

NATIONAL REPORT

ST. VINCENT AND THE GRENADINES

TO THE UNCCD



APRIL 2002

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Executive Summary

Land Degradation is global in geographic scope. No region of the world is exempted from the socio-economic impact of this phenomenon. The Food and Agricultural *Organization* estimates that >70% of the soils in the Caribbean show signs of severe degradation. To this end, implementation of the United Nations Convention to Combat Desertification and Drought is a major first step in averting social catastrophe vis-à-vis drought, food shortage and demographic shifts.

At the local level, St. Vincent and the Grenadines currently exhibits classical symptoms of land degradation occasioned by squatting, monocropping with poor agricultural techniques, global weather patterns (changes in rainfall distribution, drought and elevated atmospheric temperatures), deforestation and excessive use of agrochemicals. Unemployment, poverty and the desire for a continental life style on an insular land mass has not helped. The smaller islands of the Grenadines suffer a similar fate by default. With no surface water and little arable topsoil, inhabitants of these islands eke out an existence from the coastal waters (sea). The islands are major tourist attraction because of their exquisite beauty of the offshore reefs. However the reef resources are threatened by over exploited and phenomena associated with global Climate Change - coral bleaching, inflated ocean temperature and sea level rise.

In responding to these challenges, the government of St. Vincent and the Grenadines has committed itself to addressing environmental concerns as a matter of priority. The Environmental Coordinating Unit in the Ministry of Health and the Environment has been strengthened and now works in tandem with the National Environmental Advisory Board, Community Based Organization (NGOs) and the Steering Committee of the UNCCD. This harmonized vision supports ministerial mandates and government's policy as expressed in the National Physical Development Plan. The approach allows for synergistic outflows and a greater sense of oneness in the management of national resources.

Regional responses give credence to local initiative and speak of the consciousness of the sub-region as per its plight, options and course of action. The signing of the St. George's Declaration of Principles of Environmental Sustainability in OECS member states in testimony of the sub-regions consciousness of its dilemma. Principles No.1 commits the countries - including SVG - to strive for sustainable livelihood for all its people while the next seventeen principles identify specific targeted issues. Local and regional initiatives to address land degradation find support in some international ventures. The Fair-trade Banana Regime and the Good Agricultural Practice (GAP) spearheaded by IICA lends valuable support to soil conservation and environmental development initiatives at the local level.

Efforts to reduce land degradation in Saint Vincent and the Grenadines have encountered several obstacles. However, these are not insurmountable. Many of the negative ventures are relative new and run counter to traditional practices.

Environmental Education Programmes must therefore be fashioned to expose these fallacies and show the value of programmed developed under the UNCCD. The UNCCD Public Awareness Seminar should flow naturally into a National Action Programme (NAP) which should be infused into the workings of the various ministries of government and the work plans of CBO and NGO. In this regard, SVG is moving towards a developmental model that diffuses power in the search for real participation from the private sector and civil society in the establishment of a *holistic* long-term approach to sustainable development.

Acronyms and Abbreviations

API	agency for Public Information
CARICOM	Caribbean Community
CBD	Convention on Biological Diversity
CBO	Community Based Organization
CDO	Canounan Development Organization
CIDA	Canadian International Development Agency
DFID	Department for International Development
EC	Eastern Caribbean
ENCAPD	Environment Capacity Development
GAP	Good Agricultural Practice
GEF	Global Environment
GDP	Gross Domestic Product
ISM	Island Systems Management
I PM	Integrated Pest management
JEMS	JEMS Environmental Management Service
MEA	Multilateral Environmental Agreement
NEAB	National Environment Advisory Board
NEAP	National Environment Action Plan
NESDC	National Economic and Social Development Council
NGO	Non Governmental Organization
NRMU	Natural Resource Management Unit
OECS	Organization of Eastern Caribbean States
OFAOCC	Organization for the Advancement of the Caribbean Community
POA	Programme of Action
SVG	Saint Vincent and the Grenadines
UNFCCC	Untied Nations Framework Convention on Global Climate Change

1.0 General Introduction

1.1 Geo-Physical Setting

1.1.1 Landform

The land mass called Saint Vincent and the Grenadines is 345 km² of volcanic deposit formed during the Miocene period from two major volcanic eruptions. The main island, St. Vincent has a Central North South mountain range and several stream filled valleys draining onto black sand beaches reflective of their volcanic origin. Fifty percent of the island consist of slopes >30% with only 20% having slope below 20 degrees. In contrast, the Grenadines consist of low dry hills with white sand beaches and clear blue waters with extensive coral reefs. La Soufriere, the active volcano on mainland St. Vincent, peaks at 1200 m. During the last three hundred (300) years, the volcano had five major erupted; 1718, 1812, 1902, 1971, and 1979.

The result of these eruptions is a cap of volcanic ash, at various stages of weathering, covering the harder igneous rock deposits. In the north of the island is the younger, coarser texture sand soils that is free draining. Above the 600 ft contour are the so-called zonal or high-level yellow earth/brown earth soils. These are better drained and often more fertile and occur on gentler slopes. The valley floors (approximately 1800 acres) are the islands fertile alluvial deposits. The southern and western coastal belts consist of shoal clay soil of little agricultural value. The soil in the central mountain range is shallow, acidic and leached. They have high potential for serious erosion. Most of these soils are covered by vegetation.

Sloping lands with underground streams are prone to slippage. There are several points on mainland St. Vincent where this phenomenon exists. Some of these sites have slumps characteristic of creeping land with backward rotations

1.1.2 Location and Climate

Saint Vincent and the Grenadines is part of the volcanic arc that constitutes the Lesser Antilles Archipelago. Located at latitude 13^o 15 ' N and longitude 60^o 56 ' W. The island experiences an equatorial type of climate with temperature ranges between 18^o C and 33^o C with a yearly average of 27^o C. Annual rainfall varies from 150 cm on the coast to 380 cm in the interior. In contrast, the Grenadines receives as little as 46 cm per year. The island has two major seasons, a wet season between June and December and a dry season from January to May.

The main wind system affecting the island is the North East Trade winds. These winds have a cooling and drying effect on the island thus elevating the *evapo-transpiration* rate. Between August and September, these winds are affected by the inter-tropical convergence zone and tropical waves from the Atlantic. These weather systems reach land in the form of tropical storms or hurricanes.

1.2 Biological Setting

1.2.1 Demographic Context

The 1990 population census puts the population of SVG at 111, 810. This gives a statistical population density of 285 per km². The true population density however, is more like 350 per km² since the central third (1/3) of the island is occupied by a precipitous mountain range forcing the population and developmental activities to occupy a narrow coastal strip. In recent times, however, housing settlements have been moving up the slopes of the central mountain range with disastrous consequences. The use of impermeable concrete and galvanized iron in construction result in less soil penetration of rain water, more rapid run off, more sedimentation and pollution of streams and reduced stream flow particularly in the dry season.

The 8,435 inhabitants who occupy the 17 square mile Grenadine islands face an even more challenged existence. The size of the islands do not allow for much rainfall. Additionally, the calciferous nature of the soil does not support water retention hence there is no surface water on the islands. Attempts at agriculture and animal husbandry only exacerbate the problem. Cultivation is done during the short rain season so that the legumes and maize planted can be harvested in the dry season. The intensity of the dry season forces the animals to forage on any available vegetable matter. This overgrazing exposes and erodes the thin porous soil.

1.2.2 Ecology

The geographic location and the topography of SVG contribute to the diverse ecology of the island. Several micro-climatic zones with unique ecosystems can be identified. In addition to the 1,313 species of plants and 146 species of animals known to exist on the island, there are invasive species that are impacting the native gene pool. SVG is free of most plant pathogens that impact trade, however, being in the equatorial region of the world, phytosanitary issues are never far away.

The following is a summary of the vegetation types that exist on the island.

- Rain Forest: Confined to areas in the upper Colonarie, Cumberland and Buccament Valleys between 1,000 and 1,600 feet.
- Lower Mountain Forest: This type did not exist in the 1940's, the forests having been felled for construction purposes and the land cultivated in the early colonial period. Estate boundaries and remnants of sugar factories and building are the evidence.
- Secondary Rain Forest: This type refers to the forest which were disturbed by volcanic eruptions, hurricanes and human activity. The largest areas lie in and around the Soufriere Mountains. The vegetation ranges from almost bare soil on the upper slopes of the volcano to significant stands of new forest at lower elevations.
- Palm Brake: This refers to a sub-climax type apparently arising after such disturbances as land slides. The land is covered initially by mosses, then by small tree ferns and heliconias and by Mountain Cabbage Palms in the mountainous regions above 1,640 feet.
- Elfin Woodland: Found on exposed summits above 1,640 feet on both sides of the central mountains. They consist of pure stands of dwarfed trees about ten feet in height covered with Epiphytes. As many be observed by the similarity in elevation, they are sometimes associated with Palm Brake.
- Deciduous Seasonal Forests/Cactus Scrub: On the dry southern and southwestern coast of St. Vincent and the Grenadines where the soils are extremely thin, the land is covered by rough, dry scrub species with spiny columnar cacti interspersed in it.
- Littoral Woodland: This type of vegetation is characterized by manchineel, button mangrove, sea grape and similar species. They exist as small narrow strips along the eastern coastline on St. Vincent and on a number of the islets and cays of the Grenadines. This type of vegetation is fast disappearing as development takes place along the coast.
- Swamp: Only small areas of swamp occur in St. Vincent and the Grenadines. These exist in the southern section of the main land on the coast and on a few of the Grenadine islets. The typical species found in these

areas are Red Mangrove, Black Mangrove, White Mangrove and Button Mangrove.

1.3 Political Setting

The governing structure of St. Vincent and the Grenadines consist of the Governor General as head of state, and a democratically elected cabinet consisting of the Prime Minister and eleven other ministers. There is an opposition party in the house of Assembly with three elected members.

St. Vincent and the Grenadines, a member of the British Commonwealth is also a member of Caribbean Common Market (CARICOM), the Organization of East Caribbean States (OECS), the Association of Caribbean States (ACS) and the emerging Free-Trade Area of the Americas. The country shares the interest of several other regional and international bodies, arrangements and interest groups. When these are all viewed in tandem with the various bilateral and multilateral agreements, it becomes obvious that there is an unprecedented convergence of local regional and international development forces at work shaping the country. Such pressure creates a heightened sense of insecurity for small states with fragile economies.

In responding to the environmental challenges, the Government of SVG signed the St. George's Declaration of Principles of Environmental Sustainability in the OECS. The demands of the Principles are summarized as follows:

1. Better quality of life for all.
2. Integrated development planning.
3. More effective laws and institutions.
4. Civil society participation in decision-making.
5. Meaningful participation of the private sector.
6. Economic opportunities from environmental management.
7. Broad-based environmental education and awareness.
8. Preparation for climate change.
9. Integrated disaster management.
10. Preventing air, water and land pollution.
11. Using available resources wisely.
12. Protecting cultural and natural heritage.
13. Protecting plant and animal species.
14. Sensible and sustainable trade.
15. Cooperation in science and technology.

16. Using energy efficiently.
17. Joint decision-making on international environmental agreements.
18. Coordinated work with the international community.

1.4 Economic Setting

Despite the banana war in the international market place, St. Vincent still attaches significance to its agricultural. The decline in the contribution of agriculture to the Gross Domestic Product (GDP), from 21% in 1990 to 13% in 1996 is more a reflection of external pressures on agriculture than of the importance of agriculture in the national scheme. Agriculture continues to employ >40% of the workforce and government has announced plans to strengthen all aspects of agriculture - life stock, agro-forestry and root crops production.

Most plantations in St. Vincent are family owned and operated. The 2000 agriculture census shows 1,869 holdings employing 6,871 persons in root crop and banana cultivation.

Agro-processing and tourism continue to be significant income earners. Both activities owe their existence to sustainable land use patterns. However, coastal erosion and loss of indigenous forest and wildlife is threatening the tourism industry.

Economic growth over the last year has been marginal. Government is therefore going the route of asymmetric economics. This could be good for conservation since this was a central theme in the government's campaign platform.

2.0 Combating Desertification and Drought

2.1 Affected Areas

Neither soil conservation nor protection of human lives was on the agenda of early European Colonizers. Consequently, there was wanton destruction of primary forest to clear land for sugar cane cultivation or to obtain logs for ship and factory building. One hundred years of such destruction on 345km² of land left only the most inaccessible primary vegetation standing. When equatorial rainfall and a volcanic topography are factored into this scenario, the result is a severely scarred land mass characterized by gullies and land slippage.

Evidence of such gullying and slippage can be seen in Greggs, Troumaca, Orange Hill, Mesopotamia, Belmont and Gibson Corner. Early attempts at repairing and or arresting this damage manifest themselves in the form of bamboo patches, gloricidia hedges and vetiva grass contour.

Within the last fifty year, however, the demand for agricultural lands and housing lots has put tremendous pressure on these repair efforts. Fortunately, the errors are being recognized and efforts made to reduce them.

The housing thrust brought another form of land degradation - that of coastal erosion. Sand mining coupled with unregulated construction and increase storm surges have resulted in lost of coastland. Research conducted by Dr. J. Cambers of the University of Puerto Rico under the Sea Grants Project revealed that SVG has a base coastal erosion of 0.3m/year, however, between 1995 and 2000, areas in Richmond and Sand Bay recorded >15m coastal erosion.

Some coastal erosion has been attributed to the loss of coral reef as a consequence of land base sources of pollution and sedimentation. Coral reef smothered by sediments die and break up depriving the shore line of invaluable defense.

2.2.1 Stakeholders

The Government of Saint Vincent and the Grenadines has recognized the fact that the power of the state has diminished relative to other power centres. Further, that this diffuse power structure requires a unique type of leadership that involves civil society. To this end, the government has established a broad base, all-inclusive National Economic and Social Development Council (NESDC). Additionally government has signed the St. Georges Declaration that calls for the involvement of civil society at all levels of environmental management. Government is also in the process of formalizing a social contract with civil society. The aforementioned scenario sets the stage for all interest groups to be involved in all issues of development. More specifically, direct players in the matter of land and natural resources include:

- Ministries of Government- Planning, Forestry, Fisheries, Agriculture, Health and Environment, Works and Tourism.
- The Central Water and Sewage Authority
- National Farmers Union
- Marketing Cooperation
- NGOs and CBOs
- The National Irrigation Programme and the emerging Water users association.

There is also a plethora of external partners including

- Caribbean Environmental Health Institute (CEHI)
- Organization of East Caribbean States - Natural Resources management Unit (OECS-NRMU)
- Inter American Institute for Cooperation in Agriculture (IICA)
- Pan American Health Organization (PAHO)

These agencies lend technical support to the local agencies upon request.

2.2.2 Land Tenure

Approximately 29% of St. Vincent is covered by forest. Seventy percent of this is natural forest, 25% planted forests and about 5% agro-forest. The planted forest reflects reforestation efforts by the Forestry Department in the fight against deforestation and in its effort to maintain watershed areas. The Forestry Department encourages and practices agro-forest as a means of preventing land degradation on slopes while providing valuable economic support to the farmer or landowner.

The major land use activities in St. Vincent include agriculture, mining (quarrying) and construction (houses, roads, hard courts etc). A deciding factor in land use is that of land tenure. Most if not all of the agriculture lands are privately owned. Owners are allowed to sell, subdivide or change the use at will. The problem arises when agricultural land is converted to housing. Displaced farmers are then forced onto marginal lands or to squat on crown land, often forests. There are some tracts of forest that are privately owned. Again, these can change use at will even though it is not in the best interest of the nation. Fortunately, most of the 13 watersheds are in crown lands and are protected by the Forestry Conservation Act. In spite of this protection, illegal farming is still a concern for forest conservation especially in the Soufriere Hills. Notwithstanding the aforementioned scenarios, watersheds and water resource management is most effective on crown land/forest conservation areas. The situation can however be improved by giving more legal protection to watershed areas.

The Central Planning Department in the Ministry of Finance and Planning maintains a database on land use. GIS mapping is used to record changes in land use as designated by zoning laws. The mapping system is further informed by data obtained from population and agricultural census.

The topography of St. Vincent and the Grenadines lends some support to the protection of watershed areas. The steep slopes allow excess water to drain away preventing flooding and flood related damage. Flooding is therefore more likely in the lower elevations. There are no records of serious flooding in St. Vincent but current coastal development patterns are creating flood like conditions in the coastal towns.

2.3.1 Local Initiatives

Initiative at the local level to address land degradation and drought have been rewarding to say the least. The public awareness programme supported by the secretariat of the UNCCD and lead by the Environmental Services Unit was a winner. The programme was launched on World Environment Day, June 5, 2001. The launch took place under the auspicious of His Excellency the Governor General, Sir Charles Antrobus and Lady Antrobus with featured address by the Hon. Minister of Health and the Environment, Dr. Douglas Slater. Other speakers included Dr. Richard Cox of the UNCCD Secretariat, Mr. Peter Murray from the OECS/NRMU, Mr. Swney from CEHI, the Manager of the CWSA, the Environmental Resource Analyst of the Ministry of the Health and the Environment, the Chief Environmental Health Officer and the Director of Forestry. The seventy-five-member audience included the Chief Medical Officer, Permanent Secretary in the Ministry of Health and the Environment, representatives from primary and secondary schools, the media and civil society. The session was chaired by the UNCCD focal point and heard a stirring rendition of 'We are the Flowers of Humanity' by a forty member cast from the Vincentian Save the Children Day Care Programme.

For the next three day, twenty-two delegates from fourteen organization including NGOs, CBOs, government and the private sector were involved in a training seminar. The main facilitator was Dr. Richard Cox of the UNCCD Secretariat. This resulted in the establishment of a National Steering Committee.

For the next three months a series of activities were conducted. These include workshops, Radio Talks, a two-week summer workshop for 20 secondary school students and the production of fliers beaming messages related to land degradation in Saint Vincent and the Grenadines.

Today, April 2002, the awareness programme is in the form of Public Education, is still running. More tangible efforts currently being implemented include a "Market to Production" Skill Training Programme by the Ministry of Social Development. This programme teaches community members how to identify their natural resources and use them in a sustainable way. The effort which specifically targets farming groups is a pilot. The lessons learnt will transfer to other target communities.

The reforestation efforts by the Forestry Department are on going. This is supported by the work of the soil conservation Unit in the Ministry of Agriculture. Soil conservation efforts include the reintroduction of contour farming and the use of Vetiva grass and bamboo in soil stabilization.

An active riverbank stabilization programme is in place using gabions baskets. While coastal erosion is being address through sand mining regulations and the planting of *Pandanas* and coconut palm both in the Grenadines and on the mainland.

Despite the foregoing efforts, deforestation and illegal farming still prevails. The consequences manifest themselves in the form of water pollution and water shortage. In 2002, the island experienced severe drought like condition for five months. Excessive run off occasioned by deforestation reduced underground storage to a minimum. At the same time, water demands are steadily increasing. This situation has prompted the irrigation unit to examine its future and the future of agriculture in St. Vincent. One immediate response from the unit is the establishment of a water user croup.

Quantity is not the only problem surrounding the nations water resource. An equally pressing concern is that of quality. Sedimentation associated with loss of topsoil resulting from deforestation is a major problem. A sample of water taken from North River during a rainstorm in December 2001 contained >12% of sediment. Test conducted on the same river in March 2002 recorded elevated levels of NO₃ and decreased levels of O₂.

The same decreasing water quality has been observed but not tested in the Majorcha and Montreal Water catchment area. The concern spurred the forestry department into action. In a joint effort with the local community and supported by the OECS/NRMU, a project was conceived and implemented. Through this project, community members agree to keep farming below the 1400ft contour and to assist the forestry with replanting and policing the denuded areas.

In a similar venture, the Ministry of Agriculture is seeking to develop partnership with farmers operating illegally in the Greggs and Soufriere mountains. The challenges here are more acute. These farmers are less accessible in every sense and the issue more volatile.

2.3.2 Regional Initiatives

Regional cooperating in the fight against desertification and drought has gained momentum in recent times. In 2001, all the members states of the OECS signed the St. Georges Declaration of Principles for Environmental Sustainability. Enshrined in this document is the commitment by member states of the sub region to work collectively towards improving the quality of life of the people of the region to work towards sustainable management of the resources including land and water resource and ...

As a first step in honouring these obligations, St. Vincent and the Grenadines is currently developing a National Environmental Management strategy. This strategy

document when completed will contain short and long term measures aimed at soil conservation, watershed management and land use planning. The document will support the National Physical Development plan and the economic vision of the country.

The Caribbean Environmental Health Institute (CEHI) and the Pan American Health Organization (PAHO) continue to lend technical support in the area of water quality monitoring. CEHI has spearheaded the development of a regional project on watershed management in the wider Caribbean. This project, when implemented, will support the reforestation effort of the department of Forestry and the forging of social partnership for the protection of watershed and forest.

2.3.3 International Initiatives

The two edged sword of globalization challenges the very existence of island states like Saint Vincent and the Grenadines. On one hand there is the demand of the competitive market place for large volumes of cosmetic quality produce. For tropical islands states this means intensive mono-cropping supported by a flood of agrochemicals. On the other hand, the global health craze demands high quality organic food with zero agrochemical residues.

These double negatives create positive vents for the environment. In the banana industry, a 'fair-trade' system has emerged. Key elements of this fair-trade system are:

- The practice of Integrated Crop Management (ICM) by producers. The aim here is a balance between business results and high-level environment protection.
- The protection and respect of ecosystems of high ecological value. These ecosystems include virgin forest, protected areas, lagoon, swamps, surface water bodies and springs.
- The provision of adequate protection of water resource from pollution by chemicals.
- The minimization of the use of agrochemicals which constitute a risk to human health and the environment.

The point is here made that in just three years, approximately 3.5% of the traditional banana farmlands have been adjusted to meet these requirements.

Another positive outgrowth of international trade demands is the institutionalization of “Good Practice” in agriculture” (GAP). This project supported by the Caribbean Regional Human Resource Development Programme for Economic Competitiveness (CPEC), the government of OECS and the Inter-American Institute for Cooperation in Agriculture (IICA) aims to increase the economic competitiveness of the OECS through trade in consistently healthy, hazard free, safe and wholesome crops selected for export development.

Other international initiatives are subsumed under Multilateral Environmental Agreements (MEAs) specifically the United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Convention on Biological Diversity (UNCBD).

Under the UNFCCC, St. Vincent and the Grenadines has submitted its first National Communication to the Conference of Parties. The communication highlights the countries vulnerability and the threats to water resources primarily in the Grenadines. The loss of surface water (streams) couple with increase global temperatures negatively is impacting agriculture and forest resource. Programmes designed to arrest these losses in surface water and indigenous plant species will undoubtedly support efforts mounted under the UNCCD.

The loss of ecosystems - forest, streams and mangroves - puts greater stress on the land and threatens food security. This issue has received comprehensive review in the National Biodiversity Strategy and Action Plan. Several approaches are proposed in the Biodiversity Strategy and Action Plan, however, finance constraint limit the implementation of many of these approaches.

The current approach in St. Vincent and the Grenadines is to link the three major MEAs namely the UNCCD, the UNFCCC and the UNCBD. The Environmental Services Coordinating Unit which serves as focal point for these conventions is currently seeking assistance to undertake institutional review and development. The major objective is to ensure compliance with each convention while maximizing the national benefits of implementation.

3.0 Implementation and monitoring of UNCCD

3.1 Institutional Arrangement

The signing and ratification of conventions is the purview of the Ministry of Foreign affairs while implementation is ascribed to the most appropriate Ministry. In all cases, the Ministry of Finance and Planning is the most vital partner. All capital projects and national funding must be approved by this ministry.

In the case of the UNCCD, execution is done by the Ministry of Health and the Environment, more specifically, the Environmental Services Coordinating Unit where the focal point is housed. This unit is supported by the National Environmental Advisory Board and the National Steering Committee for the implementation of the UNCCD.

The National Steering Committee was set up following the launch of the awareness seminar. The body consists of twelve members, five from government agencies and seven from the NGO and private sector community.

Currently, implementation of the UNCCD is done in a piecemeal fashion involving several ministries of Government and few NGOs. The major government agencies are the Soil Conservation Unit, the Forestry Department, the CWSA and the Ministry of Health and the Environment. NGO groups like the Rotary Club and some community Based Organization assist in Public Awareness and strategic planning. Presently, SVG is at the point of developing a draft National Action Programme. Such a programme would formalize the involvement of all stakeholders while setting clearly defined lines of authority and execution commitment.

Monitoring the progress of the UNCCD is the responsibility of the office of the focal point. Quarterly reports from implementing agencies are obtained to determine what is done. Field visits are then made for verification.

3.1.2 Legal Framework

Once an environmental convention has been signed by the Ministry of Foreign Affairs, the work devolves to the Ministry of Health and the Environment. The Ministry of Health and the Environment through the Environmental Services Unit facilitates implementation. Despite the robust effort of the Environmental Services Unit aimed at implementation, the success of the UNCCD to date has depended on the extent to which the convention is integrated onto other programmes, individual and group commitment, and moral suasion by the few faithful apostles of the convention. Currently there is nothing in the local legislation to bind any one to the convention or to allow redress for misdeeds. There is therefore an urgent need to have some sections of the convention infused into local laws to lend legitimacy to implementation. This is very necessary to attract local counterpart funds for implementation.

3.2.2 Stakeholder Response

The fortuitous chain of events surrounding economic development at the national level and the corresponding repercussions of globalization has reverberated positively for the environment in some respects. The pressures placed on bananas in the international areas have lured some farmers to the 'fair-trade' movement (2.3.3) and other to

alternative livelihoods. In the final analysis, the decline in bananas production has forced some marginal lands back to forest type vegetation and reduce the impact of agrochemicals on the environment. At the same time, banana farmers who remain must now be certified, a process that has very stringent conservation requirements.

In responding to the changing land use, the forestry department has been very active replanting deforested areas of crown lands. The national irrigation project while spearheading the development of a water user groups, has been expanding services to more desirable farm areas below the 1000 foot contour. The soil conservation Unit and the agriculture extension service have been supporting this paradigm shift.

The poverty alleviation programme has been preaching alternative life styles and some shift towards providing services rather than raw material. Though indirect, initiatives like these are pro-conservation.

3.3 Scientific and Traditional Support

For many years, SVG was a global model of soil conservation through contour farming and the use of vetiva grass. This process, though scientifically sound, rendered some tracts of land taboo to cultivation. This protective methodology was challenged by market forces that require larger volumes of produce than could not be grown on the small areas then available. The result is the loss of much-needed buffer zones and contour barriers.

Modern science is now demanding a return to traditional land management forms and agricultural practices. The following bulleted points are offered in support of this hypothesis.

- Because of the low levels of phosphate in the soil, farmers are being advised to return to the traditional uses of animal compost high in phosphate. This is augmented by the use of a scientific blend of high phosphate, environmentally friendly fertilizers.
- Farmers are moving away from 'banking up' soil for planting. They are returning to deep planting in furrows. This allows for the trapping and retention of precipitation.
- Greater use is now made of meteorological data in agriculture. When there is prediction of reduced rainfall, crops are planted earlier.
- The Ministry of Agriculture is assisting in sourcing and maintaining genetic species grown traditionally or those with some tolerance for emerging climate conditions.

- There is a resurgence of interest in natural indicators of season variability e.g. if the full moon in May is not accompanied by rain then the dry season is likely to be prolonged.

4.0 Resource for Implementation

4.1 Sector Financing

A major element of success in the implementation of the UNCCD in SVG is the integration of activities under the UNCCD into the work-plan of local agencies especially the public sector. Once integrated into local work plans, funding is guaranteed. This is very noticeable in the working of the Forestry Department and the Soil Conservation Unit (both of these agencies under the Ministry of Agriculture). Although the accounting has not been disaggregated, conservative estimate is that the Government of SVG will spend in excess of US \$ 1.5m in 2002, in it fight against desertification.

4.2 Synergistic Financing

Institutional review aimed at strengthening the capacity of the Environmental arm of the Ministry of Health and the Environment is in its formative stage. One expected output from this exercise is the consolidation of activities associated with Multilateral Environmental Agreements. Currently the UNCCD, UNCBD and UNFCCC have a single focal point. As a result, there is a high degree of synergy in the execution of these MEAs. In this way, investment in any one agreement benefits the others causing exponential returns on investments.

4.3 External Financing

Joint funding is a norm for project execution in St. Vincent and the Grenadines. This was evident in the Montreal Rehabilitation Project that was funded jointly by the Organisation of East Caribbean States Natural Resources Unit (OECS-NRMU) and the Government of SVG. The community groups involved provided in-kind contributions. Indeed, this model is reflective of the partnership in development being forged by the Government of SVG.

The only other external direct support to the implementation of the UNCCD in SVG came from the convention Secretariat. The Secretariat provided financial support for both the Public Awareness Seminars and the compilation of this second National Report. In addition to direct cash support, the secretariat has provided invaluable logistical and technical support to facilitate the Public Awareness Seminars and the general implementation of the convention in SVG.

The Secretariat of the UNCCD contracted Ambassador Cumberbatch to help the sub-region find an entry point to European Funding. Following the lead of the Secretariat, Several meetings were held with the local signing officer of the Cotonou agreement to see how some assistance for this programme could be had from European Union funding. In brief, the meetings bore no fruit. The national focal area for this round of funding was education and the general feeling in the region is that obtaining funding under this programme is almost impossible.

5.0 Conclusion

The intent of this document was to conduct a national review of the efforts aimed at combating desertification hence the implementation of the UNCCD in St. Vincent and the Grenadines. In so doing, the document delineates the efforts of the various stakeholder groups and shows how these initiatives match the expectations of the UNCCD. In the area of Science and Technology, attempts were made to capture the extent to which efforts aimed at combating desertification and drought in St. Vincent and the Grenadines utilized concepts presented by the Committee on Science and Technology.

The findings revealed that issues of land degradation and drought are high on the national agenda but that structural complementarity to the UNCCD process is weak. This speaks to the need for institutional reform and financing. While the Ministry of Health and the Environment is strong on institutional review and development, a process already started, there is need for greater collaboration among the stakeholders and the establishment of a legal base to support the institutionalization of the process. The development of a National Action Programme under the UNCCD would go a long way in assisting both the efforts of the Ministry of Health and the Environment (*vis-à-vis* their institutional review) and the institutionalization of the process. There is no questioning of the place or readiness for a National Action Programme. This process must be implemented ASAP in order to take advantage of the momentum and national priority as set out by the present government. The enthusiasm experienced in the execution of the national Awareness Seminars is testimony of the readiness of a people for true participation in the shaping of their destiny – the protection of the land and its resources.

The format of this report followed some of the guidance set out in decision 11/COP. 1. However, for ease of language and the flow of the narrative, points (I) to (IX) in section (a) Report on national action programmes were not followed sequentially. The main ingredients were the participatory and consultative process. In this regard, two national consultants were hired to (a) review the first national report (b) conduct group meetings and consultations with key stake holders (c) determine progress made since last reporting period (d) and write a draft national report with emphasis on new and emerging elements.

This document represents a summary of their findings. Graphs, tables and photographs were removed to produce a succinct text in compliance with the request of the secretariat.

These findings were reviewed by several individuals and two consultative groups. The general consensus is that land degradation issues must be dealt with as a matter of urgency and that the NAP is the logical next step in keeping with the events on the ground. At this time, the island is developing a National Environmental Management Strategy. Such an initiative should include elements of the NAP. This will greatly assist implementation and support the holistic approach to environment now being pursued.