50 or imprisonment with hard labour of up to 3-months for any breaches of this Act. |

| Name of Act | Relevant Fines |
|---|--|
| The Watersheds Protection Act (1963) | <p>15. Fine of \$200, or 12 months with or without hard labour upon conviction before a RM, for assaulting or obstructing an agent; or \$400 - recoverable by distress - or 12 months, in default of distress, for the destruction of or damage to any work.</p> <p>16. Possible greater penalties under regulations, but</p> <p>17. Maximum fine of \$5000 or 12 months with or without hard labour for an offence under sections 8 (Power to make regulations).</p> |
| The Land Development and Utilization Act (1966) | <p>18. The Fines for an offence under this Act attracts fines of up to \$200 or imprisonment with or without hard labour of up to 12 months.</p> |
| The Quarries Control Act (1984) | <p>19. Offence to operate quarry without license, conviction on first offence liable to a fine of up to \$30,000, and/or 12-months imprisonment,</p> <p>20. Second or subsequent conviction liable to a fine of up to \$50,000, and/or 12-months imprisonment, and up to \$10,000 per day and 2-years imprisonment for continued breaches. May include forfeiture of material and mineral at the Courts discretion. Fines may be used to rehabilitate illegally operated quarry,</p> <p>21. Penalty of 15% of amount due for failure to remit tax under section 14 (tax payment),</p> <p>22. Penalty of 1%, but not less than \$15,000 or more than \$30,000 of amount due for failure to remit tax under section 15 (quarterly returns),</p> <p>23. Penalty of up to \$1,000, and up to double of the amount due for attempts to evade or defraud the payment of tax,</p> <p>24. Penalty of up to \$40,000, and up to double of the amount due for attempts to evade or conspiracy to defraud the payment of tax,</p> <p>25. Penalty of up to \$2,000, per day for each day default continues,</p> <p>26. Fines of up to \$15,000, and 6-months imprisonment in default, for failure to comply with Court re accidents and industrial diseases, and</p> <p>27. Fines of up to \$15,000 and 6-months imprisonment in default, and up to \$10,000 for each day of continued general breaches.</p> |
| The Public Health Act (1985) | <p>28. Fines of up to \$2,000 or imprisonment with hard labour for 12-months, or fines under section 29, for breaches of regulations,</p> <p>29. Fines of \$100 per person, and 3-months imprisonment for default of payment for illegal assembly,</p> <p>30. Fines of \$2,000 per person, and 6-months imprisonment for default of payment, and up to \$500 per day, and 6 months imprisonment for default of payment, for illegal assembly, breaching the closure of schools and public places re diseases,</p> <p>31. Fines of up to \$1,000 or 12-months imprisonment for assaulting an officer or withholding information, and</p> <p>32. Fines of up to \$500 or 3-months imprisonment for default of payment, and \$100 per day or 3-months imprisonment for default of payment, for offence for which no penalty is prescribed.</p> |

| Name of Act | Relevant Fines |
|--|--|
| The Litter Act (1986) | 33. Seizure of vehicle used to illegally dispose of litter, 34. Fines of up to \$1000 and/or 6-months imprisonment with hard labour for general breaches of Act, 35. Failure to comply with a notice, may lead to fines of up to \$2000, and \$400 for every day there is failure to comply, and/or up to 6 months imprisonment, 36. Fines of up to \$2000 and/or up to 6 months imprisonment for interfering with an authorized person, and 37. Punishment/Fines without persecution. |
| The Rural Agricultural Development Act (1990) | - This Act does not allow for any enforcement, therefore there are no fines. |
| The Natural Resources Conservation (NRCA) Act (1991) | 38. Preventing pollution - with recovery of amounts reasonable incurred or fines not exceeding \$10000 or term not exceeding 1-year, 39. Breaches relating to sewage and industrial waste treatment plants attracts fines of up to \$20,000 and/or imprisonment of up to 2 years, 40. Undertake measures to counter destruction or degradation of the environment - obstructions attracting fines of \$10,000 and/or imprisonment of up to 1 years, 41. Grant permits for prescribed activities - breaches can attract a maximum fine of \$50,000, and/or 2-years imprisonment. Defaults in payment may attract 1-year imprisonment and a continuing fine not exceeding \$3,000 per day, 42. Authority to request EIAs, with breaches attracting fines up to \$30,000, |
| The Water Resources Act (1995) | 43. Breaches of this Act can attract a maximum fine of \$50,000, and a continuing fine not exceeding \$10,000 per day or 2-years imprisonment, 44. Breaches of 35, 36, 37 or 42 of this Act can attract a maximum fine of \$20,000, and a continuing fine not exceeding \$10,000 per day or 1 year imprisonment, and 45. Suspend or revoke a licence. |
| The Forest Act (1996) | 46. Prohibiting cutting of trees in forest reserves - offences attracting fines of up to \$500,000 and/or imprisonment of up to 2 years. Persons may also forfeit goods seized 47. Prohibit fires, cultivation, removal of soil etc.- offences attracting fines of up to \$200,000 or imprisonment of up to 2 years, 48. Prohibits erecting buildings, pasturing cattle etc.- offences attracting fines of up to \$100,000 or imprisonment of up to 12 months, and 49. Have power of arrest. |

6. RELEVANT FINDINGS AND RECOMMENDATIONS

The review of existing laws and regulations impacting on natural resources management, and particular watershed management, highlights a number of lessons from the international and national context. These include:

1. Laws by themselves do not change behaviour. There is the need, besides the setting of policies, to build consensus around a vision and some guiding principles.
2. There need to build a political commitment, at every level of government to create and implement policies, legislation and strategies for sustainable management of natural resources.
3. Participation of all stakeholders in decision-making is a fundamental prerequisite for the achievement of sustainable natural resources management.
4. Access to information on existing laws and regulations and the dissemination of that information to all stakeholders is fundamental to the principle of participation.
5. Key partners - state agencies, local authorities, civil society, private sector, and community - must have the resources, capacity, mechanism, and commitment to share in the sustainable management of natural resources.
6. Attempts should be made to consolidate all initiatives into a single sustainable development act.
7. Despite this wealth of legislation, enforcement of laws and regulations has been less than optimal. Enforcement takes place through several mechanisms including some thirteen listed Groups. There is a urgent need to develop a trained, uniformed, capable, and properly equipped cadre of Enforcement Officers at the national level, and a similar empowered Municipal or Parish Wardens at the parish level.
8. Constraints to enforcement include lack of awareness of environmental laws, and the greater emphasis on criminal behavior rather than on environmental violations.
9. New environment management legal instruments, using participatory governance is being considered by several Central Government Agencies - NEPA, Forestry Department, Ministry of Local Government, SDC - and is being written into new laws such as the Forest Act, the Draft Watershed Policy, and the Biological Diversity Strategy.

However, the institutional arrangements are agency-based, relying on each relevant agency to "implement according to their jurisdiction". Therefore, as it now stands, watershed management as an integrated, distinct management function does not appear to be handled anywhere at the local level.

Since watershed management falls under many different categories of responsibility and authority, it is important to consider whether and where a legal enabling environment is established.

10. There appears to be few mechanisms at the national level with the capacity to respond to the results of such participatory processes. There is a disconnection between the processes of participatory development planning at the local level and the mechanisms for resource allocation and coordinated response to that planning at the national level.

11. Many laws that impact on watershed management are remnants from the British colonial period and speak to the role of local government in certain areas (for example, the Town and Country Planning Act, the National Health Services Act, etc.). There are laws specific to local government responsibilities in certain sectors (that is, the Local Improvements Act, Parishes Water Supply Act), but there is no omnibus law that supercedes other laws by defining local authorities overall role, authorities and responsibilities in relation to and/or in juxtaposition to national government.

Many local authorities are unable to have any impact on watershed management or, more broadly, environmental management, because of limited capacity to fulfill such functions.

The emerging 'Watershed Policy for Jamaica' as currently stated does not take into account or relates to the strategy of making the PDC the key local level coordinating mechanism. However, the WMU indicates that the new intention is for local councils to take the lead role in local watershed management.

12. Local Forestry Management Committees (LFMCs) and Local Watershed Management Committees (LWMCs) are expected to work together. However, two separate policies articulate their roles, without addressing how this would be achieved.

These instruments speak of local management, when the role is clearly an advisory one.

NEPA and the Forestry Department should explore, in consultation with SDC, whether it is in fact necessary to set up LWMC and/or LFMC at all. The PDC offers cross-sector coordination and planning function and the CDCs offer access to communities.

NEPA should explore the concept of Inter-Government Agreements (IGAs) as a means to address some aspects of watershed management. IGAs are simple legal mechanisms that can enable local governments and national agencies to jointly act on matters of mutual interest. One could imagine a 'Great River Watershed IGA' that engaged government stakeholders in a plan of action.

13. The notion of 'stakeholders' for watersheds may be a bit difficult to actualize. It is doubtful that there is a concept of being a citizen of 'a watershed'. People think of themselves as citizens of villages, communities, settlements, and Parishes, but rarely of watersheds. This leads one to think that rather than take a strategy of convincing people to care about watersheds by organizing committees, it may be more useful to just think in terms of facilitating actions in their communities that will help mitigate watershed degradation.
14. The immense potential of utilizing such instruments as the Watershed Protection Act, and LDUC Act as a tool for watershed management e.g. to zone areas for different categories of use, needs to be explored.

The following recommendations and strategic directions are put forth for consideration:

- (a) NEPA and the Department of Forestry should explore, in consultation with SDC, whether it is in fact necessary to set up LWMC and/or LFMC at all. The PDC offers cross-sector coordination and planning function and the CDCs offer access to communities.
- (b) As a corollary to the first recommendation, greater effort should be given to establishing the PDC as the point at which central agencies coordinate locally and the SDC framework as the means by which various single-interest activities intersect with communities.

- (c) A review should be undertaken regarding the establishment of a trained, uniformed, capable, and properly equipped cadre of Enforcement Officers at the national level, and a similar empowered Municipal or Parish Wardens at the parish level.
- (d) The new Watershed Management Policy (Green Paper) should state policies and strategies regarding how both national and local watershed management strategies will relate to the Parish Development Committee and Parish Councils
- (e) NEPA should explore the concept of Inter-Government Agreements (IGAs) as a means to address some aspects of watershed management. IGAs are simple legal mechanisms that can enable local governments and national agencies to jointly act on matters of mutual interest. One could imagine a 'Great River Watershed IGA' that engaged government stakeholders in a plan of action.

1. A number of lessons stand out from the International and National Context. These are:

- (a) Laws by themselves do not change behaviour. There is the need, besides the setting of policies, to build consensus around a vision and some guiding principles.
- (b) There need to build a political commitment, at every level of government to create and implement policies, legislation and strategies for sustainable management of natural resources.
- (c) Participation of all stakeholders in decision-making is a fundamental prerequisite for the achievement of sustainable natural resources management.
- (d) Access to information on existing laws and regulations and the dissemination of that information to all stakeholders is fundamental to the principle of participation.
- (e) Key partners - state agencies, local authorities, civil society, private sector, and community - must have the resources, capacity, mechanism, and commitment to share in the sustainable management of natural resources.
 - Consolidate all initiatives into a single sustainable development act,
 - Develop legislation for cross-cutting themes, and
 - Aggregate legislative provisions into clusters of similar subject matter (e.g. natural resource management)

Despite this wealth of legislation, enforcement of laws and regulations has been less than optimal. Enforcement takes place through several mechanisms including:

- Permitting and licensing system
- NRCA wardens and the Environmental Warden Service
- Forestry wardens

Constraints to enforcement include lack of awareness of environmental laws, and the greater emphasis on criminal behavior rather environmental violations.

BIBLIOGRAPHY

1. Ministry of Environment and Land. **Sustainable Development Law Seminar, Legislative Framework for Sustainable Development in Jamaica.** 1998.
2. Miller, Keith. **Decentralization, Local Governance and Community Participation: A Caribbean Perspective.** 2000
3. Osmani, S.R. **Participatory Governance, People's Empowerment and Poverty Reduction.** SEPED Conference Series Paper
4. GOJ/CIDA ENACT. **Local Sustainable Development Planning Framework.** 2000.
5. Ministry of Local Government Youth and Community Development. **Parish Council Handbook.** May 2000.
6. Natural Resources Conservation Authority, Ministry of Environment & Housing. **Towards A Watershed Policy for Jamaica.** Green Paper No. 2/99.
7. Chambers, Michael G. **Jamaica's National Integrated Watershed Management Programme (NIWMP) Programme Framework.** Office of the Prime Minister, 1999.
8. Sheng, Ted. C. **Environmental Management of Watershed and Development of Institutional Capability.** UNDP/GoJ-NRCA, 1998.
9. MacGillivray, C. **Modification and Amendment to the Watersheds Protection Act (1963).** NRCA, 1998.
10. The Watershed Protections Act, 1963.
11. Pereira, Beverly. **Drafting Instructions for A New Watershed Protection Act.** NRCA, undated.
12. Pereira, Beverly. **Overview of Legal and Policy Frameworks Governing Local Sustainable Development Planning in Jamaica.** Draft Paper CIDA/GoJ ENACT Programme, January 2001.
13. Khosla, Prabha. **Policy and Legislative Frameworks Enabling Sustainable Development Planning: An Overview.** CIDA/GoJ ENACT Programme. December 2000.
14. Computer Assisted Development, Inc. **Development of a National Watershed Classification and Monitoring Program for Jamaica.** April 1999.
15. Forestry Department. **National Forest Management and Conservation Plan, Draft.** Government of Jamaica, January 2000.

R2RW

Ridge to Reef Watershed Project