

**United Nations Development Programme  
Project of the Government of Trinidad and Tobago**

Project number: TRI/98/G<sup>3</sup>1/A/1G/99

Project title: Enabling Trinidad and Tobago to prepare its First National Communication in response to its Commitments to UNFCCC

Project short title: Climate Change project (UNFCCC)

Estimated start date: May 1998

Estimated end date: December 1999

Executing agent: Ministry of Planning and Development

Implementing agent(s): Environmental Management Authority (EMA)

Project site: Trinidad and Tobago

Beneficiary countries: Trinidad and Tobago


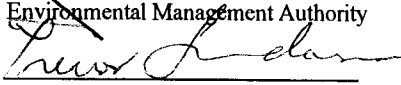
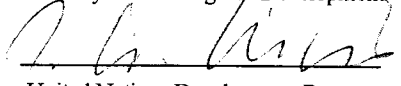
<u>Classification information</u>	
ACC sector and subsector:	20 (10 & 20)
DCAS sector and subsector:	3 (12 & 15)
Government sector and subsector:	
Primary areas of focus/sub-focus:	Promoting Environmental and Natural Resources Sustainability
Secondary areas of focus/sub-focus:	Establishment of policy, Strategy, planning & programme frameworks for sustainable development
Primary type of intervention:	Capacity building
Secondary type of intervention:	Direct Support/Operational assistance
Primary target beneficiaries:	Government/Governmental organizations
Secondary target beneficiaries:	Non-Governmental/Civil Society organizations, including NGOs

<u>Summary of UNDP and cost-sharing inputs</u> (as per attached budgets)	
UNDP:	
TRAC (1&2)	\$
TRAC (3)	\$
STS	\$
Other (GEF)	\$ <u>218,870</u>
Cost-sharing:	
Government	\$
Financial institution	\$
Third party	\$ _____
Total <b>\$ 218,870</b>	
(including STS budget and UNDP Admin. Costs)	
<u>Administrative and operational services</u> (where applicable)	
SOF 03	\$
SOF 07	\$
Other	\$

<b>Government inputs: (local currency)</b>
(in kind) \$ _____
(in cash) \$ _____

<b>LPAC approval date:</b>
<b>BPAC approval date:</b>
<b>Programme Assistant:</b>

**Brief description:** The project will enable Trinidad and Tobago to prepare its first national communication to the Conference of the Parties (COP) to the UN Framework Convention on Climate Change (UNFCCC). It will undertake (a) an inventory of greenhouse gases following the guidelines adopted by the COP; (b) an assessment of potential impacts of climate change in Trinidad and Tobago; (c) an analysis of potential measures to abate the increase in greenhouse gas emissions and to adapt to climate change; (d) preparation of a national action plan to address climate change and its adverse impacts; and (e) preparation of the first national communication of Trinidad and Tobago to the COP. Additionally, the project aims to enhance general awareness and knowledge on climate change related issues in Trinidad and Tobago and to strengthen the dialogue, information exchange and cooperation among all the relevant stakeholders including Government, non-government, academic and private sector agencies, the outcome being that the Government would then be in a better position to implement the Convention on Climate Change.

On behalf of:	Signature	Date	Name/Title
Government		18-5-98	Dr. Dave McIntosh Chief Executive Officer
Executing agent		18/5/98	Hon. Trevor Sudama Minister of Planning and Development
UNDP		18/5/98	Mr. Johann Geiser Resident Representative
	United Nations Development Programme		

## *Physiography*

The Republic of Trinidad and Tobago (T&T) is an archipelagic state located at the southernmost extremity of the Caribbean island chain. The two main islands, Trinidad and Tobago, together comprise a total land area of 5,126 km<sup>2</sup>. Both are situated on the Continental Shelf of South America from which they became separated in geologically recent times; however, they have substantial differences. Physiographically, Trinidad (4826 km<sup>2</sup>) is comprised of three mountain ranges, the Northern Range, rising over 900m and representing the easternmost extension of the Andean Mountain System; the Central range, an area of rolling hills with many limestone peaks and the Southern Range, a series of anticlinal folds separated by complicated fault systems which have resulted in low hills. These three mountain ranges are interspersed by two fertile plains, the Northern Basin, lying between the Northern and Central Ranges, and the low-lying, rolling Southern Basin with a shallow, inland freshwater lagoon, known as the Nariva Swamp, separated from the sea by a 25 km sand bar.

The physical features of the smaller island Tobago (300 km<sup>2</sup>) include the Main Ridge that occupies the north-eastern two-thirds of the island and reaches 576m, and the Southern Lowlands that comprise a coastal plain of coral terraces terminating in a fringing reef.

In addition to these main islands, T&T's Exclusive Economic Zone is estimated to be 15 times greater than the land mass, covering approximately 104,000 nautical km<sup>2</sup>. These marine areas are comprised of the Columbus Channel, lying between the South Coast of Trinidad and the Orinoco Coast of Venezuela; the Gulf of Paria, the Caribbean Sea, off the north coast of Trinidad and the leeward coast of Tobago and the Atlantic Ocean, off the east coast of Trinidad and the windward coast of Tobago.

## *Weather and Climate*

The climate of Trinidad and Tobago is strictly maritime tropical with a dry season (late December to late May) characterised by a drop in frequency and intensity of rainfall and a wet season (June through early December) with higher frequency, more intense and longer duration rainfall than in the dry season. The other periods, late May and remaining periods in December are considered to be transitional. Rainfall delivery systems abound in the wet season, dominated by the ITCZ, which position is coincidental with the movement and relative position of the overhead sun as it traverses between the tropics of Cancer and Capricorn. There is a short break lasting for a week to two weeks of relatively dry conditions referred to as the *Petite Careme* occurring in any period between late August and October. In general, Trinidad being the southern-most of the Antillean chain lies on the southern fringe of the Atlantic Hurricane Basin, and thus is not affected by tropical storms or hurricanes as often as those northern islands including Tobago. Within the last 10 years though, three storms came close to or affected Trinidad and Tobago i.e. Arthur (Tobago, 1990), Fran (Trinidad, 1990) and Bret (Galleon Passage, 1993). Eight tropical cyclones have affected Trinidad between 1886 and 1990<sup>1</sup>.

Climate statistics are available for Piarco Airport, Trinidad from 1946 and for Crown Point, Tobago from 1967. Climate statistics of importance are given in Table 1.

**Table 1. Annual Data for Piarco Airport, Trinidad and Crown Point Airport, Tobago.**

	Piarco Airport	Crown Point
Mean Rainfall (mm)	1870.0	1503.0
Extreme rainfall (highest) (mm)	2603.2 (1981)	1787 (1979)
Extreme Rainfall (lowest) (mm)	1453.7 (1987)	835.9 (1981)
Mean Max. Temperature (°C)	31.0	30.0
Mean Min. Temperature (°C)	22.0	23.0
Extreme Max. Temperature (°C)	36.5	34.7
Extreme Min. Temperature (°C)	16.1	19.0
Mean Max. Relative Humidity (%)	96	N/A
Mean Min. Relative Humidity (%)	60	N/A

Source: Henry, E.B. (1990). Climate Variability and Climate Change-the role of a small island state for instance Trinidad and Tobago. Climate Section. Meteorological Division of Trinidad and Tobago.

The country and its marine areas are buffeted year round by east-north-easterly winds with daily maximum mean speeds of  $4\text{m s}^{-1}$  over land but near exposed coastal areas of  $5\text{m s}^{-1}$ . The strongest winds occur between March and May in response to the equatorward shift of the semi-permanent Bermuda-Azores High Pressure System. The surface wind speeds decrease markedly in August through October as the doldromic influence associated with poleward shift of the Equatorial Through becomes more pronounced over the country.

<sup>1</sup> Daniel, C.B. and Maharaj, R. (1987). Tropical cyclones Affecting Trinidad and Tobago 1725-1986. Meteorological Division of Trinidad and Tobago.

Sea surface temperatures are stable with the average ranging from  $26.5^{\circ}\text{C}$  (dry season) to  $28^{\circ}\text{C}$  (wet season). Nearshore and sheltered areas may exhibit higher temperatures. The tidal regime is a semidiurnal one with periods of approximately 12.5 hours. While in the wider Caribbean Sea and adjacent Atlantic Ocean, the tidal range is approximately 10 cm, Trinidad and Tobago experiences higher tidal ranges as a result of their location on the Continental Shelf. At high spring tides the maximum range is 1.2m with some slight variation from north to south. There is also some variation of highs and lows at different parts of the coast.

## *Land Use*

A comparison of land uses over a thirty year period, early 1960s to 1994, shows that there have been significant changes in land use. Forested and cultivated lands have declined. Pure stands of forests have been replaced by broken forests, grasslands, mixed grassland and forest, settlements and other built-up areas. The reduction in forests especially from steep slopes, watershed protection areas and water production areas is a major cause for concern. The removal of natural vegetation particularly on the Northern Range slopes for farming, quarrying activities, forest fires and uncontrolled squatting has damaged the landscape and contributed to soil erosion, flooding, loss of water recharge capabilities and increased droughtiness in the dry season. The area under agriculture has also declined as a result of abandonment of agricultural estates or plantations, encroachment of settlements and a reduction in the number of active farmers.

## **2. Social Environment**

### *Population, Ethnic Composition and Religion*

According to the May 1990 census, the population of the country was approximately 1.24 million with the average population density of 242 people per square kilometer. The average annual population growth rate from 1980 to 1990 was approximately 1.3%. The ethnic composition consists of African (40.8%), East Indians (40.7%), mixed origin (16.3%), European (0.9%), Chinese (0.5%), others (0.8%). The major religious denominations consist of the Roman Catholic (33%), Anglican (15%), Hindu (25%) and Muslim (6%) religions.

### *Politics and Administration*

Trinidad and Tobago is a republic with a President as head of state. The Parliament is of a bicameral system consisting of the Senate and the House of Representatives. Senators are appointed and representatives are elected every five years when elections are constitutionally due. Executive power rests at central government level with the Prime Minister and the Cabinet. Local government is administered by fourteen Municipal Corporations in Trinidad, comprising nine Regional Corporations and five urban corporations-the Cities of Port of Spain and San Fernando and the Boroughs of Arima, Point Fortin and Chaguanas. The island of Tobago is administered by the Tobago House of Assembly, an elected body that has special constitutional status.

### *Economy*

Like other Caribbean countries, the economy of the republic was once dependent on agricultural products such as sugar and cocoa. In the 1940s, the economic structure of the country shifted to one led by the petroleum sector. During the 1970s in particular, the petroleum sector grew rapidly, in greater part due to the sudden rise in world oil prices. This was followed by an increase in oil production mainly from offshore fields. As a result of this rapid development, by 1980 the petroleum sector including refining, accounted for 40% of GDP, 90% of the total foreign exchange and over 50% of the central government revenue. Since the mid 1980s, the importance of the petroleum sector has

been gradually fading as prices and production declined (Table 2). To offset this trend, the contribution of natural gas to the national economy has been gradually increasing through the accelerated development and utilisation of this resource including downstream petrochemicals (Tables 3 and 4). As at December 1995, proven reserves of gas were 12.34 trillion cubic feet, having an estimated reserve life of 45 years at current rates of production.

**Table 2: Economic Significance of the Energy Sector, 1991-1996  
At Market Prices (Current Prices) (TT\$ Million)**

	1991	1992	1993	1994	1995	1996 <sup>P</sup>
GDP	22558.6	23117.6	24490.5	29008.2	30542.8	32810.7
Petroleum (oil)	5903.2	5464.1	5696.7	8418.0	8325.4	8747.1
(% GDP)	26.17	23.64	23.26	29.02	27.26	26.66
of	671.0	523.4	646.1	1572.3	1721.0	1580.1
which						
petrochemicals						
(% GDP)	2.97	2.26	2.64	5.42	5.63	4.82

Source: Republic of Trinidad and Tobago. *Review of the Economy 1996*. Prepared by the Central Statistical Office, Ministry of Finance. 1996.

<sup>P</sup> provisional

**Table 3. Natural Gas Production and Utilization**  
(Millions of Cubic Feet)  
1991-1996

	1991	1992	1993	1994	1995	Jan-Sept 1995	Jan-Sept 1996 <sup>P</sup>
Production	7400	7410	7080	7700	7757	5702	6514
As Fuel	3948	4114	4030	4103	4359	3245	3544
Processed	1664	1658	1685	2315	2138	1584	1900
Vented*	1695	1451	1210	1127	1116	765	954
Natural Gas Liquids	93	187	155	155	145	108	116

\*relates to gas liquids used as inputs to industry

Source: Republic of Trinidad and Tobago. *Review of the Economy 1996*. Prepared by the Central Statistical Office, Ministry of Finance. 1996.

<sup>P</sup> provisional

**Table 4. Petrochemicals Production and Exports: 1991-1996**  
(000 Tonnes)

	1991	1992	1993	1994	1995	Jan-Sept 1995	Jan-Sept 1996
<b>Nitrogenous Fertilizers (Ammonia and Urea)</b>							
Production	2465.6	2362.2	2291.8	2242.6	2630.9	1932.9	1960.2
Exports	2102.0	2089.4	1946.0	2185.2	2268.4	1664.9	1751.4
<b>Methanol</b>							
Production	452.8	481.7	492.8	1019.5	963.0	724.1	963.1
Exports	460.1	467.8	456.4	1009.4	963.2	741.1	931.5

Source: Republic of Trinidad and Tobago. *Review of the Economy 1996*. Prepared by the Central Statistical Office, Ministry of Finance. 1996.

#### *Current, Planned and Ongoing Projects Related to Climate Change*

Following the reports of the Trinidad and Tobago delegation to the Ministerial Conference on Atmospheric Pollution and Climate Change held in the Netherlands in November 1989 and the Small States Conference on Sea Level Rise held in the Republic of Maldives also in November 1989, the

Government of Trinidad and Tobago established a Working Group to “determine the implications for Trinidad and Tobago of global warming, climate change and sea level rise”. The Terms of Reference of this Working Group include the assessment of the phenomena of climate change, global warming and sea level rise as they relate to Trinidad and Tobago, identification of vulnerable areas and the recommendation of appropriate response strategies. Representation on this Working Group is multi-sectoral reflecting the nature of the phenomena and includes *inter alia*, national planning and policy formulation, resource utilisation and management, research, training/education, records and analysis through the following agencies:

- The Ministry of Planning and Development
- The Ministry of Agriculture, Land and Marine Resources
- The Ministry of Works and Transport
- The Ministry of Energy
- The University of the West Indies
- The Institute of Marine Affairs
- The Trinidad and Tobago Bureau of Standards
- The Ministry of Health
- Water Resources Agency
- The Meteorological Services, Ministry of Public Utilities
- The Tobago House of Assembly
- The Ministry of Foreign Affairs
- The Environmental Management Authority

The Environmental Management Authority, which has the responsibility for coordinating environmental management in Trinidad and Tobago, presently chairs this Working Group. The Working Group is pursuing two major initiatives aimed at fulfilling its mandate, namely, a vulnerability pilot study and a public awareness programme. Additionally, the National Environmental Policy (NEP), the National Environmental Action Plan (NEAP) and the National Environmental Management Plan (NEMP) as national policy documents, are being formulated with the efficacy of articulating several priority issues that would contribute to the Caribbean Planning for Adaptation to Global Climate Change (CPACC) project and UNFCCC initiatives.

Trinidad and Tobago signed and ratified the UNFCCC in June 1994. Representatives from Trinidad and Tobago are participating in the CoP meetings as well as local and regional meetings which address climate change. Trinidad and Tobago as a small island state is the founding member of the Association Of Small Island States (AOSIS) and along with other members of the AOSIS, is playing a vital role in dealing with environmental problems. Trinidad and Tobago is also one of the countries participating in the regional GEF-funded project entitled Caribbean Planning for Adaptation to Global Climate Change (CPACC). Early results from that work as well as studies undertaken by the Working Group will be included in the Initial National Communication on Climate Change.

The Organization of American States (OAS) is executing the GEF Regional Project entitled Planning for Adaptation to Climate Change (CPA) which is being implemented by the World Bank. This 4 year US\$6.3 million dollar project, which began activities in Trinidad and Tobago in early 1997, will

enhance the capacity of CARICOM countries which are parties to the UNFCCC to undertake regional planning related to the impacts of climate change on coastal and marine resources. Trinidad and Tobago is participating in the CPACC project and is participating in the following areas:

- Design and Establishment of Sea Level/Climate Monitoring Network (Regional)
- Establishment of Data Bases and Information Systems (Regional)
- Coral Reef Monitoring Network (Pilot)
- Formulation of Policy Framework for Coastal and Marine Management (Regional)
- Economic Valuation of Coastal and Marine Resources (Pilot)

This project will not undertake and work or studies in areas which are being worked upon by the CPACC project.

Delays in the four year CPACC project will not undermine the timely completion of the initial national communication of Trinidad and Tobago. In the event that the CPACC project is not sufficiently advanced to provide adequate input into the initial national communication by the time the final activity of preparing the national communications is reached an interim communication will be submitted at this point in time with a second and complete national communication being submitted at such point in time as the CPACC project is completed.

### 3. Project Objectives and Description

The immediate objectives of the project are to:

- a) facilitate the preparation of the first national communication of Trinidad and Tobago to the Conference of the Parties in accordance with Article 12 of the UNFCCC,
- b) enhance general awareness and knowledge of climate change issues related to Trinidad and Tobago,
- c) strengthen Trinidad and Tobago's planning and strategy formulation capabilities in different sectors but particularly in the energy sector given Government's policy of monetizing its natural gas resources,
- d) strengthen the institutional framework, and build endogenous capacity to fulfill additional communication obligations, and
- e) further the development and implementation of identified response measures addressing climate change and its adverse impacts.

The following components have been identified to respond to the objectives of the project and to implement the project successfully.

- a) ***Organization and Coordination:*** The existing Cabinet appointed Working Group on Climate Change, Sea level Rise and Global Warming is best poised to co-ordinate the implementation of this project. Its varied membership can provide access to relevant information to identify national, regional and international activities and clarify institutional as well as other practical arrangements to facilitate the successful implementation of the project. The project coordinator, an experienced staff member of the Environmental Management Authority (EMA)



will coordinate the project, including drafting of the work plan and organization of the Project Initiation Workshop.

- b) **Information and Records Management:** Strengthen the links to both national and international sources of information by establishing an information center with adequate equipment and personnel to facilitate effective exchange of information between the participating institutions at the national level, as well as to assist them in gaining internationally available information on climate change related issues. Various efforts in this respect are being pursued under Component 2 of CPACC. This project will aid in the advancement of a National Environmental Information System (NEIS) to be established at the Environmental Management Authority. This system is intended to be a repository of information needed for environmental management decision making, and which will also provide access to environmental information for all stakeholders. This activity will also involve the establishment of a national climate change website for Trinidad and Tobago
- c) **National GHG Inventory:** Undertake a national inventory of anthropogenic emissions by sources and removals by sinks of the following greenhouse gases: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O), following the guidelines adopted by the CoP for the national communications of the countries not included in Annex I to the convention. Once this work is completed, a national workshop will be held, involving all stakeholders with an interest in climate change, to finalize the national GHG inventory and agree on what to include in the national communication.
- d) **Identification and Analysis of Options:** Based on the results of the inventory, organize and undertake an analysis of potential options to abate the increase in GHG emissions and enhance sinks. Once this work is completed, a national workshop will be held, involving all stakeholders with an interest in climate change, to finalize the national analysis of GHG abatement options including agreement on what elements to include in the national communication.
- e) **Public Awareness Activities:** Establish and implement a programme of public awareness related to the impact, involving all the relevant stakeholders, linked closely with activity b) above.
- f) **Vulnerability and Adaptation** – Undertake vulnerability studies on the impacts of climate change on the following sectors (agricultural, hydrological resources, human health), Each of these studies will be examining areas which are not being covered by the CPACC project or any other climate change related project in Trinidad and Tobago so there will be absolutely no duplication. Once this work is completed, a national workshop will be held to review the outputs of these studies and the outputs of the CPACC project and decide which elements to include in the national communication.
- g) **Preparation of Draft Action Plan:** By building on the initial results of the CPACC project, the results of this project, and the results of the vulnerability studies of the Working Group, prepare a draft national action plan for effective response measures to climate change. Once

the draft national action plan is completed a national workshop to finalize the national action plan for Trinidad and Tobago;

- h) ***Additional Information:*** Based on the results of the studies, compile and prepare the additional information that the country will present in its national communications including *inter alia*:
- financial and technological needs and constraints associated with the implementation of the Convention under Articles 4 and 12;
  - projects for financing, and
  - relevant material for the undertaking of global greenhouse gas inventories.
- g) ***Preparation of Initial National Communication:*** Combine the outputs of this and other ongoing projects in the preparation and publication of the First National Communication of Trinidad and Tobago to the Conference of the Parties.

## 5. Rationale for GEF Funding

The project is consistent with the GEF Operational Guidelines for Expedited Financing of Initial Communications From Non-Annex-I Parties to provide coordinated and timely assistance to countries to fulfill their commitments to the FCCC. This proposal covers activities required in the initial communication and avoids duplication with any other ongoing activities that are already underway (in particular under the CPACC project). This includes the GHG inventory, GHG mitigation analysis, policy issues related to climate change and the preparation and production of the initial national communication.

## 6. Sustainability and Participation

The Government of the Republic of Trinidad and Tobago fully supports the objectives of this project and gives a high priority to it. The project recognises the importance of the input and exchange of information and experience at the national, regional and international levels. To this end, all identifiable stakeholders will be included for consultation and cooperation. In this regard, the involvement of Non-governmental Organisations will be an essential input. Internationally acceptable methodologies, guidelines and practices will be employed in the implementation of the various activities. Regional and local experts will provide technical assistance as far as possible.

## 7. Project Financing and Budget

As an enabling activity related to the communication obligations of Trinidad and Tobago under the UNFCCC, the agreed full costs of the project will be funded by GEF. The total budget for the project has been estimated at US\$218,870. This figure is consistent with the GEF cost norms for climate change enabling activities taking into account other ongoing climate change related work under the CPACC project. A detailed breakdown of the budget for the project can be found in Annex I.

## 8. Institutional Framework and Project Implementation

The Implementing Agency of the project will be the Environmental Management Authority. The most appropriate mechanism for the implementation of the project is through the existing Working Group appointed by Cabinet which can act as a Task Force or Steering Committee to oversee and advise on project execution. This Committee will be supplemented by a representative of the Private Sector and a representative of the NGO community in order to ensure that all relevant stakeholders are included.

The membership of the Project Steering Committee will be as follows:

	<b>Institution:</b>
1	The Environmental Management Authority – Chair
2	The Ministry of Planning and Development
3	The Ministry of Agriculture, Land and Marine Resources
4	The Ministry of Works and Transport
5	The Ministry of Energy
6	The University of the West Indies
7	The Institute of Marine Affairs
8	The Trinidad and Tobago Bureau of Standards
9	The Ministry of Health
10	Water Resources Agency
11	The Meteorological Services, Ministry of Public Utilities
12	The Tobago House of Assembly
13	The Ministry of Foreign Affairs
14	A Private Sector Representative
15	A representative of the NGO community

Working links with relevant regional and international expert institutions will be created in order to obtain relevant and up-to-date information on all aspects of the project particularly on selecting methodologies. In this regard, the project will utilize lessons learned from other ongoing or finalized international projects especially those in countries that have petroleum/natural gas based economies, in order to efficiently expedite the project and avoid duplication.

## 9. Monitoring and Evaluation

An external review of the detailed work plan will be undertaken by a competent expert with experience in these types of projects, with a view to identify the gaps, overlaps and other risks to successful project implementation. The Working Group co-ordinated by the Environmental Management Authority will be responsible for monitoring the project.

For the remaining part, the project will rely on standard UNDP monitoring and evaluation practices including a mid term evaluation.

## PROJECT BUDGET

Budget Code	Description	Total		1998		1999	
		m/m	\$	m/m	\$	m/m	\$
<b>10.00</b>	<b>Project Personnel</b>						
11.00	International Experts	2	24,000	1	12,000	1	12,000
<b>13.00</b>	<b>Admin. Support Personnel</b>						
13.01	Administrative Assistant	18	0	9	0	9	0
<b>15.00</b>	<b>Expert Official Travel</b>						
15.01	Expert Official Travel		7,500		4,500		3,000
<b>16.00</b>	<b>Mission Cost</b>						
16.01	Mission Costs		8,000		4,000		4,000
<b>17.00</b>	<b>National Professionals</b>						
17.01	National Project Manager	18	30,000	9	15,000	9	15,000
17.02	National Expert – Consultant	5	12,500		12,500		
17.03	WWW Consultant	5	15,000		15,000		
<b>19.00</b>	<b>COMPONENT TOTAL</b>		<b>97,000</b>		<b>63,000</b>		<b>34,000</b>
<b>21.00</b>	<b>Subcontracts</b>						
21.01	GHG Inventory		28,500		28,500		
21.02	GHG abatement anal & strat		16,500		16,500		
21.03	Vuln & Adapt (Agriculture)		8,000		8,000		
21.04	Vuln & Adapt (Human Health)		6,000		6,000		
21.05	Vuln & Adapt (Hydrological Resource)		6,000		6,000		
21.06	Public Awareness Campaign		12,000		6,000		6,000
<b>29.00</b>	<b>COMPONENT TOTAL</b>		<b>77,000</b>		<b>71,000</b>		<b>6,000</b>
<b>30.00</b>	<b>Training</b>						
032-1	Project Initiation Workshop		4,000		4,000		
032-2	GHG Inventory Workshop		2,500		2,500		
032-3	GHG Abatement Analysis Workshop		2,500				2,500
032-4	Vulnerability Assessment & Adaptation Workshop		2,500				2,500
032-5	National Strategy Workshop		4,000				4,000
<b>39.00</b>	<b>COMPONENT TOTAL</b>		<b>15,500</b>		<b>6,500</b>		<b>9,000</b>
<b>40.00</b>	<b>Equipments</b>						
41.00	Equipments (computers and other office supply, networking)		10,000		8,000		2,000
<b>49.00</b>	<b>COMPONENT TOTAL</b>		<b>10,000</b>		<b>8,000</b>		<b>2,000</b>
<b>50.00</b>	<b>Miscellaneous</b>						
51.00	Operational (Internet access)		3,000		1,500		1,500
52.00	Publication Costs		5,000				5,000
53.00	Sundry		5,000		2,500		2,500
54.00	Project Support Services (3%)		6,370		3,185		3,185
<b>59.00</b>	<b>COMPONENT TOTAL</b>		<b>19,370</b>		<b>7,185</b>		<b>12,185</b>

99.00	GRAND TOTAL		218,870		155,685		63,185
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**Indicative Workplan for the Project - Annex II**

**OUTPUT 1. INSTITUTIONAL ARRANGEMENTS**

ACTIVITIES:

- 1.1 Establish the Project Steering Committee (PSC)
- 1.2 Appoint Project Coordinator and Assistant
- 1.3 Prepare Draft Work Plan and TORs
- 1.4 Conduct Project Initiation Workshop
- 1.5 Identify and Employ Short-Term Consultant and WWW Consultant
- 1.6 Conduct Project Initiation Workshop and finalize the work plan

**OUTPUT 2. ACCESS TO INTERNET**

ACTIVITIES:

- 2.1 Assess Needs including Equipment
- 2.2 Conduct Training in the Use of Electronic Networks and Internet
- 2.3 Establish and Maintain Climate Change Home Page
- 2.4 Maintain Home Page and Information Relevant to the Project

**OUTPUT 3. DATA COLLECTION AND MANAGEMENT SYSTEM FOR THE INVENTORY AND FOR THE GHG ABATEMENT ANALYSIS AND NATIONAL ACTION PLAN**

ACTIVITIES:

- 3.1 Identify Data Gaps
- 3.2 Conduct Studies to fill the Data Gaps
- 3.3 Establish a Data Collection and Management System
- 3.4 Prepare Draft Inventory
- 3.5 Circulate Draft Inventory for Comments
- 3.6 Conduct Workshop
- 3.7 Finalize the GHG Inventory

**OUTPUT 4. GHG ABATEMENT ANALYSIS AND DRAFT NATIONAL ACTION PLAN**

ACTIVITIES:

- 4.1 Develop a Baseline GHG Scenario
- 4.2 Evaluate the GHG Abatement Options

- 4.3 Finalize the GHG Abatement Analysis
- 4.4 Draft National Action Plan to Abate the Increase in GHG
- 4.5 Conduct GHG Workshop
- 4.6 Finalize Draft National Plan for Abatement

#### **OUTPUT 5. PUBLIC AWARENESS ACTIVITIES**

- 5.1 Design public awareness programme on climate change for T&T
- 5.2 Implement public awareness programme

#### **OUTPUT 6. A VULNERABILITY AND ADAPTATION ASSESSMENT FOR TRINIDAD AND TOBAGO**

- 6.1 Conduct V&A Studies
- 6.2 Evaluate results of V&A Studies
- 6.3 Integrate with results of CPACC project for draft V&A analysis
- 6.4 Conduct V&A workshop
- 6.5 Finalize elements of V&A analysis to be included in national communication

#### **OUTPUT 7. A COMPREHENSIVE NATIONAL ACTION PLAN FOR RESPONSE MEASURES TO CLIMATE CHANGE.**

##### ACTIVITIES:

- 7.1 Prepare draft National Action Plan for Circulation and Comments
- 7.2 Conduct Workshop
- 7.3 Draft Comprehensive National Action Plan for Circulation and Comments
- 7.4 Finalize the National Action Plan
- 7.5 Draft the T&T First National Communication (FNC) to the COP of UNFCCC
- 7.6 Research Additional Information for the FNC and Circulate for Comments
- 7.7 Finalize the T&T initial national communication to the COP of UNFCCC

**Annex IV**

**Draft Workplan**

**Enabling Trinidad and Tobago to Prepare its Initial National Communications to the UNFCCC**

Activity	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<i>Hiring Project Staff</i>		X	X																
<i>Prepare Workplan</i>		X	X																
<i>Project Workshops</i>			X						X			X			X			X	
<i>Project Steering Ctee</i>	X			X			X			X			X			X			X
<i>National Climate Ctee</i>							X						X						X
<i>National Climate Website</i>			X	X	X	X													
<i>Public Awareness Activities</i>		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>National GHG Inventory</i>					X	X	X	X	X										
<i>GHG Abatement Options</i>								X	X	X	X	X							
<i>Vulnerability and Adaptation</i>								X	X	X	X	X	X	X	X				
<i>National Action Plan</i>																X	X	X	
<i>National Communications</i>																	X	X	X
<i>Monitoring and Evaluation (*)</i>													X						X

(\*) In addition, the Project Steering Committee will be responsible for monitoring the progress of the project

**A BRIEF SUMMARY OF THE GUIDELINES ADOPTED BY THE COP2 FOR THE CONTENT OF THE NATIONAL COMMUNICATIONS FROM NON-ANNEX I COUNTRIES**

The guidelines for the communications of non-annex 1 countries were adopted by the CoP in July 1996. In accordance with the article 12 of the UNFCCC, and following the detailed guidelines presented in the document FCCC/CP/1996/L.12, the communications of the Parties not included in Annex I should include the following elements:

- a) Information on national circumstances
- b) A national inventory of anthropogenic emissions by sources and removals by sinks of the following greenhouse gases: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O), to the extent the Party's capacities permit. Other greenhouse gases may be included at the discretion of the Parties. The guidelines and simplified default methodologies adopted by the IPCC should be used to the extent possible, and the best available data should be provided, being either for the year 1994 or alternatively for the year 1990. The format of providing this information is presented in table II below.
- c) General description of steps taken or envisaged by the Party to implement the Convention including, as appropriate: (i) programmes related to sustainable development, research and systematic observation, education and public awareness, training, etc.; (ii) policy options for adequate monitoring systems and response strategies for climate change impacts on terrestrial and marine ecosystems; (iii) policy frameworks for implementing adaptation measures and response strategies in the context of coastal zone management, disaster preparedness, agriculture, fisheries and forestry, with a view to integrate climate change impact information, as appropriate, into national planning processes; (iv) in the context of undertaking national communications, building of national, regional and/or sub-regional capacity, as appropriate, to integrate climate change concerns in medium and long term planning; and (v) programmes containing measures the Party believes contribute to addressing climate change and its adverse impacts, including the abatement of increase in greenhouse gas emissions and enhancement of removals by sinks.
- d) Any other information that the country considers relevant to the achievement of the objective of the Convention and suitable for inclusion in its communication. This may include: proposals for projects for financing, including specific technologies, materials, equipment, techniques or practices that would be needed to implement such projects, along with, if possible, an estimate of all incremental costs, of the reductions of emissions and increments of removals of greenhouse gases, as well as an estimate of the consequent benefits; material relevant for calculation of global emission trends; constraints and obstacles; etc.



## **VII. 1. PROJECT COORDINATOR**

Reporting to the Chairman of the National Climate Committee/Project Steering Committee (a Senior Official of the Environmental Management Authority) and in consultation with the United Nations Development Programme (UNDP), the Project Coordinator will be responsible for the day to day management, coordination, and supervision of the project. The Project Coordinator will be responsible for the timely and comprehensive delivery on all outputs.

### **DUTIES:**

- To ensure proper and effective management of all project activities;
- To draft terms of reference for the establishment and functioning of the National Climate Committee in consultation with the Committee Chairman;
- To prepare a detailed workplan for the project, integrated with the CPACC project, which will be finalized following endorsement by the Working Group on Climate Change, Sea level Rise and Global Warming
- To organize, supervise and convene the five national workshops under the project;
- To oversee the creation of a National Website on Climate Change for Trinidad and Tobago;
- To organize and manage training activities related to individual project components;
- To liaise closely with the Chairman of the Working Group on Climate Change, Sea level Rise and Global Warming in setting its meetings;
- To prepare periodic project progress reports for presentation to the Working Group on Climate Change, Sea level Rise and Global Warming;
- To work closely with UNDP in the disbursement of funds related to all project activities;
- To ensure the publication, dissemination, and submission of the initial National Communications of the Government of Trinidad and Tobago at the end of the Project;
- To initiate and mobilize resources for follow-up activities once the project is over;

### **QUALIFICATIONS:**

- An advanced degree (MsC or equivalent) in a subject related to climate change and environmental management (e.g - energy, natural resource management, meteorology, environmental management etc ....)
- A minimum of 7-10 years of relevant experience and increasing responsibilities in an environmental field;
- A demonstrated ability in managing projects and supervising project activities;
- Substantial experience in Government and in interdepartmental procedures;
- Experience in international negotiations and processes under the United Nations Framework Convention on Climate Change (UNFCCC) and its subsidiary bodies;

## **II. SHORT-TERM CONSULTANCIES**

### **II.I Administrative Assistant:**

The Administrative Assistant will be a full time position on a contract for 18 months, reporting directly to the Project Coordinator, responsible for all administrative activities related to the effective implementation of the project.

#### **DUTIES:**

- To assist the Project Coordinator and short-term consultant on climate change in the implementation of all project activities;
- To organize the office work and responsible for all filing related to the project;
- To assist the Chairman of Working Group on Climate Change, Sea level Rise and Global Warming in the scheduling and convening of meetings;
- To assist the Project Coordinator in arrangements related to the organization of the five national workshops to be organized under the project;
- To assist the Project Coordinator in liaising with relevant international institutions and organizations such as UNDP/GEF, the World Bank, UNEP, the UNFCCC Secretariat, the GEF Secretariat, the IPCC, the United States Country Studies Programme (USCS), the Organization of American States (OAS), CARICOM, and other as appropriate;
- To assist the Project Coordinator in the preparation of project reports;

#### **QUALIFICATIONS:**

The administrative assistant should have:

- A minimum qualification of a High School Diploma (preferably a Bachelor's degree)
- Computer Skills (familiarity with a variety of word processing, data base, and spread sheet packages)
- Knowledge of Public Service rules and procedures;
- Three to Six years experience in a similar function;

## **II.II Consultant on Climate Change (Short-Term)**

The short-term consultant on climate change will be responsible to the Project Coordinator in providing technical advise and expert assistance in the implementation of project activities. This short-term consultancy will be for a maximum of five months.

### **DUTIES:**

- To draft terms of references for as many as possible of the five national workshops to be organized under the project and participate in the Workshops;
- To assist the Project Coordinator in the management of the various project sub-contracts, as appropriate;
- To assist in the review of data collected and analyzed under the various sub-contracts of the project;
- To identify training needs under the project in consultation with the Project Coordinator and UNDP;
- To assist and participate in meetings of the Working Group on Climate Change, Sea level Rise and Global Warming, as appropriate;
- To assist the Project Coordinator in the establishment of a National Website on Climate Change, as appropriate;
- To provide data and information for the regular updating of the National Website on Climate Change;
- To assist the Project Coordinator in the preparation of the national action plan and initial national communications of Trinidad and Tobago, as appropriate;

### **QUALIFICATIONS:**

A University degree in a field related to energy and/or environment;

- Technical skills related in some way to one of more of the following (preparation of greenhouse gas inventory, ghg abatement options, vulnerability and adaptation to climate change);
- A demonstrated ability in managing projects and delivering results
- Some experience and/or knowledge of the United Nations Framework Convention on Climate Change (UNFCCC);
- A minimum of three to six years of experience in a related area;

### **II.III WorldWide Web Consultant**

The World Web Consultant will be responsible to the Project Coordinator for the establishment of a National Website on Climate Change. The consultant will then be responsible for the updating of this website with information supplied by the Project Coordinator, the members of the Working Group on Climate Change, Sea level Rise and Global Warming, and/or the short-term consultant on climate change.

#### **DUTIES:**

- Assist the Project Coordinator in evaluating computer and networking requirements for the project including access to the World Wide Web including procurement;
- To establish a National Website on Climate Change for Trinidad and Tobago with information provided by the Project Coordinator, short-term consultant on climate change, and the members of the Working Group on Climate Change, Sea level Rise and Global Warming;
- To ensure that this website is linked to other relevant websites internationally, including the website of the United Nations Framework Convention on Climate Change (UNFCCC);
- To cooperate with the CC:INFO/Web initiative of the Climate Change Secretariat in the linking of the website;
- To update the National Website on Climate Change for Trinidad and Tobago on a regular basis;

#### **QUALIFICATIONS:**

- Degree or Certificate in computer programming;
- Experience in web publishing, including programming in HTML and/or other programming languages;
- Previous experience in the creation, promotion, and maintenance of a successful Website;