

SIGNATURE PAGE

Country: St. Vincent

UNDAF Outcome(s)/Indicator(s):

(Link to UNDAF outcomes.. If no UNDAF, leave blank)

Improved Environment management Systems with improved levels of natural disaster preparedness.

Island strategy for conservation including policy, advocacy and education programmes.

Digital divide reduced through technology development. Identification of appropriate *technology*

Expected Outcome(s)/Indicator (s):

(CP outcomes linked to the SRF/MYFF goal and service line)

Expected Output(s)/Indicator(s):

(CP outcomes linked to the SRF/MYFF goal and service line)

Implementing partner:

(designated institution/Executing agency)

Min. of Health and the Environment

Other Partners:

(formerly implementing agencies)

Programme Period: 2006-2009
 Programme Component: _____
 Project Title: PIMS # 3539 CC EA SNC of St. Vincent and the Grenadines
 Project ID: 00045266
 Project Duration: 3 years
 Management Arrangement: NEX

Budget \$405,000 USD
 General Management Support Fee _____
 Total budget: \$405,000 USD
 Allocated resources: _____
 • Government 0
 • Regular _____
 • Other: _____
 ○ Donor _____
 ○ Donor _____
 ○ Donor _____
 • In kind contributions _____
 Unfunded budget: _____

Agreed by (Government): [Signature] Date: 2 July 06
 Agreed by (Implementing partner/Executing agency): _____ Date: _____
 Agreed by (UNDP): _____ Date: _____

¹ The Gini coefficient is used as a measure of income distribution. 0 indicates full equality and 1 indicates total inequality.

Government of St. Vincent and the Grenadines

United Nations Development Programme

ENABLING ACTIVITIES FOR THE PREPARATION OF THE SECOND NATIONAL COMMUNICATION TO THE UNFCCC

PIMS 3359 CC EA SNC St. Vincent and the Grenadines

June 2006

Brief Description

The government of St. Vincent and the Grenadines ratified the United Nations Framework Convention on Climate Change (UNFCCC) on September 5th 1996. Anxious to fulfill its obligations under the convention, the island nation submitted its first national communication to the sixth conference of parties (COP 6) in the Hague in November 2000. Shortly thereafter St. Vincent and the Grenadines developed its National Climate Change Adaptation Policy with support from the Caribbean Planning for Adaptation to Climate Change (CPACC). Phase II Enabling Activity saw St. Vincent and the Grenadines undertaking its technology needs assessment between July 2004 and May 2005.

This Second National Communication (SNC) will evaluate and build upon lessons learnt, skills developed and progress made in adapting to climate variability and change during the preparation of the Initial National Communication (INC) and the Technology Needs Assessment (TNA). It will also identify gaps in the national climate change response mechanism and develop appropriate responses.

Components of the SNC include (a) An inventory of Green House Gas (GHG) emissions for the year 2000, (b) A review and update of the measures to reduce GHG emissions, (c) An assessment of the potential impacts of climate change in a pilot community, (d) Examination of possible adaptation measures and, (e) Preparation of the SNC and submission to COP. Public education and awareness will be integrated into the SNC process from the MACC and through synergy with ongoing related programmes.

In an effort to efficiently utilise available resources and to ensure maximum and effective output, some priority areas have been identified for special attention during the development of the SNC. The areas include agriculture, water resources, health and adaptation options. The SNC process is expected to enhance St. Vincent and the Grenadines awareness and knowledge of climate change related issues and strengthen its mainstreaming into the national planning and development framework.

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Acronyms

ACCC	Adaptation to Climate Change in the Caribbean
CARICOM	Caribbean Community
CBD	Convention on Biological Diversity
CCCCC	Caribbean Community Climate Change Centre
CDM	Comprehensive Disaster Management
CEHI	Caribbean Environmental Health Institute
CIMH	Caribbean Institute of Meteorology and Hydrology
COP	Conference of Parties
CPACC	Caribbean Planning For Adaptation to Climate Change
CPAP	Country Programme Action Plan
CRMI	Caribbean Risk Management Initiative
EA	Enabling Activity
ESDU	Environment and Sustainable Development Unit
ESU	Environmental Services Unit
GCM	Global Circulation Models
GEF	Global Environmental Facility
GHG	Green House Gas
INC	Initial National Communication
IPCC	Intergovernmental Panel on Climate Change
MACC	Mainstreaming Adaptation to Climate Change
MDG	Millennium Development Goals
MDG	Millennium Development Goals
MEA	Multilateral Environmental Agreements
MYFF	Multi Year Funding Framework
NAP	National Action Plan
NBSAP	National Biodiversity Strategy and action Plan
NCSA	National Capacity Self Assessment
NEAB	National Environmental Advisory Board
NEMS	National Environmental management Strategy
NGO	Non Government organization
OECS	Organisation of East Caribbean States
PRSP	Poverty Reduction Strategy Paper
SGD	St. Georges Declaration
SIDS	Small Island Development States
SNC	Second National Communication
SVG	St. Vincent and the Grenadines
TNA	Technology Needs Assessment
TOR	Terms of Reference
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

VCA Vulnerability Capacity Assessment

1. ELABORATION OF THE NARRATIVE

1.1 Situation Analysis

1. St. Vincent and the Grenadines consist of 30 islands, inlets and cays. The largest of these is the main island of St. Vincent which is located at latitude 13°15'N, longitude 61°12'W. The other islands extend for 75 km south towards Grenada. St. Vincent and the Grenadines is part of the Windward Island chain in the Lesser Antilles. Other neighbouring islands include St. Lucia to the north and Barbados to the east.

2. The geographic location of St. Vincent and the Grenadines gives it a tropical maritime climate heavily influenced by the Atlantic Ocean, the Caribbean Sea, and the northeasterly trade winds. The island is in the path of the Atlantic hurricane belt and therefore suffers from yearly storm surges and gale force winds associated with the hurricane season. Annual precipitation varies from 150 cm in the extreme south to 381 cm in the interior of St. Vincent, resulting in numerous microclimates, especially on the main island. Historically records show two distinct periods, a dry period from December to May and a wet period from June to November. There have however been noticeable changes in this precipitation pattern over the past ten years. The annual temperature ranges from 18° to 33° at the E.T. Joshua airport.

3. The islands of St. Vincent and the Grenadines encompass 345 Km², with approximately 84 km of coastline. The mountainous main island of St. Vincent rises 1,234 m to the volcanic cone of La Soufriere, the island's active volcano. The volcano erupted in 1718, 1812, 1902, 1971 and again in 1979. Structurally, St. Vincent has a central north-south mountain range with numerous valleys that drain to the narrow coastal belt. The mountains consist primarily of pyroclastics dating back to two major volcanic eruptions during the Pleistocene era. St. Vincent, one of the youngest of the Antillean volcanic islands, is perched on the edge of the Caribbean and North American tectonic plates.

4. From Soufriere, the rugged hills slope to the sea and then give way to several little islets and cays that form the Grenadines. Some of these cays appear as reef crest at low tide. The Grenadines are much smaller and less rugged than St. Vincent. Nestled between these islets to the north of Grenada is an underwater volcano called Kick 'em Jenny. This is the only known submarine volcano in the Lesser Antilles and appears to be the most active in the region at this time. Its Summit lies at 160 m below sea level. An eruption of Kick 'em Jenny could create significant tsunami affecting much of the Eastern Caribbean particularly the Grenadines, Grenada and St. Vincent.

5. The small, open, agricultural based economy of St. Vincent and the Grenadines has experienced severe shock over the past ten years. The once favourable external environment, concessionary aid and preferential market access all faded at the turn of the twentieth century. Banana earnings fell from EC\$170.3 million in 1990 to less than EC\$18 million in 2000. Agriculture which accounted for 20% of the GDP in 1990 fell to 11.9% by 1996. Even at that point, agriculture still employed 60% of the work force. Agriculture and the economy were further hit by the issues of weather and climate in the period 2000 to 2003.

6. Reliance on border taxes that contribute about 45% of the current revenue, the shrinking banana industry, uncertainty of the offshore financial sector, expansion in public sector investment and high level of public debt will all have adverse effect on growth of revenue. To stimulate economic growth, the government is embarking on a programme of economic diversification that focuses on non-banana agriculture, "special interest tourism", informatics and offshore financial services.

7. The nexus between environmental degradation and poverty alleviation is very visible in the Vincentian context. The less affluent people eke out a meagre existence on the most degraded lands in the most vulnerable northern portion of the island. Recognizing the importance of protecting the natural environment and conserving natural resource, government has formulated policies aimed at sustainable use of these resources in keeping with Millennium Development Goal (MDG) 7 that speaks to ensuring environmental sustainability. However, it would take more than mere policies to ensure the achievement of the MDG within the proposed timeframe.

8. The issue of poverty alleviation is very high on the agenda of the government of St. Vincent and the Grenadines. This fact is amplified in the Medium Term Economic Strategy Paper (MTESP) and the Poverty Reduction Strategy paper (PRSP) central elements of the national development plan. UNDP is currently providing support to the poverty initiatives alongside its Governance and Environmental programmes. This, in light of the report by Thomas (2001) which identifies SVG as the country having the highest levels of poverty (37.5%) in the OECS. The country also has a high level of income inequality, with the *Gini coefficient* the worst in the region at 0.56. Kairi (1996) reported that 30.6% of households and 37.5% of the population were poor, and 20.4% of households and 25.7% of the population were indigent. Other studies focusing on the social sector and poverty by extension have since been carried out and suggest a worsening of the poverty levels.

9. It is well accepted that a country can not achieve sustainable development with high levels of poverty and inequality. Recognizing this, the government of SVG has taken on board the United Nations Millennium Declaration commitment to halve the number of people living in extreme poverty by 2015 as one of its mantra in the battle for sustainable development. With support from UNDP, the government of St. Vincent and the Grenadines is making some progress complying with the international environmental conventions, mainstreaming environmental issues into development planning and establishing legal frameworks to ensure that these efforts are sustained.

1.2 Strategy

10. The UNDP Sub-Regional Country Assessment (2005) (Barbados and the OECS) identifies risk reduction to natural hazards and climate change as a priority area for action. In this regard, the SNC will respond to a major local, sub-regional and regional concern. It will assist the government of St. Vincent and the Grenadines in addressing global environmental concerns while supporting its own development by reducing its vulnerability to climate change. Objective 1 of the Sub-Regional Cooperation Programme for 2005-2009 (Barbados and the Eastern

Caribbean) sets out to “build resilience and mitigate negative impacts of external shocks and to natural disasters {including Climate Change}.

11. The SNC will be executed within the framework of the SRCA and the Barbados Plan of Action (BPOA). It will enable St. Vincent and the Grenadines to fulfill its obligation in accordance with Article 12 of the UNFCCC having delivered its First National Communication to the COP 6 in 2000. It will further enable St. Vincent and the Grenadines to develop its national capacity to further reduce its greenhouse gas emissions, identify and implement the use of appropriate technology for energy efficiency, access resources from the CDM and other bilateral partners to reduce vulnerability by increasing the use of climate change related knowledge.

12. This project will find synergy with ongoing national priorities and programmes including the National Physical Development Plan, the Integrated Forestry Management Project, the Sustainable Land Management project and the Caribbean Renewable Energy Project. It will build upon previous studies, experiences, institutional settings and lessons learnt from the Initial National Communication (INC), Phase II Enabling Activities, Adaptation to Climate Change in the Caribbean (ACCC), and Mainstreaming Adaptation to Climate Change in the Caribbean (MACC).

13. The project will take on board policy issues developed under the Caribbean Planning for Adaptation to Climate Change (CPACC), the recommendations of the National Capacity Self Assessment (NCSA) and the National Biodiversity Strategy and Action Plan (NBSAP). It will also draw from the insights of the public awareness component of the MACC.

1.3. Management Arrangements

14. The SNC will be executed through a NEX modality with the Environmental Services Unit (ESU) in the Ministry of Health and the Environment representing the Government of St Vincent and the Grenadines. This Unit serves as the technical focal point for all multilateral environmental agreements, with direct responsibility for coordinating all national activities related to these Conventions. The ESU will be supported by the National Environmental Advisory Board (NEAB) which serves as the steering committee. The NEAB is an eleven (11) member stakeholder organisation representing Government, NGO and the Private Sector.

1.4 Monitoring and Evaluation

Monitoring responsibilities and events

15. A detailed work plan would be drawn up by the project management team and incorporated in the workshop inception report. This work plan will identify actors, roles, deliverables and time frame. A detailed schedule of project reviews meetings, reports and report format will also form part of the report.

16. *Day to day monitoring* will be the responsibility of the Project manager who reports directly to the Environmental Services Coordinator (head of the ESU and chairman of the NEAB). Monitoring activities will be in accordance with the project's Annual Workplan and its indicators. The Environmental Services Coordinator will inform the UNDP-CO of any

irregularities during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.

17. Periodic monitoring. Quarterly progress reports will be submitted to UNDP-CO who will conduct meetings with the project proponent as deemed necessary. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.

Project Monitoring Reporting

18. The Project manager (with the guidance of UNDP-GEF extended team) will be responsible for the preparation and submission of the following reports that form part of the monitoring process.

(a) Inception Report (IR)

19. A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed First Year Work Plan divided in quarterly timeframes detailing the activities and progress indicators that will guide implementation during the first year of the project. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12 months time-frame.

20. This inception report will clearly define roles, responsibilities and expected outputs matching those of the project. It will also provide updates on progress or changes in external conditions that may negatively impact project delivery.

21. The completed inception report would be submitted to UNDP-CO and UNDP-GEF for review before circulated to project partners for comments.

(b) Quarterly Progress Reports

22. Short reports outlining main updates in project progress will be provided quarterly to the local UNDP Country Office and the UNDP-GEF regional office by the Environmental Services Coordinator.

(c) Technical Reports

23. Any detailed documents covering specific areas of research or analysis, or any specialized scientific reports or findings generated by and for the project are deemed Technical Reports. A list of all such expected report will be generated by the project team and will be attached to the inception report. The list will indicate key areas of activities that require such reports and their approximate due date. If necessary the list will be updated and included in the Annual Progress Report. Technical Reports may also be prepared by external consultants and should be comprehensive, specialized analyses of clearly defined areas of research within the framework of

the project. These technical reports will represent, as appropriate, the project's substantive contribution to specific areas, and will be used in efforts to disseminate relevant information and best practices at local, national and international levels.

Audit Clause

24. The Government will comply with the audit requirements of the GEF and UNDP as outlined in the Programme Finance Manuals. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government.

1.5 Legal Context

25. This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement between the Government of St Vincent and the Grenadines and the United Nations Development Programme, signed by the parties on 29th April 1983. The host country-implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating agency described in that Agreement.

26. UNDP acts in this Project as Implementing Agency of the Global Environment Facility (GEF), and all rights and privileges pertaining to UNDP as per the terms of the SBAA shall be extended mutatis mutandis to GEF.

27. The UNDP Resident Representative is authorized to effect in writing the following types of revision to this Project Document, provided that he/she has verified the agreement thereto by GEF Unit and is assured that the other signatories to the Project Document have no objection to the proposed changes:

- a) Revision of, or addition to, any of the annexes to the Project Document;
- b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;
- c) Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and
- d) Inclusion of additional annexes and attachments only as set out here in this Project Document.

3. Appendix A: Summary Report of the Self-assessment Exercise

3.1 Scope and approaches of the stocktaking

28. The main objective of this self-assessment was to undertake a detailed, consultative and participatory process of needs assessment in accordance with GEF Operational Procedures for the Expedited Financing of National Communications from Non-Annex I Parties (GEF/C.22/Inf.16). The assessment identified and validated critical priorities for St. Vincent and the Grenadines in the implementation of the UNFCCC and the preparation of the project proposal for the second national communication.

29. The activity was designed to identify, analyze and interpret existing data sets generate by the INC, the enabling activities (biodiversity, climate change, land degradation), and the Medium-term Economic Strategy Paper in addition to the thematic areas identified by 17/CP.8. The summary findings of the exercise were used to identify gaps, uncertainties, barriers, and lessons learnt from previous and ongoing initiatives. The process involved:

- a) Team orientation, review of the TORs and design of strategic approaches for the implementation of the consultations.
- b) Meetings with relevant government departments to collect data and review policies and legislations.
- c) Meetings with the private sector to determine roles and identify response mechanisms.
- d) Meetings with selected individuals for data collection and interpretation.
- e) Small group consultations to gain national perspective.
- f) Desk review and compilation of data.
- g) Public consultation to review document.

30. Eight small group (focus group) discussions were held at strategic districts across the country. The findings were reviewed by the two national consultations convened to review the draft and final project document. The Environmental Services Coordinating Unit in the Ministry of Health and the Environment managed the stocktaking exercises. The National Environmental Advisory Board which served as the Steering Committee for this project also services as the National Climate Change Committee and stocktaking team. This multitasking may seem conflicting but in essence it is one of the great strengths that put climate change on a mainstreaming path. By having the same persons and agencies involved repeatedly institutional capacity and ownership is built. Additionally, since the representatives are senior officers, they can integrate the issues into their own departmental work-plan as well as share the information with their staff.

31. In the preparation of the reports, each team leader was responsible for producing a report from the team leader's discipline and working experience. This ensured thorough reporting, adherence to the TOR and accuracy of data. Additionally, the reports were of the type that all stakeholders can identify with since they were developed under the supervision of qualified persons from the various stakeholder groups.

32. Technical guidance for the stocktaking exercise came from a preparatory workshop conducted by the UNDP Country Office for Barbados and the Eastern Caribbean. The workshop

was held on May 12 and 13, 2005. Additionally, lessons learnt during the execution of the NCSA and the insights contained in the User Manual for the Guidelines on the Preparation of NC for non-Annex 1 Parties prepared by the UNFCCC Secretariat ensured the success of the process.

33. A priority matrix was set up to rank issues and to determine their inclusion in the SNC. Stakeholders were required to give a numerical rating (on a scale of 1-5) to each issue and to provide reasons for their rating.

3.2 Main Findings of the Self-assessment Exercises

34. The assessment exercises focused on the thematic areas in the INC on Climate Change as presented by St. Vincent and the Grenadines to the COP. Further, it included a focus on the results of the TNA prepared under the Top-up phase of the EA funded by the GEF and relevant findings from other GEF funded projects particularly the NCSA.

35. The assessment exercise was lead by the Environmental Services Unit in the Ministry of Health and the Environment of the Government of St. Vincent and the Grenadines. This unit was supported by an international consultant and the National Environmental Advisory Board.

3.2.1 National Circumstances

3.2.1.1 Data for the INC:

36. Country information provided for St. Vincent and the Grenadines under the National Circumstances of the INC that needs upgrading included data on 1) the Economic ii) Transportation iii) Energy iv) Land Use v) Agriculture, Industry and Tourism. While references to these sectors were made for the period 1980 to 1996, the period best reviewed was the period 1990 to 1996. Since 1996, however, the economic landscape has change significantly as a result of changes in the international market for agricultural produce. Consequently, priorities have shifted and so did the resulting energy use, transportation and agricultural foci.

37. The stakeholders agreed that the information on Geography and Population presented in the INC remain relatively stable during the period under review. The treatment given these sectors under the INC is therefore considered satisfactory and will not receive any significant change in the SNC.

38. Data on the economy, transport, energy and agriculture used in the preparation of the INC were extracted mainly from documents produced by the Statistical Office in the Ministry of Finance and Planning, Financial reports from the Ministry of Finance, and Financial Report from the Electrical Company. Data on vulnerability, shoreline retreat and marine resources were obtained primarily from work done by the Caribbean Planning for Adaptation to Climate Change (CPACC) the Caribbean Sea Grant Project and the Caribbean Conservation Association. All of this data related to periods prior to 2000 and were in many instances the first set of data of its kind. Such data was therefore baseline and did not offer sufficient grounds for decision-making. In some instances the data was also flawed due to inexperience of the data collector. Stakeholders felt that such data should therefore be refined and updating.

3.2.1.2 New and Improved Information for the SNC:

39. **The economic** situation in St. Vincent and the Grenadines has changed significantly since the preparation of the INC. Export earning from agriculture which accounted for almost 10% of the GDP in 2000 now accounts for about 5%. Despite the decline in foreign earnings, the acreage under agriculture appears to be increasing with much of the new agricultural areas being above the 1000 foot contour. This scenario speaks of disappearing vegetation cover, reduced recharge of underground water resources, and increase sedimentation of coastal waters resulting in coral death.

40. In the area of **transport**, there is a dramatic increase in the number of vehicle resulting in increased consumption of fossil fuel and increased production of greenhouse gases. Most of the vehicles coming to St. Vincent are old used vehicles from the developed world with highly inefficient fuel to mileage and fuel to CO² ratio. Ferry traffic between the islands is also increasing and the operators are not obligated to report their fuel consumption or country of purchase. Fishermen and ferry operators purchase fuel any where their business takes them including Grenada, Trinidad, Barbados or St. Vincent.

41. With increase urbanization comes increase **energy** demands for lighting, cooling, heating and domestic and factory use. All of this is happening at a time when the decreased stream volume is negatively impacting the generation of hydroelectric power (renewable energy). With the increasing cost of diesel fuel, the electricity generating company can ill afford to upgrade or replace obsolete machinery. The result is more inefficiency and greater consumption of fossil fuel. Under the SNC therefore, greater attention will be paid to removing barriers to the introduction of renewable energy.

42. **Land use**, land zoning and land tenure continue to be challenging issues for a small island grappling with socioeconomic development and geographic realities. Land use policy and the desire to maintain and expand natural forest cover demand an update to this element of the national circumstance.

43. The demise of the banana industry has signaled the redeployment of agricultural land into housing and commerce. This has implications for the GHG emission or absorption, economic diversification and energy consumption. This sector will of necessity be reviewed.

New priorities:

44. Given the aforementioned realities, the revised reporting requirements provided by the UNFCCC guidelines of 17/CP.8, and taking into consideration the findings of the TNA report, the current national circumstance does not adequately or accurately describe the current situation and offers no scope for future reporting. To this end, the profiles would be revised and upgraded. Attention would be placed on economic assessment of climate change impacts, building specifications for infrastructure, insurance and reinsurance, and renewable energy.

3.2.2 GHG Inventory

3.2.2.1 Data from the INC:

45. St. Vincent and the Grenadines served as the pilot project under CPACC for GHG emissions. Here, emissions were estimated for the base line year of 1990 and 1994 as well as 1997 to track changes over time. The IPCC workbooks and the accompanying spreadsheet files were used for data entry and emission calculation. Both the reference approach which calculates CO₂ and non-CO₂ emissions on the basis of energy consumption by fuel type and the sectoral approach which calculates emission by industrial sector were used.

46. Despite the international support and the use of the IPCC Good Practice Guide there were still some areas of uncertainty and inaccuracy in the data. Most of these related to data availability and format. The aggregated form was often inconsistent with the IPCC format and in some cases the sectors were not sufficiently well known by the data collector so that key steps were missed resulting in erroneous data.

47. Since 1998, the national waste management authority has made significant strides in converting the nation's dumps into functional sanitary land filled sites thus harnessing the methane production and making quantification more real.

48. There has been significant land use change since 2000 and efforts by the forestry department to reforest areas previously cleared for banana cultivation will result in significant data adjustment. This more so when one observes that there were no stated conversion factors for biomass from banana in the IPCC methodology. Additionally, primary forest (100-150 years old) was cleared via the slash and burn method during the early 1990s to support banana cultivation but there is no data as per the volume of biomass consumed.

49. The quantum of biomass consumed by wild fire each year was and still is unavailable. Even when single species for which conversion factors were available was destroyed, the area of forest cover was unknown. Here, recordkeeping instruments would need to be developed, tested and refined.

3.2.2.2 New and Improved Information for the SNC:

50. Estimates for St. Vincent GHG inventory by source and sinks for the SNC will use the year 2000 as the base year. The report will take into account all GHG covered under the INC including the NO_x and SO_x. The level of NMVOC has increased significantly with the expansion of roads and establishment of new cottage industries. This area will require more detailed analysis using the revised IPCC guidelines.

51. It will be necessary to re-evaluate the major sectors particularly the energy sector to identify any shifts in fuel source given the current upsurge in oil prices. Climate Change policies and response mechanisms will be upgraded in keeping with findings of this analysis.

52. As the first country in the Eastern Caribbean to undertake a GHG inventory, St. Vincent would seek to perfect its analytical techniques and archive the data in a standard form so that the other countries in the region can utilize the data. St. Vincent and the Grenadines would also seek

to produce a manual of procedures, lessons learnt and challenges encountered and make it available to countries in the Sub-region.

53. To make this exercise meaningful, all data gathering methodologies will be reviewed to ensure their compliance with and adherence to the IPCC methodology particularly elements identified in the IPCC Good Practice Guidelines.

54. Many stakeholders felt that this is the time to revise and enforce the Town and Country Planning Act to establish land use as a high priority with provision for the protection of water catchment. This along with technology to improve the harnessing and distribution of water to accommodate competing use as supply becomes more variable.

3.2.3 Measures to Facilitate Adequate adaptation to Climate Change

3.2.3.1 Vulnerability studies from the INC

55. Vulnerability studies for St. Vincent and the Grenadines under the INC were mainly sector specific and looked at a) Coastal Vulnerability b) Agricultural vulnerability c) Biodiversity and, d) Water resource vulnerability.

56. Emphasis was placed on the coastal vulnerability because upward to 90% of the country's infrastructural development and 75% of its population is located on a narrow coastal belt less than 5km from high water mark. Agriculture which employed more than 60% of the workforce and the biodiversity that supports it was also given high priority. Although it was previously thought that the island had an abundance of water, the realities of recent times have questioned this position.

57. As a consequence of these imperatives, the studies were national in scope with some local areas receiving greater attention because of their significance to the national needs and development. A significant challenge faced by the study was the absence of appropriate models. The level of resolution for currently available GCMs for country or regional assessment is of the order of $2.22^{\circ} \times 3.75^{\circ}$ to $7.83^{\circ} \times 10.0^{\circ}$ (USCSP, 1996). This level of resolution lumps most of the Lesser Antilles together greatly misrepresenting national conditions for St. Vincent and the Grenadines.

58. Studies done for St. Vincent and the Grenadines were therefore base on the extrapolation of available data. There were some attempts to simulate incremental climate change scenarios within feasible bounds such as +20 C temperature change combined with rainfall scenarios of + 20% change, + 10% change, + 0% change, - 10% change and - 20% change.

59. Climate Change initiatives in St. Vincent and the Grenadines were supported by the Caribbean Planning for Adaptation to Climate Change (CPACC) Project which officially ended in December 2001. The project assisted Caribbean countries to fulfill their commitments under the UNFCCC. The objective of the Project was to support Caribbean countries in preparing to cope with the adverse effects of global climate change (GCC). Elements of the project included vulnerability assessment, adaptation planning, and capacity building linked to adaptation

planning. Under this Project the following activities were carried out in St. Vincent and the Grenadines:

- Establishment of Sea Level/Climate Monitoring Station
- Establishment of Databases and Information Systems
- Inventory of Coastal Resources and Use
- Formulation of a Policy Framework for Integrated Coastal and Marine Management (Adaptation Planning)
 - Development of an 'Issues Paper', highlighting sectors vulnerable to climate change
 - Development of a '*National Climate Change Adaptation Policy*'.
 - A Public Awareness campaign that targeted academia and private sector.

3.2.3.2 Area of Work to be Addressed by SNC

51. Under the SNC St. Vincent and the Grenadines would seek to identify models that are more appropriate to the size of the country while continuing work on the incremental climate change scenario. In this regard it was agreed to examine the work being done in Cuba. There was consensus among stakeholders that the same sectors (coastal, agricultural, biodiversity and water) should be the focus of the SNC with improved data gathering and analysis.

52. The data set used in the INC was obtained from the national statistical office, the meteorology office, the power company and the fuel companies. However, the data has numerous gaps with the most consistent set being only fifteen (15) years old. Efforts will therefore be made to improve and expand the local data set where possible. In this regard regional data sets like those from the Caribbean Institute for Meteorology and Hydrology (CIMH) will be sourced.

53. The Sea level monitoring station will also be upgraded so that real time data can be downloaded to a national archiving centre. This data will also be translated into a form that it can be useful to farmers, fishermen and ferry operators.

54. In the area of coastal management, there is need for the development of a coastal management programme to address the dynamic aspect of long-term shoreline retreat. This would include permitting and incentive-based criteria for coastal development.

3.2.4 Programmes Containing Measures to Mitigate Climate Change

55. St. Vincent and the Grenadines is a net sink for carbon dioxide. A major challenge for the country is to remain that way in the face of increasing energy demands and increase competition for water. The increasing demand for water is reducing the amount available to generate hydro-electricity. At the same time, issues of deforestation looms. There is increase pressure on the forest resource both for space and for the resources that support livelihood.

56. Despite the afore mentioned scenarios, there are several programmes currently being implemented in St. Vincent and the Grenadines that contain measures to mitigate climate change. The refurbishing of the electricity generating plant with the assistance of the Canadians is

expected to bring the operation in line with internationally accepted emission standards. There is a major effort by the Forestry Department to reforest slopes abandoned by failed banana farmers. This effort will assist both in GHG absorption and soil water retention. A number of hotels in the country are seeking to become Green Globe certified. This requires adherence to principles that call for reduced energy use, reduce water use and improved vegetation cover on the grounds.

57. Under the SNC cost benefit analysis would be done for selected forms of renewable energy and efforts would be made to reduce barriers to the use of agreed renewable energy. This was a recommendation of the INC and the TNA and strongly reiterated by the stakeholder consultative process. The TNA showed how the agricultural and domestic (residential) sectors can benefit significantly from renewable energy with manageable initial cost.

3.2.5 Other Information Relevant to Achieving the Objectives of the Convention

58. The TNA for St. Vincent and the Grenadines considered the following sectors as priority; water, fisheries and coastal resources, insurance and financial services, agriculture and the supporting biodiversity, and energy and infrastructure. These sectors were examined to determine potential hazard related to climate change, potential impact of these hazards, appropriate national responses, technology options, and intersectoral synergies.

59. For each sector, a technical team consisting of experts from the public sector, the private sector, the respective sector and a regional consultant conducted a review of the existing situation. The team was required to identify appropriate replacement technology in keeping with the draft national climate change policy and the sector's own vision. The recommended technology was to be evaluated by personnel from the selected sector to determine fitness to task, efficiency, training needs to accompany change over, maintenance cost and general fit to the establishment culture and image. This was the point of greatest challenge. Resistance to change, need for retooling and the time needed to undertake the evaluation along with regular work schedule proved too much for most sectors.

60. Under the SNC support will be provided for more detailed sector specific review, training and technical support for change over processes.

61. The Caribbean Planning for Adaptation to Climate Change (CPACC) provided invaluable support to the development of a strong and sustained effort to address climate change in St. Vincent and the Grenadines. This project supported the establishment of a sea-level monitoring station, the initiation of a public education outreach, the drafting of a national climate change policy along with the beginnings of a metadata system on coastal resources. All of these initiatives are on going though with reduced momentum in some cases.

62. The CPACC project ended in 2002 but not before the start of the Adapting to Climate Change in the Caribbean (ACCC). This was a small interim project that supported mainly the Public Education Outreach (PEO) and carried over into the Mainstreaming Adaptation to Climate Change (MACC) project that is seeking to reduce vulnerability of Caribbean countries to the impacts of climate change. For St. Vincent and the Grenadines the, the MACC project

will examine the vulnerability of three critical sectors namely water, agriculture and coastal resources.

63. A resultant of these initiatives was a decision by the heads of governments in the Caribbean to set up a Caribbean Community Climate Change Centre (CCCCC). This centre was established in February 2002 and is expected to provide critical technical support to St. Vincent and the Grenadines in the implementation of its SNC.

64. The national Capacity Self Assessment (NCSA) project for St. Vincent and the Grenadines began in July of 2004. This project seeks to identify the capacity constraint and needs of the country associated with the implementation of global environmental agreements particularly the UNCBD, UNCCD and the UNFCCC. This assessment is taking cognizance of the recommendations of the INC, the NBSAP and the first national report to the CoP to the UNCCD. In this regard, the project is examining individual, institutional and systemic capacity to ascertain the true cause of poor implementation of these recommendations and consequently the lack of progress in advancing the global environmental agenda.

65. St. Vincent and the Grenadines completed the enabling activities under the UNCBD sponsored by the GEF. Under this initiative the country developed a National Biodiversity Strategy and Action Plan (NBSAP), a Clearing House Mechanism (CHM) for biodiversity data and conducted assessments in the area of use of traditional knowledge in the management of biodiversity, ex-situ and in-situ conservation of biodiversity important to agriculture. All of this data will be used in assessing the vulnerability and or resilience of the agriculture sector in the face of global climate change.

3.2.6 Synergies with Other Initiatives.

66. Despite its vulnerability and the prevalence of events attributed to climate change or climate variability, St. Vincent and the Grenadines have no programme specifically designed to address Climate Change. However, there are some initiatives that bear relevance to the realities that are addressed under Climate Change. These include the upgrading of the electricity generation plants to reduce emissions and increase efficiency, the development of a land use plan that speaks to coastal development, the reforestation of denuded slopes under the integrated forest management project, and the agricultural diversification programme that speaks to alternative livelihood and biodiversity adaptive to climatic changes.

67. In addition to these initiatives the SNC will find synergy in the emerging disaster management plan, the Vulnerability Capacity Assessment lead by UNDP, the search for alternative technology initiated under the technology needs assessment (TNA), and capacity assessment and building from the NCSA.

68. The National Environmental Management Strategy (NEMS) developed under the St. Georges Declaration of Principal for Environmental Sustainability in the Organization of East Caribbean States (OECS) is intended to integrate environmental priorities into the national development process. This initiative is both national and sub-regional in scope making provision

for the sharing expertise and experiences. The SNC will therefore be developed within the context of the NEMS.

69. In fulfilling the island's obligations under the UNCCD, St. Vincent and the Grenadines is currently developing a National Action Plan (NAP) with focus on preventing land degradation and rehabilitation of degraded lands. Three of the eight small group discussions held in support of the SNC also supported data gathering for the NAP.

3.2.7 Constraints, Gaps, Financial, Technical and Capacity Needs.

3.2.7.1 The INC

70. The INC reporting system was constraint by the limited capacity of the public service both institutional and systemic. Small island developing states (SIDS) like St. Vincent and the Grenadines face the double edged sword of small population and resource base but very high vulnerabilities. The small public service staff is expected to perform like the large public service machinery of developed countries.

71. Most SIDS are newly independent states grappling to cope with development challenges without the necessary foundation i.e institutional framework, appropriate technology, database and data management system and research institutions. Against this background, these countries are required to meet reporting obligations that are not always in keeping with their development priorities or level. All of these constraints were observed in the Vincentian scenario. Additionally, St. Vincent and the Grenadines does not have an explicit policy on data collection, management and use. This absence of a data management culture seriously compromised the data output for the INC. There were gaps in the data and inconsistency in the data form resulting in interpretation error and inaccuracy in the reports generated.

72. Correcting these deficiencies requiring staff training, procurement of modern equipment and development of policies to support the infrastructure. Because of limited financial resources and staff size, this upgrading is done in a piece wise fashion over long periods making the exercise ineffective.

3.2.7.2 The SNC

73. For the SNC to be meaningful, it must improve on the work of the INC. All data reported under the headings National Circumstances, the GHG inventory and the vulnerability studies of the INC will be updated. This will require support to the existing system of data collection, management and use. To this end the SNC will support short-term training in data collection and management for key stakeholders.

3.2.8 Lesson Learnt

74. The process leading to the production of the INC was new to many stakeholders in St. Vincent and the Grenadines. The process required cross-sectoral data matching for verification purposes and many persons were uncomfortable with having their data critique by persons from other sectors. Additionally, working around stakeholders time and priorities proved challenging. In reviewing the exercise with stakeholders the following list emerged as lessons learnt.

- o Understanding the organizational culture is critical to obtaining reliable data from any agency.

- It is critical that all concerned understand ownership and value of data and that privacy be respected.
- Persons collecting data should give adequate advance notice to curators or data managers.
- Political support and involvement at the highest level is important at all stages of the process.
- There is no substitute for a strong lead agency and steering committee.
- It is critical that all persons involved in data transfer have very clear understanding of the process, the purpose and the benefits to be derived from the exercise.
- There is great advantage in having a regional technical agency like CPACC or CCCCC supporting the process.
- There is no substitute for the building of local capacity.

75. Additionally, stakeholders felt that there was not sufficient emphasis on certain aspects of Climate change and wanted the following concerns addressed in the SNC

- Policy makers are not responding to Climate Change.
- There is some national response to consequences and results not the "cause" of Climate Change.
- There is need for long-term action.
- The education programme needs to be reshaped to reach the right target group.
- Data collection and management needs to be improved.
- There is a need to build Climate Change into sectoral work-plans.
- Efforts should be made to identify indicator species for monitoring purposes.
- The bureau of standards needs to national emission standards and have these put into legislation.
- There is need for greater awareness of coastal resources, their value and their vulnerabilities.
- The results of the TNA need to be refined and made functional.
- There are several recommendations of the INC not yet implemented and still very relevant.
- There is need for a clear policy on renewable energy.

3.2.9 Stakeholder Matrix

Name of institutions / stakeholders consulted	Stakeholder interests, mandate, responsibility	Sector	Reasons for inclusion	Role in the self-assessment process
Environmental Services Unit	Coordination of Environmental Activities. Focal Point for MEAs. Repository for environmental data. Provide advise to Government on Environmental matters.	Public	As lead agency in the process	Project Coordinator and member of monitoring team
Fisheries Division	Protection/management of fisheries resources/Monitoring regulation. Coastal zone management.	Public	Lead agency in costal zone matters	Consultation, data provider and reviewer.
Forestry Division	Management of Forest, wildlife and watershed.	Public	For technical review and access to data	Consultation, data provider and reviewer
National emergency response agency	Disaster Management Coordination	Public	To sensitize agency to potential disasters	Provide data on national response strategy and guide discussion on proposed responses to CC.
Physical Planning	Infrastructural and Land Development Control and Regulations	Public	To provide guidance on national development plan	Data provider and member of monitoring team
Ministry of Agriculture	Food Security/ Research and soil conservation	Public	Agricultural sector targeted for TNA	Evaluate technology for agriculture , provider data, share in consultation.
Meteorological Office	Data collection /Observation/ Forecasting	Public	Major provider and custodian of climatic data	Data provider and reviewer
Central Statistics Office	Data Collection/Analysis/Storage	Public sector	They are chief source of data on the island	Data provider and analyst
Ministry of Transport Works and Housing	Design and construct public facilities and community housing	Public	Shelter and transport are important sectors likely to be impacted by CC	To provide policy guidance
Environmental Health Department	Vector Control and water quality	Public	To ensure that health issues are reflected	Data provider and reviewer
CWSA	Water Management	Statutory	Their role as managers of a resource that is very likely to be impacted by CC	To provide data, share in and guide the consultation.
Solid Waste Management Authority	Solid Waste Management/	Statutory	As a regulator of GHG they need to understand the challenges	To provide data and guidance in evaluation of data.
VINLEC	Electricity Generation/Distribution	Public-Private	Energy issues are central to GHG emissions	To provide data, policy direction and alternative approaches

Appendix B: Technical Components of the Project Proposal

1. Background/Context

76. The objective of the United Nations Framework Convention on Climate Change (UNFCCC) is to achieve, in accordance with the relevant provisions of the convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Recognizing its vulnerability and the benefits to be derived from collective global responsibility and action, St. Vincent and the Grenadines ratified the convention on the 5th of September 1996. By so doing the country has committed to develop, periodically update, publish and make available to the Conference of the Parties (COP) national inventories of anthropogenic emissions by source and removal by sinks of all greenhouse gases not controlled by the Montreal Protocol, and measures to facilitate adequate adaptation to climate change.

77. In responding to these commitments, the government of St. Vincent and the Grenadines engaged in a series of activities (interviews, consultations, data collection and analysis) between 1999 and 2000 that culminated in the submission of the country's Initial National Communication to the COP in November of 2000. During the preparation of the national communication, the country was forced to take a look at its land use policies, its water resources, its agricultural programme, the transportation sector, the energy sector and the links between these various sectors and the economy. It was observed that the country has a heavy reliance on imported fossil fuel despite having a number of streams flowing swiftly down steep slopes. Further that much of the energy was wasted due to inefficiency occasioned by inappropriate or obsolete technology, poor management plan and limited human resource in both the energy generation and transportation sectors.

78. Some training was provided under the INC for the development of a greenhouse gas inventory. In this regard, St. Vincent and the Grenadines served as the pilot project under the CPACC for GHG emissions. The inventory process began here earlier than any other island in the Eastern Caribbean. In the process emissions were estimated for the baseline years of 1990 and 1994 as well as for 1997 in order to track changes over time. The approach used two basic methodologies; the reference approach which calculated both CO² and non-CO² emissions on the basis of energy consumption by fuel type, and the sector approach which calculates emissions by industrial sector.

79. Although St. Vincent and the Grenadines is a Non-Annex 1 country, much work was done on the preparation of the GHG inventory. As a result, St. Vincent and the Grenadines did not develop a National Action Plan during the development of the INC nor did it elaborate an abatement plan. However, the National Climate Change Policy document does call for the options focused on energy efficiency. The document also promotes the expansion of natural forest which now stands at 29%.

80. Continuing the work of the INC, the 'Add-On' from GEF-UNDP supported the Technology Needs Assessment (TNA). The TNA undertook a self-assessment of national needs for GHG abatement and adaptation technologies. This assessment consists of prioritizing the key

abatement and adaptation technologies for GHG relevant to agriculture, energy and the tourism sector.

81. So far, the GEF has been the main contributor to the Climate Change challenge in St. Vincent and the Grenadines. Between 1999 and 2001, CPACC provided the technical support needed to support climate change initiatives. Between 2001 and 2003 CPACC was replaced by ACCC and MACC. Beyond 2005, St. Vincent and the Grenadines will turn to the Caribbean Community Climate Change Centre (CCCCC) to provide this support. While ACCC received support from the Canadians MACC has been supported primarily by the GEF.

2. PROJECT'S DEVELOPMENT AND MAIN OBJECTIVE

Project Development Objectives:

82. This project will enable St. Vincent and the Grenadines to mainstream climate change concerns into sectoral and national developmental priorities by strengthening the institutional and systemic capacity of the country, develop its technical capabilities and expand its knowledge base to support decision making.

83. The project will contribute to the global objective of stabilizing greenhouse gas concentration in the atmosphere by providing greater understanding of sources and sinks of GHG. Also it will help St. Vincent to better manage its sources of GHG by reducing fossil fuel consumption and increasing energy efficiency. These commitments are all enshrined in the national climate change policy document and hailed as key elements of sustainable development.

84. This project will in accordance with Article 6 of the convention contribute to greater public awareness and involvement in issues of climate change. It will provide public access to information on climate change and its effects while facilitating public participation in developing adequate responses.

85. This project will foster links with ongoing and emerging initiatives in the search for adaptation options and opportunities. The project will also seek to expand its impact by developing other projects in the area of climate change that may be funded under the Clean Development mechanism or other bilateral sources.

Project Immediate Objective:

86. The project will enable St. Vincent and the Grenadines to prepare and submit its second national communication to the COP to the UNFCCC in accordance with Articles 4 and 12 of the convention.

3. PROJECT STRATEGY

87. During the development of the First National Communication, St. Vincent and the Grenadines placed high priority on the development of skills and competences at the individual and institutional level. This training paid dividend during the implementation of the Technology Needs Assessment in that there was a cadre of persons with sufficient knowledge and skills to

undertake a review of the GHG inventory without external assistance. Additionally, with the aid of only one external consultant, the TNA was completed to the satisfaction of the Implementing agency and the national Authorities.

88. Based on the foregoing experience, St. Vincent and the Grenadines will embark on a strategy that will seek to build national capacity for the sustainability of the national communication and related processes. To this end greater links will be forged with the private sector (banks and insurance companies), academia and local community based organization. Synergies will be forged with other public sector agencies like the Central water and Sewerage Authority, The St. Vincent Electricity Company, and the Ministry of Finance and Planning. The aim is to mainstream climate change issues by integrating them into the work of key agencies which will obviously be affected by climatic variation and change.

89. The National Environmental Management Strategy (NEMS) calls for the harmonization of MEA related work plan in sink with national priorities. This will mean the linking of outputs from Biodiversity, Land Degradation, and Climate Change beyond the assessment now being done under the National Capacity Self Assessment (NCSA). This will have the effect of amplifying benefits while making gaps more visible and easier to fill. The Second National Communication (SNC) will thus provide a good tool for evaluation, and monitoring of activities started in the Initial National Communication, and the Phase II Enabling Activities while addressing any new areas that may have arisen or needs more emphasis.

90. In the broader regional context, St. Vincent will look to the Caribbean Community Climate Change Centre for technical backstopping in addressing abatement issues and adaptation strategies in collaboration with major stakeholders like water companies, energy providers and consumers and academia.

4. PROJECT ACTIVITIES

4.1 National Circumstances

91. There will be a general revision and update of all the data provide in the INC of St. Vincent and the Grenadines. However, while data on Geography and Population are not expected to change significantly, data on the Economy, Transportation, Energy Sector and Agriculture are expected to change significantly. Consideration will be given to the impact of climate change on the economy. The issue of water resource which was given only cursory treatment in the INC will now be given more substantial treatment.

92. Challenged by the loss of the preferential trade regime enjoyed by agriculture, the country was forced to make significant shifts in its economic strategy. This national circumstance for the SNC must therefore speak to the new economic order, poverty reduction strategies (PRSP) and the legal and institutional arrangements within which these would evolve. Sector specific profile will therefore be updated to reflect the new realities in technology, land use planning and conservation, economic diversification and demographics.

93. A number of the aforementioned gaps have been identified in the stocktaking exercise. Filling these gaps will be a first step in collecting the required data to upgrade the national circumstance. This process will involve the following activities:

Output 4.1.1 National Circumstance Review and Updated

Activities

1. Statistical analysis of relevant data in INC and available at National Statistical Office to identify missing data source and determination of new data source to be added. The project officer will spearhead this effort.
2. Determine data quality and authenticity through data review workshops including custodian of data, data users, and person charged with data collection.
3. Desk review and stakeholders review of national development priorities in view of economic trends.
4. Examine any emerging or developing area of economic significance that will affect demographics, industrial growth and livelihood issue.
5. Fill the data gap in accordance with the communications guidelines reflected in the TORs of the National Circumstances.
6. Draft the national circumstances section relevant to the thematic area.

4.2 Greenhouse Gas Inventory

94. The initial GHG inventory looked at the base years 1990, 1994 and 1997 and covered all net anthropogenic emissions by source and removals by sinks of GHG's (CO₂, CH₄ and N₂O) and related gases (NO_x, CO, NM VOC) as mandated by Article 10/CP2, and in accordance with IPCC revised guidelines and used this data in its reporting. However, a reassessment started during the TNA revealed a number of gaps and inaccuracies in the data primarily in the area of reporting. One of the three fossil fuel importers has its base on the island of Barbados. Consequently only a very limited data set for that company is to be found on St. Vincent. The other two companies are able to provide reliable bulk data but no reliable disaggregated figures. The INC reported a 27% increase in diesel oil consumption between 1990 and 1997. This figure has risen significantly between 1997 and 2000 due to an import ban on the cheaper leaded gasoline. Development of a GHG inventory for 2000 will require addressing these challenges. It is not envisaged that any new methodology apart from the IPCC methodology used in the INC would be used in the SNC. This will include the 1996 Revised IPCC Guidelines for National Greenhouse Inventories and the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories.

95. In addition to energy, agriculture will be an area of focus in the SNC. The decline in agriculture (from employing > 60% of the population in the 90's to < 30 % currently) has led to greater urban migration, increase unemployment, increased energy consumption, increased waste generation all of which impacts GHG emission. All of this is occurring in tandem with declining forest cover hence reduced biomass.

96. St. Vincent and the Grenadines second national GHG inventory will address all gases mandated by 17/CP8. More accurate measurement of the methane produced from municipal

waste is expected with the opening of a sanitary landfill in 2000 and the national enforcement of disposal regulation.

Collecting this data will require:

- additional training of agricultural extension workers and modification of their data log.
- abstracting data from the latest population (2000) and agricultural (2002) census
- generation of GIS demographic maps
- mandatory disclosure of data by fuel and energy companies.

Output 4.2.1 National GHG Inventory Team Formalized, and Expanded

Activities

1. Persons trained to conduct GHG inventory under the INC brought together into a formalized body.
2. New persons trained and added to the inventory team. These persons will be drawn from the sectors
Under survey.
3. Gap analysis and identification of appropriate sources of data to fill the gaps.

Output 4.2.2 Data collected for GHG inventory

Activities

1. Review of existing data sets by inventory team.
2. Identify new data set needed for 2000 and to fill gaps in the 1994 and 1997.
3. Collection of new necessary data sets.
4. Perform data cleaning and analysis using the IPCC methodology and guidelines.

Output 4.2.3 Comprehensive GHG Inventory of Anthropogenic Emissions by Source and Removal by Sinks .

Activities

1. Compile estimates of GHG emissions for 2000.
2. Perform statistical analysis on all data collected to identify possible trends
3. Conduct uncertainty assessment as per IPCC guide.
4. Preparation of a draft inventory of GHG emissions by sources and removal by sinks for 2000 and a
time series 1994 to 2000.
5. Circulate draft inventory for internal review.
6. Organize national workshop to review and update or modify inventory where necessary.
7. Formulate inventory for inclusion into St. Vincent and the Grenadines SNC.

Output 4.2.4 GHG inventory data documented and put in public domain.

Activities

1. GHG inventory published and circulated to academic institutions, libraries, sectors involved in the

- inventor, and documentation centres.
- 2. Electronic version of data created and posted on appropriate national web site.
- 3. GHG inventory included in SNC.

4.3. Programmes Containing Measures to Facilitate Adequate Adaptation to Climate Change

97. The INC for St. Vincent and the Grenadines examined the various predictions as to the possible impact of Climate Change on the physical structure of the island and the lives of the people. Because of the relative small size of the island, the resolution offered by most available Global Circulation Models (GCMs) were unacceptable. Consequently, an alternative approach of simulating incremental climate change scenarios with feasible bounds was used. The results of these modeling points to accelerated sea level rise. For St. Vincent and the Grenadines that will result in:

- Increased coastal erosion
- Inundation of low-lying coastal areas
- Increased flooding and storm damage
- Wetland loss, and
- Higher water table.

98. These negative physical impacts will produce major challenges in the area of transportation, agriculture, settlements, energy and the economy all of which were examined in the INC. Additionally, health, water resource, tourism and demographics will be severely affected. These sectors will however be re-examined in the SNC to take account of recent developments and the period up to 2000. Attention will also be paid to filling data gaps resulting from faulty reporting or failure to report. During the Top-Up phase some attention was paid to the agriculture and water sector but mainly in the area of technology needs. It was clear from this work that the available water resources cannot support the current technology used in the irrigation sector to support the vital agricultural sector for any prolonged period. This result points to the need for more detailed assessment and the development of technology response as well as the need to do more sectoral cross matching.

99. The current global economic trends and coastal imperatives mandates that St. Vincent and the Grenadines revisit its climate change policy to take account of adaptation measures to more effectively address the management of coastal resources and the coastal zone.

100. Linking climate change to national vulnerability is both necessary and appropriate. However, this is very new in the context of St. Vincent and the Grenadines. To this end, climate vulnerability studies would be developed with emphasis on physical, biophysical and economic indicators of climate change and impact. These indicators would be developed in consultation with academia, private sector and the wide stakeholder community. While the effort will be national, it would draw on the results and lessons learnt from regional initiatives under the CPACC, research work on indicators done by the University of the West Indies (UWI) St. Augustine and the studies on physical and biophysical indicators for CARICOM countries done under the UNCCD.

101. The climate change policy document currently being reviewed will be upgraded to give effect to the use of these indicators. The National Environmental Management Strategy currently awaiting cabinet approval makes provision for climate change considerations primarily those aspects that address housing, land use, water and energy to be factored into development. The strategy calls for the identification and use of appropriate indicators, identification and allocation of financial resources, establishment of time frame and implementing partners.

102. The vulnerability assessment done as part of the INC focused mainly on coastal resources, agriculture, water and biodiversity. The SNC will review and expand this scope to include the economic and health sectors and create synergies with on going *Disaster Risk Reduction* supported by UNDP. The *Vulnerability Capacity Assessment* currently being lead by UNDP will emerge into a national initiative and will be linked to National Vulnerability study program under the SNC. These issues are all reflected in the Common Country Assessment (CCA) and expanded in the scope of work under the Country Programme Action Plan (CPAP) now being finalized between the government of St. Vincent and the Grenadines and UNDP.

Output 4.3.1: Baseline Data Established, Tools and Methods Approved

Activities

1. Decide on the appropriate scope of the assessment in-keeping with national goals and available finance and technical support.
2. Decide on the approaches, tools and method to be used for the assessment.
3. Identify the type and range of data and information needed in order to use the chosen models and tools
4. Establish baselines through collection, synthesis and verification of available data.
5. Develop an environmental and socioeconomic baseline.

Output 4.3.2 Vulnerability and Risk Assessment of Priority Sectors Completed

Activities

1. Select appropriate indicators from regionally existing data sets and develop new indicators where the available list is deficient or not applicable.
2. Complete national Vulnerability Capacity Assessment (VCA)
3. Refine and utilize scenario modeling (using the incremental climate-change scenario from the INC) to determine magnitude of vulnerability.
4. Determine future climate change trends and risks
5. Determine environmental and socioeconomic trends and risks for priority areas.

4.3.3 Adaptation Programme to Address Vulnerability to Climate Change Formalized

Activities

1. Discuss findings and options with stakeholders and community at workshops.
2. Carry out a cost/benefit analysis of these options.
3. Results from the VCA, scenario modeling and trend analysis integrated into national work programmes.

4. Update the National Climate Change Adaptation Policy and Action Plan to reflect findings.
5. Adaptation response measures implemented.
6. Compile draft Vulnerability and Adaptation chapter and circulate for review
7. Finalize V&A chapter in SNC.

4.4 Programmes Containing Measures to Mitigate Climate Change

103. GHG emissions in St. Vincent and the Grenadines are a very small part of the global emission. In fact St. Vincent and the Grenadines is a net remover of GHG. However, any reduction in emission is important in the global context. For this reason St. Vincent and the Grenadines will seek to reduce emissions in individual economic sectors. This initiative will depend in large part on the development of appropriate technology to retrofit or replace existing operating systems.

104. The TNA exercise focused on the main economic sectors namely energy, transportation, and agriculture. Energy is the primary source of greenhouse-gas emission in SVG. While most of the energy comes from diesel, approximately 20% of the electricity generated comes from hydropower. It would be an ideal situation for SVG to increase its quantum of hydropower, however, the water volumes in the rivers are diminishing. The TNA report noted that in addition to operating efficiencies in all sectors of the economy, energy conservation and alternative energy sources offer opportunity for emission reduction.

105. St. Vincent and the Grenadines would need to review its energy policy to encourage the search for and use of renewable energy. In the recent past, there has been some examination of the country's potential to produce geo-thermal energy given its large active volcano. Several studies have also been conducted on the use of solar and wind energy. The stakeholder consultation called for a change in the energy infrastructure and a refinement of the TNA to make investment work. Participants were calling for greater involvement of the private sector and a move towards the Cleaner Development Mechanism.

106. Given the current world energy climate, the government of SVG is keen to revisit the aforementioned initiatives. The government also sees this as an opportunity to further express its commitment to the UNFCCC, the Kyoto Protocol and the global environmental agenda.

107. It should be noted that a formal mitigation process was not initiated in SVG under the INC. However, some functional mitigation measures currently in place include reforestation of slopes abandoned by failed banana farmers, retrofitting of the power generation plant to meet international standards and the imposition of high import tax on old used vehicle from develop countries. Government is showing a willingness to go beyond this point to the point of offering incentives to alternative energy entrepreneurs, thereby removing barriers to clean energy development and mitigating climate change.

The mitigation programme under the SNC will deliver the following outputs:

Output 4.4.1: GHG Baseline Scenario Developed

Activities

1. Conduct a comparative analysis of the GHG inventories of 2000 and 1994.
2. Collate data from relevant sectors as required by scenario methodology (software).
3. Conduct required training or have appropriate personnel trained.
4. Develop GHG baseline scenario for priority sectors.

Output 4.4.2: GHG Mitigation Scenario Developed

Activities

1. Estimate the GHG reduction potential against the baseline scenario.
2. Develop a GHG emission scenario for the priority sectors by using the appropriate software
3. Develop the GHG mitigation scenario for the energy sector for 2000-2025
4. Develop the GHG mitigation scenario for the non-energy sectors

Output 4.4.3 Mitigation Technology Identified and Approved

Activities

1. Review the work done under the TNA and identify appropriate technology for each sector based on cost, functionality and availability.
2. Conduct cost benefit analysis of the technology and estimate penetration rate into the existing infrastructure. The analysis will also examine the potential of the technology to mitigate climate change.
3. Carry out a mitigation assessment to include a detailed evaluation of specific programmes and policies, including a description of the social and economic development framework for climate change mitigation, the main national economic and social development trends, including expected GHG emissions in sectors such as energy, industry, agriculture, forestry and waste management and the appropriateness of the supporting technology.
4. Identify GHG mitigation technology appropriate to sectors evaluated under the INC and SNC.
5. Evaluation and approval of appropriate mitigation technology.
6. Incorporate technology data into the SNC.

Output 4.4.4 Barriers to Renewable Energy Removed

Activities

1. Review legislation pertinent to the energy sectors thus breaking the monopoly.
2. Provide incentives to renewable energy.
3. Identify appropriate technology to support renewable energy.
4. Provide necessary training through local academic institution.

5. Develop marketing strategy for the technology and the product.
6. Propose policy interventions and financial schemes to support renewable energy and integrate them into national planning and policy process.

4.4.5 Mitigation Programme Developed

Activities

1. Prioritise mitigation options
2. Implement technology options identified in the TNA.
3. Put in place mechanisms to reduce barriers to implementing the mitigation options
4. Integrate mitigation options into national development plans
5. Expand the mitigation debate by inclusion into the national development dialoguc.
6. Prepare the mitigation report for the SNC.

4.5 Other Information Considered Relevant to the Achieving the Objective of the Convention

108. The INC placed special emphasis on Public Education Outreach. This was because the concept of Climate Change though very relevant to SVG is also very new and it was generally felt that there is nothing that countries with small economies, limited infrastructure and imported technology could do to help avert or reduce the impacts of Climate Change. The Public Education Outreach (PEO) started by CPACC and continued under the MACC is invaluable in this regard.

109. The TNA looked mainly at Alternative Technology (covered in output 4.3.5) and Systematic Observation and Research. These three areas are considered very important to SVG in achieving the objectives of the UNFCCC. The aspect of Systemic Observation and Research has its base in Decision 5/CP5 of the UNFCCC Conference of Parties (COP). The requirements in the Reporting Guidelines are based on the needs for meteorological, atmospheric, oceanographic and terrestrial observations of the climate system as identified by the Global Climate Observing System (GCOS).

Output 4.5.1 Public Education Strategy Strengthened and Implemented

Activities

1. Assess the current status of the PEO
2. Determine gaps and constraints
3. Strengthen the Education Unit in the Ministry of Health and the Environment by
 - a) Fusion with the education elements of the Environmental Services Unit
 - b) Expanding the library resources of the Education Unit in the Ministry to include environmental and climatic literature and data.
 - c) Establishing formal links with academia allowing wider circulation and use of the information.
4. Expand the Biodiversity Clearing House data set to include climate data and impacts.
5. Through the Ministry of Education include the resources of the Education Unit in the Ministry of Health and the Environment as part of the national education data set.

6. Include the PEO strategic elements into the SNC

**Output 4.5.2 Systematic Observation and Research Mechanism Upgraded
Activities**

1. Assess the state (functionality, accuracy, and spatial location) of the national systematic observation system.
2. Determine the type and quality data needs compared with current data receipt.
3. Determine what equipment needs upgrading and where new equipment is needed.
4. Conduct upgrade of equipment (sea level monitoring station) and purchase new equipment where necessary. Cost may be a constraining factor here.
5. Train relevant staff in the use of equipment, data retrieval, analysis and storage.

4.6 Constraints and Gaps, and Related Financial, Technical and Capacity Needs

110. The INC did not dedicate a section specifically to 'constraints and gaps, and related financial, technical and capacity needs' but included these issues as a sub-section under Climate Change Response Strategy. The INC noted that the island's economy was weak and fragile and that loan conditions have proven to be counter-productive in the context of resource management. Further that GEF resources targeted emissions rather than vulnerability hence small island states are eligible for comparatively limited amounts of assistance.

111. The INC also noted that technical response to climate change and sea-level rise require a cadre of skilled technicians, an accurate and extensive data-management system, adequate financial resource and private/public partnerships.

112. The SNC will dedicate a section to 'constraints and gaps, and related financial, technical and capacity needs'. In the course of developing the SNC, new constraints and gaps and related financial and technical capacity needs will be identified and reported. Recommendations will be made and proposed projects developed for funding to support implementation of the recommendations.

Output 4.6.1 Constraints and Gaps, and Related Financial, Technical and Capacity Needs Identified and Reported.

Activities

1. Review the status of previously identified constraints, gaps and needs (financial, technical, institutional, technological and capacity).
2. Identify any new constraints, gaps and needs (financial, technical, institutional, technological and capacity).
3. Summarize constraints, gaps and needs and elaborate into a format as an independent section of the SNC.
4. Obtain consensus on this new section (through consultation) and include into SNC.

Output 4.6.2. A Strategy for Addressing Constraints and Gaps, and Needs Developed.

Activities

1. Conduct workshops to identify commonalities and synergies between sectoral work-plans with emphasis on activities to address GHG emissions, energy use, technology acquisition.
2. Identify cost-sharing opportunities and develop approaches that support technology development and sharing.
3. Develop proposed projects for funding to address constraint and gaps.
4. Forge public/private partnerships to address all gaps, constraint and needs relating to climate change challenges.
5. Include proposals and strategies into the SNC document.

4.7 SNC Prepared, Submitted and Disseminated

Activities

1. Compilation of the draft Second National Communication of St. Vincent and the Grenadines.
2. Circulate the draft for stakeholder review and comments
3. Incorporate amendments and editorial changes to produce final report.
4. Submission of SNC to Cabinet for approval
5. Official submission of SVG Second National Communication to the COP of UNFCCC
6. Publish the SNC; launch and disseminate the document.

5. INSTITUTIONAL FRAMEWORK FOR PROJECT IMPLEMENTATION

113. This project will use the National Execution Modality (NEX) of the United Nations Development Programme with the Ministry of Health and the Environment as the Executing Agency. The Environmental Services Unit in the Ministry of Health and the Environment will therefore be responsible for the overall management of the project ensuring the achievement of the outputs, impacts and objectives while the Ministry of Finance and Planning oversees the use of the project resources. It should be noted that the Environmental Services Unit has only two fulltime staff, a Japanese volunteer (on a one year assignment) and an ozone project officer. This unit would need to be strengthened for more effective delivery of climate change related adaptation and mitigation impacts.

114. In addressing the aforementioned challenge, the Ministry of Health and the Environment is currently reviewing its mandate and strategies. The Ministry proposes to merge the Environmental Health Department and the Environmental Services Unit at the same time strengthen synergies with the Ministry of Agriculture (Forestry and Fisheries Division) and the Ministry of Transport Works and Housing (Met. Division) to ensure effective, sustained and harmonized implementation of MEAs. This move will reduce the need for some new staff but will require training for staff of the Environmental Health Department and the acquisition of technology to link the various departments and ministries.

115. The Project Team for the development of the SNC will consist of the National Project Coordinator (NPC), Administrative Assistant and a Public Awareness Consultant who will work on a full time basis. A Legal Consultant and three National Technical Experts will assist the project Team as needed. International Technical Experts will be hired or consulted on a needs basis to assist the National Project Team. A number of consultants, however, will have been previously engaged with the INC and top up activities.

116. The NPC will oversee the day-to-day project execution with guidance from the National Environmental Advisory Board (NEAB) functioning as the Project Steering Committee. The NEAB is an eleven (11) member cabinet appointed body consisting of senior personnel from government and non-government organisations the private sector and academia. This institutional arrangement is an expansion of the one put in place for the INC. There are some new members on the NEAB due to succession and adjustment in ministerial mandate. A public awareness personnel has been added to the project team because of the high priority given public education and the need to engage civil society in all aspects of the project. In the INC the Ministry of Legal Affairs provided legal advice, however, this Ministry is severely short staffed and the SNC will require more substantive legal support in addressing policy issues, removing barriers and forging links with the private sector. Technical backstopping provided for the INC by CPACC will now be provided by the CCCCC and OECS-ESDU.

117. As part of the project implementation, mechanisms will be established for communication, networking, information dissemination and partnerships. The existing electronic network will be upgraded to optimise communication and information dissemination, especially with the UNDP office. Regional links to similar projects will also be established with participating countries to share experiences and provide assistance if needed. Most importantly all stakeholders and civil society will be involved in the development of the SNC.

118. Because this project is international and broad based in terms of its partners and expectations, it will be necessary to have clearly defined roles, responsibility, timelines, outputs and resources allocation (technical, financial, human). For this reason, all key personnel will be involved in the inception workshop. Here mechanisms for communication, networking, and problem solving would be agreed upon. Some TORs will be discussed and finalized and time frames on the national work-plan synchronized. Implementing partners will include UNDP/GEF, the CCCCC, OECS-ESDU and CEHL.

6. ASSESSING PROJECT IMPACT

119. A series of results oriented matrices would be developed as tools to assess the project impact at the policy level, capacity development level and at the sustainability level. In this regard, the monitoring and evaluation process will feature outcome evaluation as a critical element of the process. Matrices will include all project activities, expected outputs and outcomes matched against actual outcomes and management decisions. A list of indicators approved by the project team and the project steering committee will be used to measure the degree of success of an activity.

120. The SNC is expected to significantly influence the national policies relating to energy, agriculture, transport, coastal resources and water resource management. There is currently a draft Climate Change Policy document in circulation in SVG. That draft policy addresses the sectors here listed and is expected to be formally approved as a national Climate Change Policy document during the execution of the SNC. The impact of the SNC on this and other policies will be determine by the quality of supporting regulations developed and the degree of enforcement as it relates coastal setbacks, emissions reduction, and incentives provided for renewable energy and reforestation.

121. Implementation of the national communication process of the SNC will require capacity building at all levels to ensure intersectoral corporation, effective implementation and sustainability of effort. Training of personnel, identification and allocation of adequate funding, acquisition of appropriate technology and integration of work-plans will be necessary in this regard. The extent to which to which these necessities are met will determine the degree of success of the process.

122. Mainstreaming climate change into the national development framework requires building and integrating capacity into the national machinery, implementation of the INC and stakeholder recommendations, and compliance with national obligations under the UNFCCC. There is already some move in this direction. The evolving NEMS has created a platform for harmonizing all MEAs ratified by SVG as well as integrating work-plans and providing a common reporting framework. This move was supported by the NCSA and is expected to be concretized under the SNC and approved as the national approach sustainable management of environment and natural resource as set out in the millennium development goals (MDGs).

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7. Total Budget and Workplan

Award ID:		40142									
Award Title:		PIMS # 3539 CC EA SNC of St. Vincent and the Grenadines									
Project ID:		45266									
Project Title:		PIMS # 3539 CC EA Second National Communication of St. Vincent and the Grenadines									
Executing Agency:		Government of SVG: Min. of Health and the Environment									
OUTPUTS (and corresponding indicators)	RESP. PARTY	Source of funds	Budget Code	Budget Description	Year 1 (USD)	Year 2 (USD)	Year 3 (USD)	Total Budget (USD)			
1- National Circumstances	Ministry of Nat. Resources	62000	71300	Local Consultants	3,000	2,000	1,000	6,000			
		62000	71400	Contractual services	2,000	1,500	-	3,500			
Sub-total					5,000	3,500	1,000	9,500			
2- National Greenhouse Gas Inventories	Ministry of Nat. Resources	62000	71300	Local Consultants	20,000	15,000	10,000	45,000			
		62000	71405	Service Contracts-Individuals	6,500	3,000	3,000	12,500			
		62000	71600	travel	4,000	2,000	1,000	7,000			
		62000	71400	Contractual services	5,500	3,500	1,500	10,500			
Sub-total					36,000	23,500	15,500	75,000			
3. Programmes containing measures to mitigate CC	Ministry of Nat. Resources	62000	71200	International consultants	6,000	4,000	2,500	12,500			
		62000	71405	Service Contracts-Individuals	10,000	8,000	4,500	22,500			
		62000	71400	Local Consultants	8,000	8,000	6,500	22,500			
		62000	71600	travel	3,000	2,000	900	5,900			
Sub-total					27,000	22,000	14,400	63,400			

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OBJECTIVES		RESPONSIBILITY		PLANNED BUDGET				TOTAL BUDGET (USD)	
Component	Indicator	Source of Funds	Budget Code	Budget Description	Year 1 (USD)	Year 2 (USD)	Year 3 (USD)	Year 4 (USD)	Year 5 (USD)
4- Programmes containing measures to facilitate adaptation to climate change		62000	71200	International consultants	8,000	7,000	-	-	15,000
		62000	71405	Service Contracts-Indiv.	9,400	9,400	-	-	28,200
		62000	71400	Local Consultants	9,000	7,000	-	-	22,000
		62000	71600	travel	4,000	2,500	-	-	6,500
Sub-total									
5- Other relevant information		62000	71400	Local consultants	2,500	2,500	-	-	7,500
		62000	71405	Service Contracts-Indiv.	3,000	2,000	-	-	5,500
		62000	71600	travel	1,000	1,000	-	-	2,500
		62000	74210	Printing and Publications	-	2,000	-	-	4,000
Sub-total									
6- Constraints & Gaps; Related Financial, Technical, & Capacity Needs		62000	71405	Service Contracts-Indiv.	2,500	2,500	-	-	6,000
		62000	71200	International consultants	1,000	800	-	-	1,900
					3,500	3,300	-	-	7,800
Sub-total									
7- Technical Assistance		62000	71405	Service Contracts-Indiv.	3,500	3,500	-	-	10,000
					3,500	3,500	-	-	10,000
Sub-total									
8- Compilation, including Executive summary, Production & Dissemination		62000	71405	Service Contracts-Indiv.	-	2,500	-	-	7,500
					-	-	-	6,000	6,000
					-	2,500	-	-	11,000
Sub-total									

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OBJECTS and Components (in Indicative Language)	Source of Funds	Project Code	PLANNED BUDGET				Total Budget (USD)
			Year 1994 (USD)	Year 1995 (USD)	Year 1996 (USD)	Year 1997 (USD)	
9- Project Management	62000	71405	Service Contracts- Individuals	25,000	25,000	25,000	75,000
		72200	Equipment and Furniture	12,000	6,000	4,000	22,000
	62000	72400	Communic & Audio Visual Equip	4,200	2,000	2,000	8,200
			Supplies	1,500	1,500	1,450	4,450
	62000	74000	Operational costs	1,500	1,500	1,500	4,500
	62000	74500	Misc.	2000	1700	1700	5,400
Sub-total			46,200	37,700	35,650	119,550	
10- Monitoring & Reporting	62000	74100	Professional Services	1,250	1,250	1,250	3,750
		74210	Printing and Publications	900	900	900	2,700
	62000	74110	Audit Fees	2,200	2,200	2,200	6,600
Sub-total			4,350	4,350	4,350	13,050	
Grand Total	62000		161,450	133,750	109,800	405,000	

8. DETAILED WORK PLAN

ACTIVITY/OUTPUT	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Project Inception												
1. Project staff selected and hired												
2. Establish technical team												
3. Finalise the work plan and TORs												
4. Establish task teams												
5. Organize project inception workshop with stakeholders												
6. Organize meeting with steering committee and project staff to clarify roles and communication channels.												
4.1 National Circumstances												
Output 4.1.1 National Circumstances reviewed, updated and finalised												
1. Statistical analysis of data (gap analysis)												
2. Determine data quality and authenticity (workshop)												
3. Desk review of national priorities and economic trends.												
4. Examine emerging areas of economic significance that will affect demographics, industrial growth, livelihood.												
5. Fill data gaps according to communications guidelines.												
6. Draft the NC section for the SNC under the thematic areas.												
7. Organize a workshop to finalize the NC section.												
4.2 GHG Inventory												
Output 4.2.1 National GHG Inventory Team formalized and expanded.												
1. Persons trained to conduct GHG inventory organized as team.												
2. Sector staff trained to conduct GHG inventory.												
3. Gap analysis and identification of data source.												
Output 4.2.2 Data collection for GHG inventory												
1. Review of existing data sets												
2. Identify new data sets needed for 2000												
3. Collection of new and necessary data sets												
4. Perform data cleaning and analysis												
Output 4.2.3 Comprehensive GHG inventory of anthropogenic emissions by source												

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ACTIVITY/OUTPUT	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
1. Compile estimates of GHG emissions for 2000												
2. Perform statistical trend analysis.												
3. Conduct uncertainty assessment as per IPCC guide.												
4. Prepare draft inventory of GHG emissions by sources and removal by sinks for 2000 and time series 1994 to 2000												
5. Circulate draft inventory for internal review.												
6. Organize national workshop to review and update inventory.												
7. Formulate inventory for inclusion into SNC.												
Output 4.2.4 GHG inventory documented and put in public domain												
1. GHG inventory published and circulated												
2. Electronic version of data created and posted on the web.												
3. GHG inventory included in SNC.												
4.3 Programme containing measures to facilitate adequate adaptation to climate change												
Output 4.3.1 Baseline data established, tools and methods approved												
1. Decide on appropriate scope of the assessment												
2. Decide on approaches, tools and methods of assessment.												
3. Identify the type and range of data needed in order to choose models and tools.												
4. Establish baseline through collection, synthesis and verification of available data.												
5. Develop environmental and socioeconomic baseline.												
Output 4.3.2 Vulnerability and risk assessment of priority sectors completed												
1. Select appropriate indicators from regionally existing data sets and develop new indicators where available list is deficient.												
2. Complete national vulnerability capacity assessment.												
3. Refine and utilize scenario modeling to determine magnitude of vulnerability.												
4. Determine future climate change trends and risks.												
5. Determine environmental and socioeconomic trends and risk for priority areas.												
Output 4.3.3 Adaptation programme to address vulnerability to climate change formalized												
1. Discuss findings and options with stakeholders and community												

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ACTIVITY/OUTPUT	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
2. Carry out cost benefit analysis of these options.												
3. Results from the VCA, scenario modeling and trend analysis integrated into national work programme.												
4. Update national climate change adaptation policy and action plan to reflect the findings.												
5. Adaptation response measures implemented.												
6. Compile draft vulnerability and adaptation chapter of SNC												
7. Finalize V&A chapter in SNC												
4.4 Programme containing measures to mitigate climate change												
Output 4.4.1 GHG baseline scenario developed												
1. Conduct a comprehensive analysis of the GHG inventory of 2000 and 1994												
2. Collect data from relevant sectors as required by scenario methodology.												
3. Conduct required training.												
4. Develop GHG baseline scenario for priority sectors												
Output 4.4.2 GHG mitigation scenario developed												
1. Estimate GHG reduction potential against the baseline scenario												
2. Develop a GHG emission scenario for the priority sectors												
3. Develop the GHG mitigation scenario for the energy sector for 2000-2025												
4. Develop the GHG mitigation scenario for non-energy sector.												
Output 4.4.3 Mitigation Technology Identified and Approved												
1. Review TNA and identify appropriate Technology specific to each sector.												
2. Conduct cost benefit analysis of selected technology.												
3. Carry out mitigation assessment												
4. Identify GHG mitigation technology appropriate to sectors evaluated under the INC and SNC.												
5. Evaluate and approve appropriate mitigation technology												
6. Incorporate technology data into the SNC												

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ACTIVITY/OUTPUT	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Output 4.4.4 Barriers to Renewable Energy Removed												
1. Review legislation pertinent to energy with a view to break monopoly currently existing.												
2. Provide incentives to support renewable energy.												
3. Identify appropriate technology to support renewable energy.												
4. Provide necessary training to support renewable energy.												
5. Develop marketing strategy for the new technology and product.												
6. Propose policy intervention and financial schemes to support renewable energy and integrate these into national planning and policy process.												
Output 4.4.5 Mitigation Programme Developed.												
1. Prioritize mitigation options.												
2. Implement technology options identified in the TNA												
3. Put in place mechanisms to reduce barriers to implementing the mitigation options.												
4. Integrate mitigation options into national development plans.												
5. Expand the mitigation debate by inclusion into the national development dialogue.												
6. prepare the mitigation report for the SNC												
4.5 Other information considered relevant to the achievement of the objectives of the Convention												
Output 4.5.1 Public education strategy strengthened and implemented												
1. Assess the current status of the PEO												
2. Determine gaps and constraints												
3. Strengthen the Education Unit in the Ministry of Health and the Environment.												
4. Expand the Biodiversity Clearing House data set to include climate data and impacts.												
5. Include the data set in the Ministry of Health and the Environment as part of the National Education data set.												
6. Include the PEO strategic elements into the SNC.												
OUTPUT 4.5.2 Systemic Observation and Research mechanism Upgraded												

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ACTIVITY/OUTPUT	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
1. Assess the state of the national systematic observation system.												
2. Determine the type and quality data needs compare with data receipt.												
3. Determine equipment needs (upgrade, replace)												
4. Conduct upgrade of equipment.												
5. Train staff in the use of equipment, data retrieval, analysis and storage.												
4.6 Constraints and gaps, and related financial, technical and capacity needs												
Output 4.6.1 Constraints and gaps, and related financial, technical and capacity needs identified and reported												
1. Review the status of previous identified constraint, gaps and needs.												
2. Identify any new constraint, gaps and needs.												
3. Summarize constraints, gaps and needs and elaborate and include in SNC.												
4. Obtain consensus on this new sector.												
Output 4.6.2 Strategy for addressing constraint, gaps and needs developed.												
1. Conduct workshop to identify commonalities and synergies between sectoral work-plans												
2. Identify cost-sharing opportunities and develop approaches that support technology development and sharing.												
3. Develop proposed project for funding to address constraint gaps.												
4. Forge public and private partnerships to address all gaps constraint and needs relating to climate change challenges.												
5. Include proposal and strategies into the SNC.												
4.7 SNC prepared, submitted and disseminated												
1. Compilation of draft SNC												
2. Circulation of draft for stakeholder review and comments												
3. Incorporate amendments and editorial changes												
4. Submission of SNC to Cabinet for approval												
5. Official submission of SVG SNC to the COP of UNFCCC												

Appendix C: Terms of Reference

TOR for the National Project Coordinator

Under the supervision of the Environmental Services Coordinator the NPC will manage the day-to-day activities of the project and in consultation with the project steering committee ensuring the achievement of the outputs and objectives including the production of the Second National Communication document.

Specifically the NPC will:

- Lead and coordinate the day-to-day management of the project to ensure timely implementation of the project activities as set out in the project work-plan.
- Prepare a detailed project work-plan and TORs for subcontractors in consultation with the project team and steering committee.
- Identify and procure the services of qualified national and international experts to assist in project implementation.
- Supervise the project support staff (including consultants) who are hired to provide technical support.
- Organize and coordinate workshops and training necessary under the project.
- Liaise with relevant ministries, research institutions, private sector and other relevant institutions to foster synergies, ensure involvement of these stakeholders and gather and disseminate information relevant to the project.
- Prepare and circulate quarterly progress report.
- Manage all resources (including financial) related to the project.
- Ensure synergies between the SNC and other MEAs.
- Ensure that the SNC process follows the guidelines provided by the UNFCCC.
- Oversee the finalization of the SNC and its submission to the Ministry of health and the Environment.

Qualifications:

The NPC should possess the following skills and experiences or equivalent:

1. Master of Science (MSc.) degree in environmental related studies or natural sciences.
2. Good understanding of environment and development issues in the Caribbean.
3. At least five years experience working in St. Vincent
4. Knowledge of the IPCC inventory methodology.
5. Good communication (written and oral) and management skills.
6. Computer skills with mastery of MS Office.
7. A sound knowledge of Climate Change issues and challenges for SIDS.

TOR for Public Awareness Consultant:

Because of the high importance of this project, a Public Awareness consultant will be hired to keep the project, its objectives and outcomes in full view of the public and to solicit public participation. This consultant will work under the supervision of the NPC and will perform the following specific tasks:

- Using the existing PEO as a base, design and implement a public awareness programme specific to the SNC.
- Prepare public awareness material for dissemination to schools and academic institutions.
- Keep the public abreast of progress on the project highlighting successes, lessons learnt, challenges and future benefits.
- Facilitate training, workshops and public awareness activities.
- Conduct surveys to determine project impact and guide implementation.
- Be the chief spokesperson for the project.
- Integrate Climate Change into the Health Education programme.
- Prepare reports on all activities taking place under the project.

Qualification and Experience:

The candidate should possess:

1. A university degree in mass communication.
2. At least three years in the field of public education.
3. Some formal training in Environmental Studies. A degree in Environment will be an advantage.
4. Good communication skills including mastery of local dialect
5. At least three years work experience in SVG.
6. Basic knowledge of electronic equipment commonly used in communications.

TOR for the NEAB/Steering Committee

The NEAB will maintain its standard operating rules regarding meetings, quorum and authority. In so doing it will provide technical oversight and support to the implementation of this project. In regards to this project, however, in addition to reporting to the Minister of Health and the Environment, the NEAB will also report to UNDP.

The NEAB will facilitate coordination of project activities among national stakeholders particularly state actors in order to support the mainstreaming effort. Individual members will also be responsible for overseeing specific components of the SNC process based on their competences. Collectively the NEAB will be responsible for the final review of the SNC document. More specifically the NEAB will:

1. Endorse the detailed work plan and implementation schedule for the SNC process.
2. Reviews and make necessary comments to all draft documents in a timely manner.
3. Provide technical guidance when and where necessary.

4. Assist in identifying and recruiting appropriate technical staff.
5. On an individual level, ensure the provision of relevant data from their organization to the project team and the integration of project output into their organization's work-plan.

TOR for National GHG Team Leader

The National GHG team leader should be someone trained and worked under the INC thus having a first hand experience of the Vincentian situation. This team leader would work under the supervision of the NPC and will have specific responsibility for:

- Assist the national Project Coordinator in selecting the team of experts to undertake the development of the GHG inventory.
- Oversee the training of new members of the GHG team.
- Facilitate further training in GHG inventory for stakeholders.
- Prepare detailed work-plan for members of his team.
- Provide quarterly progress report and report to the NPC and steering committee.
- Lead and supervise the entire GHG collection process.
- Select and implement appropriate methodology for the GHG inventory.
- Present a synthesized report to the review body.
- Incorporate relevant comments into the report.
- Draft the national inventory report and related chapter of the SNC.
- Provide guidelines for continued future assessment.
- Ensure proper archiving of all GHG data.

Qualification and Experience:

1. A university degree in environmental studies or related field.
2. Formal training in climatology or meteorology.
3. A working knowledge of statistics.
4. Should have worked on the GHG inventory for the INC or had formal training in this field at a tertiary level.
5. Possess good computer skills especially working with Excel and Access.

**Terms of reference
the V&A component of the National Communication**

These generic terms of reference for the preparation of the V&A studies identify the basic set of activities that the V&A expert/consultant will be responsible for under the supervision of the National Communication's Coordinator. It is important to note that these generic terms of reference do not intend to limit the work of the expert but to guide countries on the general profile of the V&A expert and on the activities generally expected to be carried out.

Profile of the V&A expert/consultant

The V&A expert should be knowledgeable and with hands-on experiences on V&A issues, have a solid understanding of the gaps and needs for developing/improving vulnerability assessments, and have technical expertise in the formulation of adaptation options. The V&A expert should be able to scope technical studies in the V&A area and design an implementation strategy to carry out the different V&A activities within the framework of the NC. He/She should also have a solid understanding of the institutional arrangements and resources required to carry out the V&A work.

Although the NC project document already provides the framework for the V&A studies, the expert should be able to advise on any adjustments if needed, both at the organizational and technical levels, for a successful implementation of the V&A studies.

Activities

In general, the V&A expert/consultant should be responsible for ensuring that the following set of activities is carried out. Emphasis on different activities will depend on the scope of the work already described in the NC project document and/or on the specific activities the V&A expert would be assigned to.

Policy and institutional issues

1. Identify the key policy issues the V&A study of the SNC project aims to address, e.g.,
 - a. to scope the scale of risks associated with projected climate change;
 - b. to aid in the identification of priorities for adaptation;
 - c. to support the development of a national adaptation strategy.

2. Identify the expected output of the V&A study of the SNC project on the basis of the project document, e.g.,
 - a. impacts assessment at the sectoral level for the given priorities identified in the project document;
 - b. a national adaptation strategy, including policies, programs and projects.

3. Develop a clear strategy to link the V&A outputs to national development planning. This would include, among others:
 - a. assessment of institutional arrangements/stakeholders engagement required to facilitate linking the outcome of the V&A studies to sectoral or national planning;

framework for assessing how the above linkage can be monitored and measured in the short and long terms, for instance through the development of practical indicators.

Technical issues

Scope of the V&A study

4. Elaborate on the scope (geographic, thematic, sectoral coverage, time horizon) of the V&A study, e.g.,
 - a. designing a strategy to build on but advance what was done within INC, and while applicable, NAPA project;
 - b. elaborating on the scope of studies to address sectors/regions not covered by INC, sectors/regions identified as sensitive/vulnerable to climate change, as per the NC project proposal;
 - c. preparing a detailed workplan for each of the study to be carried out, including a strategy to involve the relevant stakeholders, timeline, etc.;
 - d. designing a strategy, as applicable, to link the V&A studies with previous and ongoing related projects/activities (e.g., land degradation, biodiversity, international waters.)

Methodological framework

5. Elaborate on the overall methodological framework for the V&A study as per the project document and in consultation with the project coordinator. In doing so, the V&A expert should ensure that:
 - a. The proposed methodological framework is the most appropriate given the policy questions to be addressed, the characteristics of the study (e.g., sectoral focus, spatial and temporal scales, stakeholders involved, and data requirement, etc.), and data availability;
 - b. In-country expertise required for such a methodological framework is available. If needed, the V&A expert should develop a strategy to address technical capacity gaps. For instance, by exploring the possibility of applying another framework in which more in-country expertise exists, or by designing a training/technical backstopping strategy, etc.

Scenarios development

6. Identify the types of scenarios required to conduct the V&A assessment, e.g., climate, socio-economic, sea level, adaptive capacity, technology, land-use land-cover.
7. Identify the temporal and spatial resolution needed for these scenarios (e.g., national, sub-national, watershed, community, farm level, multi-decadal average, annual, monthly, daily, mean conditions, extreme events, etc.). In doing so, the expert should justify the choices.
8. Develop the strategies for developing such scenarios, e.g., model-based, expert judgment, etc.

In the preparation of the scenarios development strategy, the expert should assess the feasibility of the scenario needs and the methods for developing these scenarios, given the characteristics of the studies, and data availability. For instance, the expert would be expected to advise on alternative options to running regional climate models or other resource intensive and time consuming exercises. The V&A expert would also assess whether there is enough in-country expertise to develop such scenarios and/or identify options to address the needs for additional expertise.

Sectoral assessment (to be considered by each of the sectors to be covered in the V&A study)

9. Elaborate on the methods and tools, as per the project document, chosen to undertake sectoral assessments, e.g., numerical models, elicitation of expert views, stakeholder consultations, focus groups, etc. In doing so, the expert will advise on any adjustments needed to the options identified in the project document.
10. Provide justifications for the selection of the methods/tools considering the research questions, characteristics of the study, and requirements of data and technical expertise of these methods/tools.
11. Assess in-country expertise required to apply the selected methods/tools and prepare training/technical backstopping strategy as required.
12. Develop a strategy to integrate findings from sectoral assessment, as needed. For instance, by applying an integrated model, synthesizing sectoral information, etc.

Technical assistance needs

Develop a technical backstopping/training strategy to strengthen the national capacity needed to carry out the different V&A studies. This would include details on the type of support needed (training courses on particular methodological frameworks/tools, guidance material, technical documents and good practice) and the timeline for such support.

**Appendix D: Endorsement letters
GEF Operational Focal Point and UNFCCC Focal Point**

Ref. No.
In replying the date and
Number above of this letter
Should be quoted.

MINISTRY OF HEALTH AND THE ENVIRONMENT
Ministerial Building
Kingstown
SAINT VINCENT AND THE GRENADINES

Tel No: 784-456-1111
Fax No: 784-457-2684
Email: moheya@vincysurf.com

January 26, 2006


Mr. Leonard Good
CEO/Chairman
Global Environmental Facility

Dear Sir,

St. Vincent and the Grenadines has completed its Initial National Communication and Top-up Activity Project for Climate Change. The Second National Communication will build upon lessons learnt from the implementation of the above mentioned projects and will also assist St. Vincent and the Grenadines in meeting its obligations under the United Nations Framework Convention on Climate Change (UNFCCC).

It is for this reason St. Vincent and the Grenadines endorses the GEF funded project entitled "Enabling Activities for the Preparation of the Second National Communication to the UNFCCC".

Best regards,


Mr. Edmund Jackson
GEF Operational Focal Point
St. Vincent and the Grenadines

CC: Rosina Wiltshire
UNDP Resident Representative
Barbados



Annex 1

PROJECT IMPLEMENTATION ACTIVITIES

Unless otherwise stated, all activities should comply with the
UNDP-GEF and the UNDP Programming Manuals

Stage	Responsibilities of UNDP Country Office
Development	• Review, appraise and provide guidance to proponent on Concept/project idea.
	• Defend Concept/project idea eligibility as needed.
	• Support Project formulation.
	• Support Co-financing negotiations.
	• Defend Proposal eligibility as needed.
	• Participates in policy negotiations as needed.
Preparation	• Support Project Document formulation.
	• Facilitate and participate in Project Document appraisal.
	• Prepare response to GEF Council comments for Project Document endorsement by GEF CEO.
	• Process UNDP signature of project document.
	• Process Government signature of Project Document.
	• Process Executing Agent signature of Project Document as relevant. • Finalize agreement with HQs on Project Support Services (tasks and reimbursement).
Implementation	♦ <i>Management Oversight</i>
	• Project launching.
	• Steering committee meetings .
	• Monitoring the implementation of the workplan and timetable.
	• Field visits: ensure visit to the project site at least once a year; prepare and circulate reports no later than two weeks after visit completion.
	• Problem identification and trouble shooting
	• Project document revision
	• Review, editing and response to reports • Technical backstopping as needed

Implementation (cont'd)	• Policy negotiations
	• Operational completion activities in agreement with GEF RCU, determining when the project is operationally completed and advising all interested parties accordingly.
	◆ <i>Financial Management & Accountability</i>
	▪ Financial management (verifying expenditures, advancing funds, issuing combined delivery reports, ensuring no over-expenditure of budget).
	▪ Ensuring annual audits of NEX projects are completed and the audited financial statements together with the audit report reach UNDP headquarters (Office of Audit and Performance Review) as needed.
	▪ Timely issuance of the initial Annual WorkPlan (AWP) and subsequent Budget Revisions.
• Operational and financial completion of the activities in agreement with GEF RCU, ensuring that projects are financially completed no more than 12 months after the date of operational completion by ensuring the final budget revision is promptly prepared and approved.	
Evaluation	▪ Ensure preparation and completion of Annual Project Reports (APRs) by the due date, two weeks before the tri-partite review (TPR).
	▪ Organize and attend tri-partite review (TPR) meetings and ensuring that decisions are taken on important issues).
	▪ Ensure preparation and completion of the GEF Project Implementation Review (PIR) reports by the due date.
	▪ Arrange evaluations (mid-term, final, post-final, independent etc...), hiring personnel, planning mission) as agreed upon with the GEF RCU and ensuring that GEF-specific requirements with regard to <i>Monitoring & Evaluation</i> are met in accordance with the UNDP-GEF Programming Manual.