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**PROJECT PAPER DESIGN MANAGEMENT OF
LAND AND THE BUILT ENVIRONMENT**

**For
East Caribbean**

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Stephen Reeve**

**for:
U.S. Agency for International Development
and
International City/County Management Association**

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*The views herein are those of the authors and do not necessarily represent those of the
U.S. Agency for International Development*

Stephen M. Reeve

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Ketchikan, Alaska 99901

3 July 1990

Irene Ramos and Michael Murphy
INTERNATIONAL CITY MANAGEMENT ASSOCIATION
777 North Capitol Street, NE
Washington, DC 20002-4201

Dear Irene and Michael,

I have completed the first phase of my consulting assignment (ICMA Project Number 6940-369: Eastern Caribbean Land Use and Urban Environmental Management) with USAID's Regional Office of Housing and Urban Development in Kingston, Jamaica. I have enclosed a copy of the draft report completed in Barbados and left with the USAID Mission staff for review. As you know, I have been asked to return to Barbados for a week later this month to assist in the final preparation of the Project Paper.

The principal product of this phase of the assignment is a written report summarizing the:

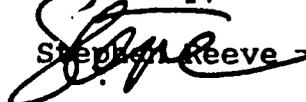
- * *identification and assessment of key issues related to the management of land in St. Lucia and Dominica which affect sustainable development and environmental protection and*
- * *identification of a set of achievable project outputs and short and intermediate-term accomplishments that would most beneficially address the key issues.*

Other written products include specific sections of the Project Paper related to project implementation and training.

The services were carried out over a period from May 30 to June 28. Fifteen days were spent in Barbados for initial briefings and post-field trip debriefings, team discussions, and report preparation. The field trip included six days in St. Lucia and eight days in Dominica. I have enclosed the requisite forms documenting my services.

It is anticipated that the next phase will be over a one week period in Barbados and may include one or more site visits to other countries in the Eastern Caribbean region. I will submit a final report to you after that assignment. I will also be in touch by telephone to discuss the possibility of a second advance to cover my project-related cash flow needs. Thanks a lot, Irene, for all of your help and advice. It is always a pleasure to work with you.

Sincerely,


Stephen M. Reeve

D R A F T F O R R E V I E W

ENCORE Project.....Stephen Reeve.....26 June 90

**PROJECT PAPER DESIGN:
MANAGEMENT OF LAND AND THE BUILT ENVIRONMENT**

NOTES TO REVIEWERS:

The attached draft report is my principal written contribution to the PP design phase of the ENCORE project. As a member of the PP design team, my focus was on land management and the interface of land and natural resources with the built environment and how these broad subjects manifest themselves at the national and SAMI site levels in St. Lucia and Dominica. This is not an all-inclusive, definitive statement on land management in these countries. The principal objectives were (1) to identify and assess those key issues related to the management of private and public land and the built environment which affect sustainable development and environmental protection and, then, within the context of the PID and the contributions of other PP design team members, (2) to identify a set of achievable ENCORE project outputs and short and long-term accomplishments that would most beneficially impact the key issues.

An important element of this report is a suggested framework for integrating the management of land and the built environment along with other elements of environmental management in a manner that provides a basis for development decision making. For the moment, this is labelled an "Environmental Management Strategy". The report also outlines a range of land management-related initiatives that could be supported by the ENCORE project and could begin early in the project's life. There are other such initiatives that relate to land management that were under the purview of other members of the PP design team and are to be incorporated in the project paper as well as in the final draft of this report. These include: environmental education and training; forest land management; marine and coastal zone management; and tourism and economic development.

This draft includes written contributions by Ivor Jackson and Bob Dubinsky, and the ideas and suggestions of other members of the PP design team. It represents the experience of only four or five days in each of St. Lucia and Dominica and but hours at the project sites. The draft therefore would greatly benefit from any country and site-specific knowledge you may be able to add. Certainly all comments and suggestions on substance and approach would be greatly appreciated. Please direct your comments to me, c/o Al Hankins, Chief of Party, USAID Mission, Barbados no later than 10 July 90.

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PROJECT PAPER DRAFT

ST. LUCIA: MANAGEMENT OF LAND AND THE BUILT ENVIRONMENT

I. BACKGROUND

THE NATIONAL CONTEXT

Land Management Issues

St. Lucia is the second largest of the Windward Islands but its 238 square miles are rugged and mountainous and only a very small percentage of its land mass is considered developable. Demand for this land from all economic sectors far outweighs its availability and, in certain areas, there is great pressure for it from competing land uses. Population growth in St. Lucia has been high (2.3%) relative to the eastern Caribbean region and the growing needs for shelter and services has placed further pressure on the land resource.

The pressure that growth and development imposes on St. Lucia's finite land resource has degraded environmental systems and natural resources. It has reached such proportions that it threatens to undermine productive functions and to thereby reduce sustainable levels of development. The most serious problems are:

- * *irreversible loss of agricultural land to land subdivision and development activities (estimated at 1.5% per year);*
- * *loss of forest cover due to poor crop selection, over-grazing and land development activities (estimated at 2% per year);*
- * *the "capturing" by uncontrolled squatter settlements of environmentally sensitive lands and lands important to St. Lucia's natural resource base and economic development;*
- * *environmental health hazards caused by the pollution of coastal areas, water courses and water catchment basins as a result of inadequate disposal of liquid and solid wastes, indiscriminate use of chemical contaminants (especially pesticides, herbicides and fertilizers) and inappropriate location of land uses; and*
- * *stresses to marine ecosystems caused by wastes and contaminants transported from adjacent coastal lands and watersheds.*

Land Management Constraints

The government of St. Lucia has had difficulty coming to grips with these land management issues as a result of a variety of policy, institutional and procedural constraints. These include:

- * a lack of recognition that sustained economic development in St. Lucia is dependent on environmental protection;
- * a lack of awareness of tools, methods and approaches for reconciling development and environmental protection;
- * an absence of approved national (or area) land management plans to guide land uses, allocate management authority (on Crown lands) and direct economic and population growth;
- * a preoccupation of the physical planning section with development control functions rather than proactive, action-oriented planning;
- * a shortage of qualified planning staff;
- * an absence of a functioning land delivery agency (a key factor in the lack of access to land for shelter development and the resultant widespread illegal settlements);
- * a reliance on public subsidies for land servicing and infrastructure delivery and maintenance which compromises the self-sustainability of these systems;
- * a lack of enforcement of land regulations resulting in inappropriate land uses which have, in turn, contributed to contamination of water catchment basins and water courses by chemicals and human and solid waste;
- * an absence of an institution responsible for solid waste management (with the exception of certain municipalities); and
- * a low level of governmental and public awareness of the environmental problems associated with inadequate land management.

Land Management Opportunities

There are a number of significant building blocks in place in St. Lucia on which a strategy for land management interventions can be built. These include:

- * a satisfactory institutional structure in place with sufficient depth in staff to support expanded land management efforts;
- * a good start toward preparation of a national physical development strategy and land use plans at the area or sub-national level;

- * *an excellent land and natural resources information base developed over the past decade (especially noteworthy are the OAS-supported Development Atlas and geographic information system and the USAID-supported Environmental Profile);*
- * *a sound land registration and titling program resulting from a recently-completed USAID project; and*
- * *a good network of environmentally aware individuals and NGOs.*

THE SAMI SITE CONTEXT

The Dennery Area

The proposed sub-project site encompasses the Dennery administrative unit focussing on the drainage basins of the Fond d'Or River and including the Dennery townsite and the Forest Reserve and Crown lands from Dennery Knob to approximately Tortue Point on the north. The area includes diverse land uses including plantation crops, unique natural habitats, important water catchment areas, expanding villages, extensive and growing squatter settlements, uninhabited and undeveloped Crown lands, fragile forest lands, and significant shoreline and marine ecosystems.

(insert map of sub-project site).

In many respects, the Dennery area serves as a microcosm of the land management issues noted earlier. There is evidence of overcutting of the forest cover; planting of inappropriate crops on steep hillsides; unauthorized squatter settlements (especially on Crown lands) which occupy significant natural resource lands and environmentally sensitive areas; and inappropriate land uses which magnify the pollution problems associated with improper use of agricultural chemicals and the lack of collection and disposal of liquid and solid wastes.

Many of the same land management constraints and opportunities described above are also present in the Dennery area. A noteworthy institutional opportunity is the existence of the Mabouya Valley Development Authority, an integrated development program that has set out to improve the conditions of citizens of the eight settlements in the valley by providing access to suitable lands for farming and subsistence, instituting soil and water conservation measures, diversifying crops, expanding employment, augmenting community development services, etc. The project is overseen by a policy-making board comprised of representatives of key ministries, the private sector and the local communities. The staff is well-respected, apparently by local citizens and government officials alike.

II LAND MANAGEMENT PROJECT DESIGN ELEMENTS

Project Objectives

While the focus of the project will be at the site level, a deliberate emphasis will be given to those Dennery area issues whose solutions will have direct application to policies, institutions and procedures at the national level, and, to the maximum extent these experiences can be shared, at the eastern Caribbean regional level. The key land and resource management objectives are:

- * protection of agricultural and forest lands, watersheds, beaches and marine ecosystems, and environmentally fragile areas;
- * channeling of land use and infrastructure development so as to guide growth to ecologically suitable land, to enable the affordable expansion of water systems, liquid and solid waste collection services, and other urban services, and to reduce environmental health hazards associated with pesticides, fertilizers, and liquid and solid wastes;
- * provision of access to appropriately-located land to control the proliferation of unauthorized settlements;
- * allocation of Crown land management to relevant authorities, including the Ministry of Agriculture, Department of Forest and Lands, National Trust, Mabouya Valley Development Authority (if appropriate), etc.;
- * fostering improved living standards and employment opportunities; and
- * construction of small-scale public works that are integral to project objectives, including restoration of wastewater drainages, collection and disposal of solid waste, establishment of visitor attractions, etc.

The policy, programmatic, and institutional objectives are:

- * establishing a national planning and policy framework for addressing on a broad front the fundamental issues of environmental protection and sustainable economic development;
- * establishing an action-oriented planning process that begins with the Dennery area and is subsequently replicated in other priority areas of St. Lucia;
- * strengthening the national-level planning program with staff training, simplified and more effective planning approaches, improved interagency coordination, new technologies, improved regulations and expanded enforcement capacity, community participation techniques, etc.;

- * enhancing a public and private sector land delivery capacity to meet the needs of low-income citizens, initially in the Dennery area and ultimately in other areas of the country, using cost recovery techniques that will lead to a sustainable program; and
- * establishing a solid waste collection and disposal program initially for the Dennery area and ultimately for other areas of the country.

(Other objectives to be added pending team discussion)

Project Approach

In a small island nation with a fixed endowment of resources, the impact of decisions about the direction of growth and the allocation of scarce land resources to various competing uses is very far-reaching: decisions made today create the physical setting for economic and social system activities in perpetuity. If the environment is damaged and natural resources are wasted, St. Lucia is unlikely to be able to afford the massive expenditures required for remedial actions such as restoring degraded natural environments, clean-up of wastes or water pollution, and restructuring land uses so that development investments can be placed to better advantage.

The planning and management of land is a key component of any strategy to achieve sustainable development and environmental protection. But it must be carried out in concert with the planning and management of other elements of the environment--transportation, economic development, natural areas, infrastructure, social welfare, etc.--within the context and with an understanding of natural environmental processes. An important element of the ENCORE project design, therefore, is the creation of a framework for integrating all elements of environmental management as a basis for development decision making.

The proposed planning process will provide the tools to help create a satisfactory balance between pressures for growth and development and the need to maintain St. Lucia's limited resources and environmental integrity. The process must define the problems that need to be addressed; establish goals, policies and strategies; create an action plan that integrates the various resource management programs and public facilities and services; establish controls and incentives; secure and direct A.I.D funds, local resources and other external financial aid; and establish effective means by which citizens and policymakers can participate in decision making.

The process would bring together the relevant sectoral interests (economic planning, natural resources management, land use, infrastructure, environmental health, parks and protected area management, etc.) along with local bodies (the Mabouya Valley Development Authority and the Dennery Town Council) and community groups in a partnership with the mandate to create a dynamic planning process and a comprehensive environmental management program. Critical to the process is a shared responsibility for setting priorities, responding to present and anticipated problems, programming capital improvements and carrying out agreed actions.

The planning process would be directed by a newly-formed public/private steering committee which may be comprised of representatives of the present Mabouya Valley Development Project board and other relevant participants (see page ___) and would receive advice from a local group comprised of community interest groups and individual citizens. A "technical team" will provide project design and implementation capacity. It will be made up of a local project coordinator, a staff person from the physical planning unit of the Ministry of Planning, technical advisors called upon to support various aspects of the project, and support as necessary from the various pertinent resource management agencies and the Mabouya Valley Development Project.

The needs of the Dennery area would be addressed at two equally important levels of programming: short and intermediate term. A Framework for Action would be prepared over the initial three-month period of the project that would provide an opportunity for Dennery area citizens to express their concerns; make an initial allocation of management responsibility for certain lands in the study area; identify certain feasible projects that could be undertaken right away; highlight the fundamental environmental, institutional, and developmental issues that must be further examined; and confirm the priorities to be addressed in the next phase plan. Growing out of the Framework for Action, an Environmental Management Strategy would be prepared over the next 12 months (approximately) based on a set of sectoral and topical analyses and extensive public participation. The products would include a set of intermediate-term (3-5 years) actions, an implementation strategy, a budget for capital investments, monitoring programs, and new development controls and incentives.

Project Outputs and Accomplishments

Phase I: The Dennery Area "Framework for Action"

This would entail rapid assembly and analysis of available information: population; land use; infrastructure; economic growth;

land capability and resource value maps; studies of environmental issues such as solid and liquid waste management, pest control strategies and crop diversification opportunities; descriptions of anticipated development projects; etc. Representatives from pertinent public agencies, NGOs and community-based groups would provide the information and it would be assembled by the technical team. An abbreviated planning process would be carried out by the technical team over the balance of the 3 month period. The views of government professionals, local interest groups, NGOs, property owners, and others would be solicited through a variety of methods including interviews, surveys, public meetings, media presentations, etc. The products of the "Framework Action" would be an implementation strategy, an array of action projects and the setting of directions for future work, including:

- * public identification of problems and issues;
- * clarification of the most serious and costly environmental issues to be addressed and the most likely development opportunities to be examined;
- * decisions as to responsibility for preparation of management plans for selected portions of the Dennery area (e.g., assignment of the Fond d'Or area and Dennery Knob to Tortue Point to the National Trust to prepare a parks and protected areas management plan);
- * decisions on action projects such as a solid waste collection program, a sites and services project to meet low-income citizens' needs, a chemical management program, an environmental education project, etc.;
- * ideas for diverse and appropriately-scaled tourist attractions; and
- * identification of needed implementing mechanisms, policies, regulations, incentives and enforcement measures.

It is anticipated that the Framework for Action may identify several action projects that could be implemented immediately. The following are brief descriptions of some of these actions.

1. Identification/Demarcation of Land for Low-Income Settlement

Many citizens in the Dennery area cannot afford or do not have access to land on which to erect a home. As a result, squatting has become a major environmental problem, perhaps one of the more serious examples of which is the concern that a key water catchment serving the area now receives wastes and agricultural chemicals from a growing squatter settlement located on the slopes above.

The assembling, planning, servicing and distributing of land for settlement can be a key environmental management tool. Which lands are developed and how they are used has a great bearing on whether an area can have sustainable economic development, meet the basic needs of its citizens and develop harmoniously with its natural environment. St. Lucia, however, is virtually without plans, policies and trained personnel to carry out the task of meeting the land needs for low-income shelter and public facilities.

The project will provide planning and technical support to promote the provision of well-located sites for guiding population growth and providing settlement alternatives for squatters presently occupying environmentally sensitive lands in the Dennery area. The project will provide improved access to land for shelter for the residents and at the same time protect the area's natural resources. Prospects for accommodating household expansion and relieving congestion lie initially with the use of well-located lands at Despinoze and La Caye, and several small parcels at Limiere and Dennery. As alternative lands become available, the project will provide planning and technical support to assist in the regularizing of the Au Leon informal settlement.

Initially, only minimal servicing of land would need to be provided in order to guide growth while addressing public health and environmental concerns at affordable costs. In time, as resources become available, public and private investments can be used to upgrade services. Land development procedures would be established that will provide for coordination of all public and private sector bodies involved in land development and will operate on the principle of maximum cost recovery and self-sustainability without substantial outside assistance.

2. Management of Parks and Protected Areas

Natural resources and environmentally sensitive areas are being jeopardized by a lack of environmental management protection measures. A project component would support the preparation of a development and management plan for the government's proposed national park near the Fond d'Or River area, including adjacent lands which have recently been surveyed for flora and fauna by the St. Lucia National Trust with support from A.I.D. The project would accommodate the government's stated objectives for the area from Tortue Point on the north to LaCroix Point on the south, which are to maintain biological diversity, to protect landscape/scenic values of the coastal environment and to provide employment opportunities for area residents.

The development and management plan for the proposed national park would determine the mix and scale of uses appropriate to the area and set out guidelines for its management in accordance with agreed objectives. Based on consultations, analysis, and synthesis of constraints and opportunities, the appropriate management category (e.g., national park, protected landscape, multiple use area) will be chosen using criteria of the evolving St. Lucia parks and protected area system. The process requires the widest possible degree of consultation and collaboration between government and NGOs responsible for land and resource management, resource users, and community groups.

Phase 1 of this project will occur during the Framework for Action and will entail consultations; agreement for transfer of management responsibility to the appropriate authority (most probably, the National Trust); definition of roles and responsibility of other agencies; and data gathering. Phase 2 will be accomplished during the Environmental Management Strategy for the SAMI and will entail data analysis and synthesis and plan preparation, including identification of concessions, infrastructure, conceptual design of interpretation and recreational facilities, zoning of uses, etc.

3. Solid Waste Management

With a population of approximately 10,000 people in Dennery town and the settlements of the Mabouya Valley area, at least 10 tons of garbage is produced daily. Without provision to collect and safely dispose of waste matter, the region's landscape becomes increasingly littered, creating an aesthetic nuisance and an environmental health hazard.

Unmanaged waste has critical implications for community sanitation. Insect and rodent infestations, disease vectors, and clogged and overflowing drainage channels (particularly in congested settlements such as Au Leon) are all manifestations of the threat to human health. The project will improve the welfare of the community by reducing solid waste related health risks and by reducing the extent of litter on the landscape, thereby enhancing scenic values and aesthetic pride.

Improving solid waste management in the Dennery area requires, among other things, a strategy to bring about desired change in the attitudes and practices which have resulted in widespread littering of the landscape. Integral to the strategy would be an awareness program to inform residents of the links between poorly managed waste and poor health, and to generally highlight the advantages of having a clean environment.

The appropriate system for waste collection and disposal in the region must be chosen from a number of options, all having varying price tags for initial infrastructure investment as well as recurrent operational costs. Thus, as a precondition for capital expenditure on equipment, these options would be assessed during the Framework for Action phase of the project. A technical study would be carried out to investigate the relative advantages and disadvantages of incineration versus landfilling (or in conjunction with landfilling), waste separation approaches, and options related to solid waste vehicles and storage facilities. The study would also assess and make recommendations as to the appropriate waste management entity (public or private sector) and operational budget. The project would seek funds for significant capital expenditure, but operational costs should be met locally.

4. Public Works Activities

Wastewater accumulates in a concrete drain where Ravine Trou a l'Eau exits to the sea at the northern end of the beach in Dennery Bay--a place regularly used by area bathers. Stagnant and septic appearing, the wastewater is denied free flow due to an accumulation of sand and gravel at the beach and probably poor drain design. Surface and ground water contamination is assumed because of problems with toilet waste (excreta) disposal in Dennery Town where homes are either built on steep slopes with exposed bedrock or on low lying flood-prone areas. Subterranean treatment of wastes is therefore problematic and leaching of effluent is reported. It can be expected that the ravine is also contaminated from both domestic liquid waste and from solid waste accumulated at its banks. Waterborne sewage-related communicable diseases, such as typhoid and viral hepatitis, may result from the conditions that exist at Dennery.

The main objective of the project is to alleviate the environmental health risks by undertaking minor drainage works. A corresponding objective would be to determine the exact nature of risk to human health from wastes in Dennery Town as a basis for long-term solutions to the problem. The project elements would include: (i) collection and analyses of water samples (probably by CEHI) using appropriate water quality parameters; (ii) assessment of drainage problems and design of drainage works; and (iii) capital expenditure to be based on the design.

NOTE: Additional land management-related project activities to be added by other team members.

Phase II: The Dennery Area "Environmental Management Strategy"

In this phase, a management strategy would be prepared for the Dennery area that emphasizes the location and nature of public and private investments to produce maximum benefit in a manner that insures environmental protection and sustainable economic growth. The strategy will build on the Framework for Action but will be based on much more substantive analysis and within a longer-term perspective of institution-building, sequencing of activities, and monitoring of land use, economic and environmental change. While the Framework for Action relies on available data, the Environmental Management Strategy will depend on much more complete information and analysis of project opportunities and constraints, available financial resources, capital investment requirements, etc. Each of the principal agencies or NGOs would prepare strategies for their respective assigned areas in cooperation with those agencies and NGOs who have significant resource or other interests within the assigned area.

Information systems will be established in the initial months of this phase. Relevant information will be gathered from community-based sources and from each sector (agriculture, forestry, tourism, public facilities, etc.) in a format that enables ease of comparison and analysis. Identified studies will be carried out under the substantive direction of the technical team to fill information voids as necessary. These may include infrastructure needs and public facility assessments, tax structure and incentive studies, water quality analyses, land ownership research, etc. A simple, but sufficiently comprehensive data base will be designed that could be incorporated in the Ministry of Planning's geographic information system (a system which has been successfully demonstrated in the Mabouya Valley area) and will enable both "what if" analyses of development projects as well as the monitoring of changes taking place in the Dennery environment. Economic, social and environmental indicators will be designed to measure performance toward goals to be identified in the plan.

Population, economic and demographic forecasts will be translated into future requirements and locations for community expansion, commercial development, sewage and solid waste disposal, housing, new tourism attractions, public facilities, etc. Identified weaknesses in environmental institutions will be translated into specific training and management strengthening programs. Investment needs and opportunities will be translated into programs for financing and sources of funds identified. Incentives will be proposed for adoption and control techniques will be developed to implement new policies and ensure compliance with plans. Incentives based on the investment of public

resources, the use of regulatory powers, and the judicious use of taxation authority may be used to encourage individuals and groups to pursue their own interests while accomplishing the larger environmental interest.

The Dennery Area Environmental Management Strategy would be comprehensive and reflect the balancing of what can be mutually supportive goals of environmental protection and economic development. It would integrate the strategies of all environmental management activities in the Dennery area and the variety of targeted environmental management actions to be carried out based on feasibility and sufficient support by governing bodies. The strategy will detail the actions necessary to implement each intervention including policy changes, institutional roles, financing instruments, budget requirements, etc. It should be noted that many actions can be carried out immediately, especially in cases where advance planning or interagency agreements are not necessary. Other activities will begin over the course of the 12 month planning process and still others will occur at a later time. Specificity need not be developed for all functional interests or geographic units of the Dennery area at one time and the strategy may not produce "operational" recommendations in more than a few specific areas. The Environmental Management Strategy should be seen as an iterative process that enables new information and priorities to be addressed at the time decisions are required.

Upon completion of the first iteration at the end of the 12 month period, it will be incorporated into the National Physical Development Strategy now being prepared by the Ministry of Finance and Planning and will thus be integrated into the forward planning and capital investment programming now being carried out on a nationwide basis. In subsequent years, the physical planning unit and the planning forces of other resource management agencies should turn their sights to other important regions (e.g., the Vieux Fort and Soufriere areas) to develop similar integrated plans that will ultimately constitute a complete national strategy.

The Dennery area will, in effect, be serving as a laboratory in which to test and determine the cost effectiveness and appropriateness of various environmental management mechanisms, processes and tools. The experience gathered will help to identify the specifics of policy and institutional changes that are required at the national level and provide useful information about the design and implementation of environmental management programs in other countries within the region.

III STRATEGY FOR IMPLEMENTATION

The above approach is to result in an action-oriented, short and intermediate-term environmental management strategy for the Dennery area. Key to its success will be the development of a common understanding and acceptance of the interdependent relationship between economic development and the state of the natural environment. In the past there has been an insufficient level of awareness and concern for resolving the environmental issues facing the Dennery area and St. Lucia. An informed public--local citizens, government professionals, private developers, and political leaders--is essential for any attempt to improve environmental management. Achieving such an informed public is therefore a key strategic consideration in project design.

The public participation program has been developed by a PP design team expert in this field and is described elsewhere. A key public participation objective of the above strategic planning process will be to open a channel of communication with each potentially affected interest. The communication approach will vary depending on the significance of the interest and the nature of the interest group. Special attention will be given to engaging political leaders in the process and attempting to demonstrate that the process deserves their full support. It will be important to also engage the interest, support and efforts of all government entities, NGOs, community-based groups and private citizens and to demonstrate to them that the project will be a convenient, reliable and unbiased source of information and that it will strive to provide a basis for equitable decision making.

Project Implementation Roles

The "organizational chart" on the following page describes a suggested organizational relationship. A regional managing entity (to be determined by the A.I.D. Mission) would be the primary grantee of the project and serve as the focal point for implementation of the regional project (including activities taking place in all countries of the region). Financial support for St. Lucia project activities would flow to the Ministry of Finance and Planning. This entity would serve as the "contractor" for the St. Lucia sub-project (alternatively, the National Trust has also been identified as a possible contractor and could accordingly receive funds from the Ministry of Finance and Planning) and would coordinate all project management services and program support services as indicated on the diagram. Other government entities, such as the National Trust, and NGOs, such as the National Research and Development Foundation, would serve as "sub-contractors" and carry out substantial project support and implementation activities.

AID

REG'L MANAGING ENTITY

PROJECT MANAGEMENT SERVICES
REPORTING
CONTRACTING
MONITORING

PROGRAM SUPPORT SERVICES
TRAINING
ENV. AWARENESS
TECH. ASSISTANCE

ST. LUCIA PROJECT
MIN. OF FINANCE & PLANNING
"CONTRACTOR"

STEERING
COMMITTEE

TECHNICAL TEAM /
PROJECT COORDINATOR

COMMUNITY-BASED
GROUP

PROJ. MAN. SERVICES
REPORTING
CONTRACTING
MONITORING

PROG. SUPPORT SERVICES
TRAINING
ENV. AWARENESS
TECH. ASSISTANCE

SHORT-TERM
ACTIONS

ENVIRONMENTAL
MANAGEMENT
STRATEGY

DATA COLLECTION
MONITORING
INST. BUILDING

INTERMEDIATE-
TERM
ACTIONS

POLICIES
REGULATIONS
INCENTIVES

Three groups will provide the leadership and substantive content for project implementation: the steering committee will provide overall leadership and direction; the technical team will provide the technical skills to design, manage and implement the projects; and a community-based group will articulate the needs of people most directly affected by the plan and its projects. Both the steering committee and the community-based group would serve an additional purpose of building a constituency for the strategy. To be effective constituency-builders, both groups will need to include a variety of potentially affected interests. Members of both groups will serve as important conduits of project information to and from their respective organizations and areas of interest. This will be important in the initial design stages of the project, in the decision-making processes, and subsequently in the implementation of agreed actions.

The Steering Committee

The steering committee should be built around the committee in place that is now directing the Mabouya Valley project. This group includes key government and private sector interests as well as Mabouya Valley residents. Additional interests to be represented include the Ministry of Health and the Environment, National Trust, and the Dennery Town Council. (determine suggested composition with other team members) The steering committee will provide guidance on policies, assign management responsibilities for various project actions, arrange for technical and other support from their respective organizations, plan and review project activities, and provide overall leadership and direction for project implementation.

The Technical Team and Project Coordinator

The technical team will be comprised of an A.I.D.-financed local project coordinator (who would report to the contractor and to the steering committee), an experienced planner from the Ministry of Finance and Planning's Physical Planning Unit, local, regional and expatriate technical consultants, and, as necessary for specific projects, representatives from key resource management agencies and the Mabouya Valley project staff. The physical planner will take the lead for land management planning elements and serve as facilitator both to examine the relationships, supportive and conflicting, among the objectives of the various sectors and interests, and to help achieve resolution among them. The project coordinator will provide overall project administration and sub-contractor coordination. He or she will facilitate the

implementation of all special projects, though rarely will have direct "hands-on" responsibility. Each identified project will be managed by the appropriate entity, i.e., a parks and protected areas project would be managed by the National Trust and a solid waste management project may be managed by either the Mabouya Valley Development Authority or the Dennery council as appropriate.

The Community-based Group

The community-based group will be comprised of interest groups such as the Au Leon neighborhood committee, the Mothers and Fathers committees, and other relevant PVOs and NGOs. The community-based group will not serve as a second level of decision-making, rather, it is created to provide substantive ideas, advice and information about the various subjects that must be considered in the planning process. Its formation is also to insure that key interested organizations and interest groups are represented and are participants in the process to create and implement the Dennery Area Environmental Management Strategy.

The Physical Planning Unit, Ministry of Finance and Planning

The Physical Planning Unit would provide one person to the technical team on a full-time basis and technical and graphic support as necessary. The PPU will have lead responsibility for the management planning efforts outlined here and will provide planning advice to individual project activities on a case by case basis. The planner assigned to the project will work closely with the project coordinator and the Mabouya Valley Authority staff and will provide professional support to the steering committee as appropriate.

The Mabouya Valley Development Authority

The staff of the Mabouya Valley Development Authority (MVDA) will play an important role in project implementation. In the case of short-term actions carried out under the project, e.g., land identification and demarcation for low-income settlement or a drainage improvement project, the MVDA may often have project implementation lead. In the case of the preparation of the Environmental Management Strategy, the MVDA will play significant roles in data collection, monitoring, assessment of infrastructure and public facility needs, delineation of serious environmental issues, advice on identifying the needs of local residents, as well as implementation of actions which grow from the strategy. The MVDA has already been engaged for some years in environmental management in the Dennery area and has extensive on-the-ground experience which must certainly be tapped by the project.

Other Organizations

There are a number of other organizations which will likely play important roles in the preparation of the Environmental Management Strategy and the implementation of project activities in the Dennery area. These include the National Trust, Caribbean Environmental Health Institute, Caribbean Natural Resources Institute, Housing and Urban Development Corporation, Water and Sewerage Authority, and numerous other NGOs and community-based groups. Their specific roles in planning, data collection, monitoring and project implementation will be determined initially as an outgrowth of the Framework for Action and later on as a result of activities defined in the Environmental Management Strategy.

Project Training and Technical Assistance in Land Management

The following is a summary of project-driven training and technical assistance needs in land management at both the national and local levels in St. Lucia. The focus for training and technical assistance is the principal land management-related components of the project: (1) land management planning associated with the preparation of the Framework for Action and Environmental Management Strategy and (2) project implementation activities associated with the identified land management related action projects. A summary of the timing, measurable outputs and project resources required for technical assistance and training is provided on the attached "project component" forms. (A complete description of proposed regional, national and local ENCORE project training and education activities has been prepared by another member of the PP design team.)

Land Management Planning

The focus for training and technical assistance in land management planning will be on the Physical Planning Unit of the Ministry of Finance and Planning. The objective will be to strengthen the forward planning function of the unit to make it an effective player in addressing both the land management issues facing St. Lucia and the specific ENCORE project land management objectives outlined at the beginning of this paper. The strategy is to encourage a redefinition of the planning program to:

- * *incorporate a focus on environmental systems;*
- * *encompass consideration of all principal sectors (economic development, natural resources, natural areas, etc.);*

- * *emphasize proactive, "action-oriented" planning which responds (in time) to decision needs;*
- * *use current, appropriate technology to increase efficiency and effectiveness;*
- * *focus more on incentives and less on regulatory activities in achieving environmental management objectives; and*
- * *become facilitators of citizens, interest groups, specialists and politicians in arriving at environmental management strategies.*

The project's "Framework for Action" and "Environmental Management Strategy" for the Dennery area will be of themselves training opportunities to achieve these measures. Short-term technical assistance will be provided at critical steps in each of the two activities to assist the planning staff in rapid methods of data collection and organization; community participation techniques; use of the geographic information system now resident in the Ministry (and already successfully tested in Mabouya Valley) to display land, natural resource and other information and analyze alternative environmental management solutions; methods of effective interagency coordination; creation of development and conservation incentives for adoption by governing bodies; etc. Short-term training opportunities will include working visits to successful environmental management planning offices in the US and elsewhere.

Land and Infrastructure Delivery for Low-Income Settlement

The institutional focus for training and technical assistance will initially be on the Mabouya Valley Development Authority, which has the institutional responsibility for addressing the land needs of low-income residents in the Dennery area, and will subsequently be on the Housing and Urban Development Corporation, which has the land delivery responsibility at the national level and on the Water and Sewerage Authority, which has the charge for infrastructure delivery. The objective for training and technical assistance is to build the institutional capacity for land and infrastructure delivery to address the environmental issue of proliferating squatter settlements (see earlier discussion) at the national level and in the Dennery area. The strategic targets of training and technical assistance will be to:

- * *assist in the identification and demarcation of environmentally suitable land for low-income settlement in the Dennery area;*
- * *promote policy changes that will encourage cost recovery of investments for land and infrastructure delivery;*
- * *promote standards that will enable the provision of minimal infrastructure and urban services to allow self-help housing programs to operate effectively;*

- * *encourage private/public partnerships in land development that bring the strengths of both sectors to bear on the delivery of adequate and appropriate lands for low-income settlement;*
- * *encourage the channeling of extensions of infrastructure and roads in such a way as to encourage (or discourage) private development activities dependent on them so that efficient and environmentally sound development occurs; and*
- * *assist in securing funds from other sources to provide seed money for self-sustaining property acquisition programs that will enable government to direct development and guide it away from ecologically sensitive areas.*

The identifying and demarcating of land in the Dennery area and its distribution to low-income residents will be a training opportunity for the MBVA staff and initial exposure for the HUDC and WASA. Short-term technical assistance will be provided to assist in this initial task, advise on cost recovery measures, and begin dialogue on policy changes required to build a self-sustaining capacity to deliver land and infrastructure. If the initial activities are encouraging, project training and technical assistance would focus on regularising squatter settlements in the Dennery area and expanding the perspective of these activities to other areas of the country.

NOTE: Other land management-related project training and technical assistance activities will be added pending PP Team definition of projects to be included in the PP.

Regional Training Related to Land Management

Training directed to regional, national and SAMI site concerns will be used to support the land management activities associated with the project. While there are linkages and overlapping concerns between regional, national and local training activities, each will have its own focus. At the regional level, OECS country decision-making officials and NGO representatives need to be made more aware of the common environmental problems facing the region, alternative strategies and approaches for addressing those problems, and the technical and financial resources that may be available to OECS countries. Training for both the private sector and public officials could cover a variety of areas including environmental planning techniques, model environmental legislation, land development and conservation incentives and regulations, natural resources management, solid waste management, cost recovery in land and infrastructure delivery, information management systems, environmental impact assessments, etc. The SAMI site activities will also provide a wealth of "on-the-ground" training material to share with counterparts in other countries of the region.

NOTE: A list of the St. Lucian individuals interviewed and a summary of each interview will be appended to the final draft of this paper.

DOMINICA: MANAGEMENT OF LAND AND THE BUILT ENVIRONMENT

I. BACKGROUND

THE NATIONAL CONTEXT

Land Management Issues

Dominica is the largest and most northerly of the Windward Islands. It is a rugged, mountainous island with spectacular forests, streams, and waterfalls and diverse flora and fauna. It is appropriately labeled the "Nature Island". In spite of its relatively large land mass, the usable land for development purposes is extremely limited due to the mountainous terrain. Most of Dominica's 84,000 people live in compact coastal settlements on the leeward side and in most cases there is little room for further expansion. The one exception to this is the Portsmouth area where there is considerable potential for physical expansion that can accommodate all types of land use.

Demand for developable land from all economic sectors has grown considerably in recent years in spite of only moderate population growth rates (estimated at 1.5%). Forest resources are increasingly giving way to crop production, particularly due to the recent growth in banana production. As growth and development pressures advance, Dominica's unique environmental systems, natural resource base, and attractiveness as a tourism destination is likely to be degraded. Already, serious problems are faced:

- * *loss of forest cover due to agricultural expansion (especially on private lands) and illegal cutting encroachments;*
- * *serious soil erosion, especially where steep forested land has been cleared for conversion to agriculture;*
- * *destruction of wildlife habitat stemming from agricultural expansion and deforestation;*
- * *environmental health hazards caused by the pollution of coastal areas, water courses and water catchment basins as a result of inadequate disposal of liquid and solid wastes, indiscriminate use of chemical contaminants (especially pesticides, herbicides and fertilizers); and*

* stresses to marine ecosystems caused by wastes, contaminants and siltation transported from adjacent coastal lands and watersheds.

Land Management Constraints

The government of Dominica has attempted to respond to some of these issues, but a number of policy, institutional and procedural constraints have hampered these efforts, including:

- * an absence of approved national (or area) land management plans to guide land uses, manage natural resources and direct economic and population growth;
- * an absence of a strategy to carry out the nation's tourism potential as the "Nature Island";
- * a lack of appropriate legislation and planning policies to control land development activities;
- * a policy of transferring to private ownership all remaining Crown (public) lands not in reserve status without applying any land use or conservation conditions;
- * a preoccupation of the physical planning section with development control functions rather than proactive, action-oriented planning;
- * an absence of a cadastral survey and a lack of legislative authority requiring private surveyors to submit their plans to government causing confusion and insecurity as to the rights to land;
- * an extreme shortage of qualified planning staff; and
- * a low level of governmental and public awareness of the environmental problems associated with inadequate land use management.

Land Management Opportunities

There are a number of significant building blocks in place in Dominica on which a strategy for land management interventions can be built. These include:

- * a commendable effort by the government in recent years to highlight environmental concerns, most recently with the activities of YES (Years of the Environment and Shelter);
- * a good start in the establishment of a national park system;
- * a beginning toward the development of an adequate land and resource information base in recent years (notable is the almost completed, A.I.D.-funded Dominica Environmental Profile);

- * a recently-established national program to collect and dispose of solid waste;
- * a commitment on the part of the Ministry of Planning to prepare and secure approval of an up-to-date "national structure plan" to serve as a general guide to land and resource management and capital improvement programming; and
- * a satisfactory institutional structure in place with excellent key staff in pertinent institutions to support a limited expansion in land management efforts.

THE SAMI SITE CONTEXT

The Scott's Head/Soufriere Site

The Scott's Head/Soufriere site encompasses an area bounded by Pte Guignard on the north and Pte des Fous on the east in an arc following the Soufriere Ridge, and including adjacent coastal reefs. The area includes two villages--Scott's Head and Soufriere--and diverse terrestrial and marine resources. Offshore, pristine coral reefs provide habitat for a variety of species of fishes, corals and sea plants. On the upper slopes of mountains are unexploited natural forests which contain a variety of wildlife and birds, including the endangered sisserou parrot. In the valley bottoms and other developable areas are the two villages; several important historic sites (including a potential national park site at Scott's Head); an abandoned lime orchard which has been recently subdivided and used principally for plantation crops; an aloe farm which provides employment for many local citizens; and sulfur water springs which may have potential as a tourist attraction (as well as continued local use).

(insert map of sub-project site)

The Portsmouth Site

The Portsmouth Site encompasses Prince Rupert Bay from the Cabrits on the north to Pte Ronde on the south, and the watershed drainages of all rivers flowing into Prince Rupert Bay. The site includes the town of Portsmouth; the national park and nearly completed cruise ship terminal at the Cabrits; important fishery resources; a variety of ecologically significant resources at the Indian River estuary; important forest resources located on private

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lands and on the Northern Forest Reserve; extensive lands with agricultural potential; and the proposed site of a major golf course/condominium project.

(insert map of sub-project site)

Together, these two sites serve as a microcosm of many of the land management issues noted earlier. In the Portsmouth area, there is evidence of overcutting of the forest cover; establishment of inappropriate crops on steep hillsides; unauthorized settlement of areas around Portsmouth; imminent and large-scale tourism development and its accompanying opportunities and impacts; and inappropriate locations of land uses which magnify the marine and estuarine pollution problems and environmental health hazards associated with improper use of agricultural chemicals and the lack of collection and disposal of liquid and solid wastes. In the Scott's Head/Soufriere area, there are stresses to marine ecosystems caused by overfishing and recreational/commercial competition; similar liquid and solid waste disposal problems as occur in other communities of Dominica; potential contamination of water supply in Soufriere town from upstream agricultural chemicals and liquid waste discharges; potential for inappropriate land use development on private lands on the former lime estate; and many fine opportunities for "nature tourism", both land and marine-based.

Many of the same land management constraints and opportunities described above are also present in the two sites. Land and resource management plans have not been prepared for the areas so there is no guidance for land development and marine resource use activities; with the exception of the Cabrits National Park, tourism development planning has not occurred; the Village Council of Scott's Head/Soufriere and the Town Council of Portsmouth operate on very thin budgets and with very little staff; and there is little institutional infrastructure in the area around which to focus environmental management programs. On the other hand, in the communities of both sites there exist many community-based groups; there is the structure of the YES program, including committees at the local level whose energies can be mustered to support local environmental management efforts; and there is a commitment at the national level (in spite of very limited staff) to carry out land and resource management improvements.

II LAND MANAGEMENT PROJECT DESIGN ELEMENTS

Project Objectives

As in the case of St. Lucia, the focus of the land management intervention in Dominica will be at the site level with a deliberate emphasis on those Scott's Head/Soufriere and Portsmouth area issues whose solutions will have direct application to policies, institutions and procedures at the national level, and, to the maximum extent these experiences can be shared, at the eastern Caribbean regional level. The key land and resource management objectives are:

- * protection of agricultural and forest lands, watersheds, estuarine and marine ecosystems, and environmentally fragile areas;
- * provision of access to appropriately-located land to guide population growth and discourage additional squatter settlement;
- * channeling of land use and infrastructure development so as to address the land use components of environmental health issues associated with pesticides, fertilizers, and liquid and solid wastes;
- * encouragement of "nature tourism" related action planning to identify, protect and establish tourism destination opportunities such as parks and protected areas, trails and vantage points, historic and cultural attractions, and enjoyment of the diverse marine-related community of mammals, birds and fishes;
- * construction of small-scale public works that are integral to plan implementation, including restoration of wastewater drainages, collection and disposal of solid waste, establishment of visitor facilities, etc.; and
- * demonstration--early in the project's life--of visible, "on-the-ground" improvements to environment conditions.

The policy, programmatic, and institutional objectives are:

- * establishing a national planning and policy framework for addressing on a broad front the fundamental issues of environmental protection and sustainable economic development;
- * establishing an action-oriented planning process that begins with the Portsmouth and Scott's Head/Soufriere areas and is subsequently replicated in other priority areas of Dominica;
- * strengthening the national-level planning program with staff training, simplified and more effective planning approaches, improved interagency coordination, new technologies, improved regulations and expanded enforcement capacity, community participation techniques, etc.;

- * *improving the management of Crown lands by identifying and protecting public interests prior to transfer to private ownership and establishing soil and water conservation conditions on those lands that are sold or leased to private parties;*
- * *promoting improved forest management on private lands by a system of incentives, including tax advantages for lands dedicated to forestry, and of regulations, including minimum standards for erosion control;*
- * *improving the land registration and titling system to enable greater land management administrative efficiency, clarify public and private title to land, and provide an improved basis for taxation and private access to credit;*
- * *enhancing the effectiveness and efficiency of the recently initiated solid waste collection and disposal program;*
- * *improving information and monitoring systems required for the integrated management of land and resources, including geographic information and other decision-support systems; and*
- * *developing a high level of public awareness in land management issues and involvement in land management planning.*

(Other objectives to be added pending team discussion)

Project Approach, Outputs and Accomplishments

Land management planning plays a key role in Dominica's long-term environmental protection and ability to sustain economic growth for very much the same reasons as discussed in the case of St. Lucia. Both are small island nations with a limited amount of resources and the impact of decisions about the direction of growth and the allocation of the scarce land resource to various competing uses has tremendous bearing on the efficiency, attractiveness, and health of economic and social system activities far into the future. Both countries are unlikely to be able to afford the massive expenditures required for remedial actions to correct today's poor land management decisions. The recognition of the interrelationship of economic growth and environmental protection, suggests a redirection in the manner in which land and resources are managed. Especially in Dominica, whose economic future as well as quality of life, is so dependent on maintaining its natural ecosystems and hence its reputation as the "Nature Island", a renewed and redefined approach to land management planning is crucial.

The proposed land management intervention is similar to that described for St. Lucia and is not repeated in detail here. The

approach will be to establish goals, policies and strategies for environmental management at the two SAMI sites; create action plans that integrate the various resource management programs and public facilities and services; establish controls and incentives; secure and direct A.I.D funds, local resources and other external financial aid; complement project actions with management activities already in place and those planned for the future; and establish effective means by which citizens and policymakers can participate in decision making.

As with St. Lucia, a newly-formed public/private steering committee would direct a land management planning process. The steering committee would receive advice from a local group comprised of community interest groups and individual citizens and it would be served by a "technical team" which would provide project design and implementation capacity. The planning process would address the Portsmouth and Scott's Head/Soufriere areas' needs at both the short and intermediate term perspective. A Framework for Action for both sites would be prepared at the initiation of the project that would:

- * provide an opportunity for citizens of these two areas to express their concerns;
- * identify opportunities for complementarity between actions and programs undertaken in this project and other existing or proposed environmental management activities;
- * make an initial allocation of management responsibility for certain lands (and waters) in the study area to the appropriate organizations;
- * determine certain feasible projects that could be undertaken right away;
- * highlight the fundamental environmental, institutional, and developmental issues that must be further examined; and
- * confirm the priorities to be addressed in the next phase plan.

An Environmental Management Strategy for the Portsmouth site would be prepared over the next 12 months in a manner similar to that described for the Dennerly site in St. Lucia, tailored to the issues faced at Portsmouth. As staff resources become available, an Environmental Management Strategy would be initiated for the Scott's Head/Soufriere site. The products of both strategies would include an implementation plan, a set of intermediate-term (3-5 years) actions, institutional strengthening measures, a budget for capital investments, monitoring programs, and new development controls and incentives.

An action that would happen early in the project and affect both SAMI sites is the development of an improved solid waste collection and disposal system. The initial step of this project

and implement the projects; and a community-based group will articulate the needs of people most directly affected by the plan and its projects. The function of each group is similar to that for St. Lucia and is not repeated here.

The Steering Committee

A separate steering committee would be established for both the Scott's Head/Soufriere and Portsmouth sites, however, the core public agency representatives for each site would remain the same to provide consistency and to use scarce agency personnel more efficiently. (This core group may be built around the existing Development and Planning Corporation which has recently become extremely active in land and resource management concerns and has broad powers to acquire land, control land development, and oversee area plans. A recommendation on this issue will be made after further research over the next two weeks.) The core group would be rounded out by local government leaders from the councils of each community; agency representatives whose agencies may be uniquely involved in a particular site (e.g., for the national park planning activity at Scott's Head); representatives from NGOs and community based organizations that are pertinent to the project activities (e.g., local YES Committee leadership); and several interested citizens from the affected communities.

The Technical Team and Project Coordinator

The technical team would serve both sites and the project activities would be sequenced to accommodate this. The team would be comprised of an A.I.D.-financed local project coordinator; a planner from the Physical Planning Division; local, regional and expatriate technical consultants; and, as necessary for specific projects, representatives from key resource management agencies and NGOs. The physical planner will take the lead for land management planning elements and serve as facilitator both to examine the relationships, supportive and conflicting, among the objectives of the various sectors and interests, and to help achieve resolution among them. The project coordinator will facilitate the implementation of all special projects, though rarely will have direct "hands-on" responsibility. Each identified project will be managed by the appropriate entity, e.g., a land information system would be managed by the Lands and Survey Division and a solid waste management project may be managed by the Ministry of Health or a private sector organization.

The Community-based Group

The community-based group will be comprised of project-related interest groups much as the model for St. Lucia.

The Physical Planning Division, Economic Development Unit

The Physical Planning Unit would provide one person to the technical team on a full-time basis and technical and graphic support as necessary. The PPU will have lead responsibility for the management planning efforts outlined here and will provide planning advice to individual project activities on a case by case basis.

Other Organizations

A number of other organizations will play important roles in the preparation of the Environmental Management Strategies and in the implementation of land management-related project activities. These include Dominica's National Development Foundation; the Caribbean Environmental Health Institute; the Caribbean Natural Resources Institute; DOWASCO (Dominica's infrastructure providers); the Town Council of Portsmouth and the Village Councils of Scott's Head and Soufriere; and other NGOs and community-based groups. Their specific roles will grow out of the Frameworks for Action and Environmental Management Strategies.

Project Training and Technical Assistance in Land Management

The training and technical assistance program will also be very much like that proposed for St. Lucia. The SAMI site project related training and technical assistance in land management will focus initially on support for the organization and development of the Framework for Actions and the Environmental Management Strategies. Over time the character of training and TA will shift to selected project actions and national policy and institutional reform. The timing, measurable outputs, and project resources required for training and TA is indicated on the attached "project component" forms. (A description of all proposed regional, national and local ENCORE project training and environmental education activities has been prepared by another member of the PP design team.)

Land Management Planning

The institutional focus for training and TA in planning will be on the Physical Planning Division of the Economic Development

Unit in the Prime Minister's Office. The objective will be to strengthen this division in much the same ways as those proposed for the St. Lucia planning unit. There are some noteworthy differences in approach however. In Dominica, the staff is very thin. Project resources will need to provide for an additional full-time local staff position and, during the initial six months of project implementation, nearly full-time regionally-based TA and intermittent US-based TA will be required. Technical assistance in planning will also need to be provided other key agencies who will have a significant role in the preparation of the Portsmouth Environmental Management Strategy. This will include assistance to the Lands and Survey Division in the preparation of land ownership base mapping and land development controls for Crown lands; to the Tourism division in the analysis of tourism opportunities and methods to cope with the expected influx of tourism in the area; to the Ministry of Health in the planning of the proposed national landfill site near Portsmouth; to the Forestry and Wildlife Division for the development of measures to improve forest management on private lands; to the Portsmouth Town Council for assistance in identifying infrastructure and public service needs; to the Development and Planning Corporation for the identification of lands appropriate for low-income settlement; etc.

Nearly all relevant agencies are very thinly staffed and will need at least some assistance in the beginning. The longer term approach will be to develop the capacity within the Physical Planning Division to provide this assistance to agencies in subsequent planning activities and ultimately to develop the capacity for forward sector planning within each of the agencies.

Other Identified Project Implementation Actions

Training and technical assistance will be provided as necessary for each of the identified project implementation actions. This may include TA related to a management analysis of Dominica's new solid waste collection program and staff training as appropriate; TA to the Economic Development Unit in the preparation of an effective national structure plan; training and TA to the Lands and Survey Division in the development of a prototype land information system for the Portsmouth area and for the development of new land management controls and incentives for the use and transfer of Crown lands; training and TA to the Forestry Division for national park implementation activities at Scott's Head; etc. (This section will be developed further upon receipt of other PP team members' proposed land management-related actions.)

NOTE: A list of persons interviewed and a summary of the interviews will be appended to the final draft of this paper.