Project Document

UNDP-GEF-AusAid Enabling Activities Project

Initial National Communication under the UN Framework Convention on Climate Change for Timor-Leste

August 2009

UNITED NATIONS DEVELOPMENT PROGRAMME
PROJECT DOCUMENT

SECTION 1: PROJECT IDENTIFICATION

1.1 **Title of Sub-Programme:** Climate Change – Enabling Activities

1.2 **Title of Project:** **Timor-Leste:** Enabling Activities for the Preparation of Initial National Communication under the UN Framework Convention on Climate Change (UNFCCC)

1.3 **Sub-Project Number:**

1.4 **Geographical Scope:** Timor-Leste

1.5 **Executing Agency** UNDP Timor-Leste

1.6 **Duration:** 36 Months
Commencing: 1st September 2009
Completion: 31st August 2012

1.7 **Cost of Project:** (Expressed in US Dollars)

	YEAR 1	YEAR 2	YEAR 3	Total	%
Cost to GEF Trust Fund	$ 163,250.00	$ 169,750.00	$ 72,000.00	$ 405,000.00	58%
Govt. in-kind contribution	$ 20,000.00	$ 20,000.00	$ 20,000.00	$ 60,000.00	9%
AusAID	$ 36,000.00	$ 99,500.00	$ 30,500.00	$ 166,000.00	24%
UNDP – TRAC	$ 2,500.00	$ 30,500.00	$ 37,000.00	$ 70,000.00	10%
Total Cost	**$221,750.00**	**$319,750.00**	**$159,500.00**	**$701,000.00**	**100%**

1.8 **Project Summary:**

The main objective of this proposal is to enable Timor-Leste to fulfil its commitments and obligations as required by Articles 4.1 and 12.1 of the Convention by preparing and reporting its Initial National Communication (INC) based on the recommended guidelines adopted at COP 8 (decision 17/CP.8) in 2002 and the format recommended by the *Operational Procedures for the Expedited Financing of National Communications from non-Annex I Parties* provided by the GEF in 2003. Through the process, Timor-Leste, as a least-developed country, will build its institutional, scientific, technical, informational and human capacity at all levels as highlighted in Decision 2/CP.7 of the COP 7, so as to facilitate the country's effective implementation of the Convention in a sustainable manner.

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ACRONYMS AND ABBREVIATIONS

^0C	Degree Celsius
ACIAR	Australian Centre for International Agriculture Research
ADB	Asian Development Bank
ADPC	Asian Disaster Preparedness Centre
ALGIS	Agriculture and Land Use Geographic System
AMDAL	Analisis Dampak Lingkungan
AUSAID	Australian Agency for International Development
CBD	Convention on Biological Diversity
CC	Climate Change
CDM	Clean Development Mechanism
COP	Conference of Parties
EIA	Environmental Impact Assessment
ENSO	El Niño-Southern Oscillation
EST_S	Environmentally Sound Technologies
ESTIS	Environmentally Sound Technologies Information System
ETPA	Education, Training and Public Awareness
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
GoTL	The Government of Timor-Leste
HFC_S	Hydrofluorocarbons
IAM	Integrated Assessment Modelling
ICT	Information Communication Technologies
IETC	International Environnemental Technology Centre
IMWG	Inter-Ministerial Working Group
INC	Initial National Communication
IPCC	Intergovernmental Panel on Climate Change
KP	Kyoto Protocol
LDC	Least-Developed Country
LEAP	Long-range Energy Alternatives Planning
MAFF	The Ministry of Agriculture, Forestry and Fisheries

MARKAL	MARKet Allocation
MDGs	Millennium Development Goals
MEAs	Multilateral Environmental Agreements
MNRMEP	Ministry of Natural Resources, Mineral and Energy Policy
NAPA	National Adaptation Programme of Action
NBSAP	National Biodiversity Strategy and Action Plan
NCCC	National Climate Change Committee
NCSA	National Capacity Self Assessment
NCSP	National Communication Support Programme
NDCF	National Directorate for Coffee and Forestry
NDES	National Directorate for Environmental Services
NDIEA	National Directorate for International Environmental Affairs
NDMO	National Disaster Management Office
NDP	National Development Plan
NGO	Non-Governmental Organization
NMVOC	Non-Methane Volatile Organic Compound
NST	National Study Team
PFC_S	Perfluorocarbons
PIR	Project Implementation Revision
PMT	Project Management Team
RDTL	República Democrática de Timor-Leste
RSO	Research and Systematic Observation
SAE	Self-Assessment Exercise
SoSE	Secretariat of State for Environment
TL	Timor-Leste
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNFCCC	United Nations Framework Convention on Climate Change
UNITAR	United Nations Institute for Training and Research
UNIDO	United Nations Industrial Development Organization
UNTAET	United Nations Transitional Administration in East Timor

USAID	United States Agency for International Development
V & A	Vulnerability and Adaptation
WEAP	Water Evaluation and Planning System
WMO	World Meteorological Organization

CHEMICAL FORMULA

CH_4	Methane
CO	Carbon monoxide
CO_2	Carbon dioxide
N_2O	Nitrous Oxide
NO_X	Nitrogen Oxides
SF_6	Sulphur Hexafluoride
SO_2	Sulphur Dioxide

MEASUREMENT UNITS

Unit		Exchange Unit
cm	centimeter	
ha	hectare	$10^4\ m^2$
km	kilometer	$10^3\ m$
km^2	square kilometer	$10^6\ m^2$
m	meter	

Country: Timor-Leste

Project Title: *Timor-Leste: Enabling Activities for the Preparation of Initial National Communication under the UN Framework Convention on Climate Change (UNFCCC)*

GEF Focal Area: Climate Change

Country Eligibility: Timor-Leste acceded to UNFCCC on 10 October 2006

Project Duration and Expected Starting Date: Three years (from September 2009)

GEF Implementing Agency: UNDP

In-country Executing Agency: UNDP Timor-Leste

GEF Operational Focal Point: Mr. Mário Ximenes

UNFCCC Focal Point: Mr. Adão Soares Barbosa

GEF Financing for Project: US$405,000

GEF financing for stocktaking and stakeholder consultation (if any): US$15,000

AusAID: US$166,000

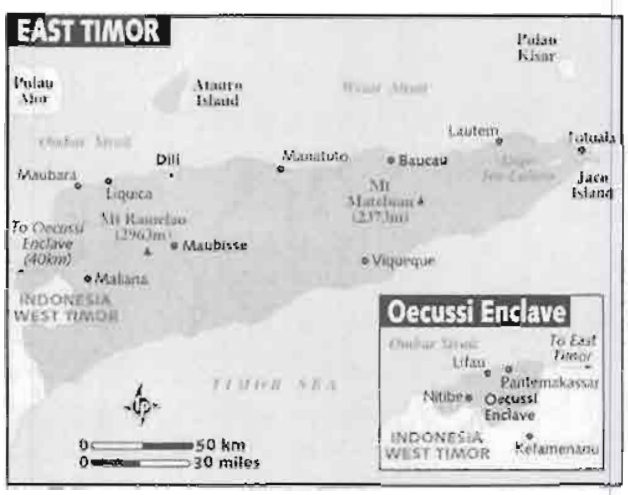
UNDP TRAC funds: US$70,000

Government Counterpart Financing: US$60,000 (in-kind)

Background

Geography

1. Timor-Leste, which became independent on 20 May 2002, is situated at the eastern end of the Lesser Sunda archipelago, between latitudes 8'15 and 10'30 south, and longitudes 124'50 and 127'30 east. It occupies the eastern half of Timor Island and includes an enclave within the Indonesian province of West Timor as well as a handful of small coastal islands. To the north, Timor-Leste is met by the Savu Sea and Straits of Wetar. To the south, the Timor Sea fills the 500-km gap between East Timor and Australia. A core of rugged hills and mountains characterizes the land area of approximately 14,610 km^2. An estimated 44% of the country has slope of 40% that encourages soil erosion with heavy rainfall. The island's numerous rivers and streams are flooding prone (Dolcemascola, 2003). The highest point of the country is the Mount of Tatamailau at 3,000 m above sea level.



2. Timor-Leste has a population of approximately 1.1 million.

Climate

3. The climate in Timor-Leste is influenced by distinct wet and dry seasons, though rainfall patterns vary considerably between locations. There are two distinct rainfall patterns: the Northern Monomodal rainfall pattern produces a 4-6 month wet season beginning from December to March/May, and the Southern Bimodal Rainfall Pattern produces a 7-9 month (a longer period of wet season) with two rainfall peaks starting in December and again in May (Barnett, 2003). According to Keefer (2000) *cit.* Barnett (2003) rainfall in Timor-Leste can be broadly described as being low to very low along the northern coast (<1000 mm/annum), low to moderate throughout the central and elevated areas (1500-2000 mm/annum), and relatively high (>2500 mm/annum) in high altitude areas which are mostly in the west of the country. The rainfall ranges from 500 mm to more than 2000 mm on the southern coast. During the wet season, extremely heavy rainfalls occasionally occur over Timor-Leste at relatively short time intervals (Barnett, 2003), which could result in flooding in some areas, such as in Suai and Liquisa in 2006, and landslides that were associated with a higher level of soil erosion (see NAPA Project Document). The country has also experienced drought problems and cyclone events. These climate-related extreme events, especially floods and droughts, have caused considerable economic losses and social and environmental impacts.

4. The mean temperature on the northern coast zone is 27°C, while the south coast below 100 m has a mean temperature of 24°C, and the mountain districts with elevations above 500 m has a mean temperature 21°C. In addition, the cold zone from 1200 m to the highest point has a main temperature range of 15-21°C (Benevides, 2003). Annual climate is hot with an average temperature of 21°C and 80% humidity.

5. Timor-Leste is influenced by El Niño and La Niña, which have resulted in drought and flood respectively. For example, the heavy rainfalls associated with the current La Niña event have resulted in flooding in

Liquisa since January to March 2008, and many people have been evacuated from the affected areas. How to cope with and adapt to climate-related hazards will be an important component of this project. .

Water Resources

6. Timor-Leste has more than 100 rivers, which are short and fast flowing, taking water efficiently to the lowlands and into the sea, especially during the rainy season. The longest river, the Loes, is only 80 km long, flowing into the sea at Atabae. Given the temporal variation in rainfall, and the low capacity of upland areas to hold water, very few rivers flow all year round. There are only eight permanent river channels that have permanent courses of water throughout the year. These include Loes River in Liquisa district, Laclo River in Manatuto district, Sahe River in Manufahi district, Seisal River in Baucau district, Carau Ulun River in Manufahi and Bebui River in Viqueque district. Timor-Leste has only one large lake called Lake Iralalaru, lying on the Eastern edge of the island covering approximately 22 km^2. The level of this lake has been observed to vary dramatically over past decades, with great seasonal variations. **The impact of climate change on this lake will be a major focus of assessment in this project.** Initial observations suggest that primary forests surrounding the lake are a unique ecosystem, which, until now, has been exceptionally well preserved. However, in recent years, the GoTL plans to produce hydro electricity resources from the lake, with financial and technical assistance from the Government of Norway.

7. Groundwater is an important source of water for domestic use across the island, including upland and urban areas, but little is known about either the quantity or quality of the resource, let alone the extent of changes in these attributes.

8. As in all countries, water performs many economic and social functions. In Timor-Leste, the principal uses of water are for agriculture (both irrigated and rain-fed) and domestic consumption..

Forestry

9. Of the estimated 1.5 million hectares (ha) of land in Timor-Leste, approximately 57% or 854,000 ha are classified as forest. Forests in Timor-Leste are dominated by trees and grasses located in flat lands or in areas of greater than 45° slope. Significant natural forests, however, can still be located in the districts of Manatuto, Viqueque, Lautem, Manufahi, Bobonaro and Covalima.

10. Due to several decades of misuse, the productivity of forest in Timor -Leste has been declining. Marketable size of important tree species like Sandalwood (*Santalum album*) and Ai Teka (*Tectona grandis*) are now gone. However, the situation could be reversible provided that there are appropriate management policies and strategies and supporting laws and regulations. The forest land rehabilitation process may take time and it would require involvement and strong commitment of various stakeholders.

11. The dominant forest cover of Timor–Leste is significantly affected by the availability of rainfall. The northern part of the country that receives an annual rainfall of 500-1,000 mm/year is dominated by Ai Bubor (*Eucalyptus alba*) and Sukaer (*Tamarindus indicus*). In contrast, the eastern and southern parts of the country that receive an annual rainfall of 1,500-2,000 mm/year are dominated by Ai Kiar (*Canarium reidentalia*), Ai Na (*Pterocarpus indicus*), and Ai Saria (*To'ona sureni*). On the other hand, the mountainous areas that receive the highest amount of rainfall of 2,500-3,000 mm/year are dominated by Ai Ru (*Eucalyptus urophylla*) and several species of ferns (Godinho, 2005).

12. In addition to inland forest cover, the country has also significant mangrove areas located within the small bay, estuarine and brackish water lakes. Significant areas of mangroves can be found in the districts of

Covalima, Manufahi, Baucau, Lautem, Dili/Hera and Liquica. Most of the tree species that grow within the mangrove areas belong to Rhizophora species.

Biodiversity

13. The biodiversity in Timor-Leste is poorly documented and poorly studied. However, it has been identified that there are six ecological zones for the habitats of the country's biodiversity. These are:

(i) Marine and coastal zone;
(ii) Arid lowland areas;
(iii) Mountainous areas;
(iv) Highland plains;
(v) Wetlands and lakes (Alves, 2006);

14. Marine and coastal areas provide the habitats for mangroves, coral reefs, sea grass and other unspecified vegetation. However, mangrove and other species of vegetation have been greatly under threat because of the increasing demand for firewood and so far no alternative solutions have been provided. For example, Sandalwood was formerly abundant, but it has been severely over-harvested (Alves, 2006) due to economic needs of the community. The famous wildlife in Timor-Leste is crocodile that inhabits along the rivers and coastal zones. There are 31 species of birds that have been identified in Timor-Leste of which 15 species have been categorized as endangered species (Trainor *et al.*, 2007) due to the impacts of human activities and climate change. For marine biodiversity, however, over 200 species of fish have been identified (MAFF, 2006). It is reported that at least 17 marine biodiversity species have been critically endangered (Alves, 2006). For coral reef biodiversity, however, about 500 species have been found[1].

Agriculture

Crop production

15. The agriculture sector provides direct employment to approximately 80% of the workforce of Timor-Leste (Timor-Leste 2007 Mid-Year Review). This sector comprises of crop and livestock activities, fisheries and forestry. The country has a total area of approximately 600,000 hectares that are suitable for crop and livestock (Planning Commission, 2002). Maize is the most dominant subsistence crop grown apart from cassava, sweet potatoes and beans. Rice and corn are also important staple food for Timor-Leste, but their production declined due to destruction of agriculture equipment in 1999 conflict. Rice production for instance, in 1997 achieved 40,286 ton but in 2001 become 38,340 tons by 2001 (Planning Commission, 2002) and 35,200 tons (Barnett, 2003) by 2002. Maize production had also declined from 106,600 ton (Planning Commission, 2002) in 1997 to 106,200 ton (Barnett, 2003) in 2003. Barnett (2005) stressed that maize is vulnerable to drought and changing rainfall pattern in the country.

16. Coffee is the most important commercial agricultural commodity in Timor-Leste. It provided in 2002 US$4.8 million of the US$6 million in export earnings from all sources (except oil and gas). It is also an important source of seasonal employment. The harvestable area of coffee is approximately 45,000 hectares. An estimated 25,000 farm families derive a substantial portion of their income from coffee while another 15,000 obtain a small portion of their income from the crop. The implication is that around 200,000 people rely on the crop for at least a portion of their livelihood (MAFF, 2004).

[1] Mr. Abilio Fonseca was interviewed on 12 March 2008

Livestock

17. Most households have some livestock to support their subsistence farming (poultry, goats, pigs, water buffalo and Bali cattle). Livestock serves as a store for savings, as a food security reserve and as a source of protein. For a small group of livestock owners, it is a principal source of livelihood. Water buffaloes play an important role in the "rencah" system of land preparation in irrigated rice farming.

18. It seems that the numbers of livestock have generally returned to pre-independence levels with the exception of goats. Goats currently number about 85,000 compared with quoted figures of well over 200,000 in 1997-1998 and in 1972. Timor-Leste is considered to have the potential to support over 400,000 ruminants (cattle, buffalo, goats and sheep), compared with about 350,000 (MAFF, 2004).

Fisheries

19. Timor-Leste's coastal habitat around the country varies from region to region. The coastal areas are characterized by lagoons, fringing coral reefs, sea grass beds and steep cliffs accompanied by adjacent deep-water drop-offs, mangrove stands, beaches and shallow bays. The various coastal habitats influence the abundance and diversity of local fish stocks with each different habitat contributing to the spawning and recruitment process of the inshore and offshore species. The extent and the importance of each of these habitats is not well known for Timor-Leste, although some information can be inferred from similar habitats in near-by regions.

20. The present state of the offshore fisheries is unknown, but includes pelagic and demersal stocks. There is some potential for development in the offshore fishery aimed at export markets but a precautionary approach is needed, as there is little information as to the state of the fish stocks or the habitat that supports the fishery. There is also no information as to the role the coastal habitat plays in the reproduction of some of the offshore species (MAFF, 2004). However, over 200 species of fish have been roughly estimated as they regularly landed around the country (MAFF, 2006). In 2005, a study on identification of marine biodiversity was undertaken and it was found that at least 130 fish species were identified in 15 families in the northern part of Timor-Leste's marine environment (Cook, 2005).

Mineral Resources

21. A few mineral resources have been identified in Timor-Leste. These include marble in Laclo-District of Manatuto; limestone in districts of Baucau and Lautem; gold and manganese in Baucau, especially the sub-district of Vemasse; and sand and gravel in various areas. The country is also blessed with copper and silver, though with unknown quantities. Copper deposits are located in the north and central part of the country such as in Ambeno, Baucau and Viqueque districts (Ministry of Natural Resources and Environment, 2005).

Energy Resources

22. Timor-Leste is almost totally dependent on imported petroleum products and domestically produced firewood to meet its energy requirements. Petroleum products are the single largest import of the country. According to the Trade Data released by the National Statistics Directorate *cited* in Natural Resource and Environment Sector Investment Programme (2005) that Timor-Leste, until 2004, imported some US$36.8 million of petroleum related products. An informal estimate indicates that the power sector in 2005 consumed the equivalent of 450 barrels of oil a day, while the transport sector used the equivalent of 600 barrels per day (Ministry of Natural Resources and Environment, 2005).

23. However, oil and gases are located in the Timor-Sea and other dry land areas, especially in the south coast areas. Bayu-Udan petroleum resource in the Timor-Sea was estimated as about 500 million barrels and gases about 3 trillium cubic feet (Ministry of Natural Resources and Environment, 2005).

Economy

24. Timor-Leste is one of the poorest nations in Asia. Its economy is characterized by sluggish investment of aid funds and oil revenues – inadequate road construction is one example. The GDP per capita is estimated as US$373 in 2007. The GDP composition by sector (2006): Services 55%, agriculture 32%, industry 13%. The major exports are coffee, oil and natural gas. In July 2005, parliament unanimously passed a law creating a petroleum fund to effectively manage and invest oil revenues to ensure these funds are invested in the country's development after exploitation of these resources ends.

25. 85% of the country's population depends on fragile subsistence agriculture for their livelihood. Their interaction with world trade is a handful of beans, quite literally: in 2004 Timor-Leste formally traded $7 million in coffee (out of total, non-oil exports of $8 million). The livelihoods of 40,000 families depend on the fickle global coffee market.

26. While unemployment statistics in a largely agrarian and informal economy are difficult to ascertain, the level of those without paid jobs is between 23% in urban areas and 44 % among youth in Dili. With population growth adding about 14,000 young people each year into a stagnant labour market, economic disenchantment is undoubtedly one of the reasons why social stability is so fragile (see http://us.oneworld.net/guides/timorleste/development).

27. Meanwhile, private investment, including foreign direct investment into Timor-Leste will remain modest. Timor-Leste's economy is uncompetitive -small and with poor infrastructure, high cost, low labor skills, incomplete legal and institutional frameworks. The Government also realizes this and will work with partners to progressively improve the attractiveness of Timor-Leste's economy (ADB, 2006).

Past and ongoing Environmental Activities and Action Plans

28. Since independence in 2002, a National Directorate for Environmental Services (NDES) has been established with a mission to conserve and protect the country's national resources and environment through a sustainable manner (Planning Commission, 2002). The NDES consists of six units: (i) Environmental Awareness and Education Unit; (ii) Environmental Impact Assessment Unit; (iii) Precaution/Law Unit; (iv) Biodiversity and Convention Unit; (v) Laboratory and Pollution Control Unit; and Database Unit. As a new country with limited capacity, this institution has not yet fully realized its entire mandates; however, two environmental laws such as Pollution Control Law and Environmental Impact Assessment Law have been formulated since 2003. However, these laws have not yet been approved by the Council of Ministries.

29. As part of its mandates, since 2003 NDES has been conducting various environmental activities, including the following:

    (a) Implementation of various programmes related to sustainable development, including MEAs, such as the three Rio Conventions (UNFCCC, UNCBD and UNCCD) that the Government has acceded since 2003[2]. In particular, the GEF has provided funding for the following projects: (i) US$475,000 for a

[2] The GoTL has acceded the UNCCD on 20 August 2003, the UNFCCC on 10 October 2006, and the CBD on 8 January 2007.

Sustainable Land Management project that is being implemented by the National Directorate for Forestry since 2007; (ii) US$277,200 for the preparation of the National Biodiversity Strategy Action Plan (NBSAP) that will begin implementation in April 2009; and (iii) US$200,000 for undertaking the *National Capacity Needs Self-Assessment (NCSA) for Global Environmental Management* related to the three Rio Conventions from 2005 to 2007;

(b) Implementation of the 34-month Environmental Governance Support Programme (EGSP) funded by UNDP that aimed to bridge capacity gaps and identify capacity constraints, with a view to removing these constraints and formulates a legal framework in order to address global environmental management requirements. One of its four components was the NCSA funded by the GEF.

(c) Since 2004 and in cooperation with NDMO, organization of training on natural disaster management, including drought, flood, tsunami and fire issues, in various locations;

(d) Training on environmental policy formulation, including drafting pollution control law and EIA in 2003, which was supported by USAID with a total funding of US$100,000;

(e) With the assistance of USAID and AUSAID, formulation of environmental guidelines for industries and companies for compliance in 2003/2004, including pollution control that relates to climate change;

(f) Coordination with other relevant institutions for assessing and monitoring environmental quality;

(g) Conducting Environmental Assessment and Priority Needs in Timor-Leste in 2001 which was funded by Asian Development Bank (ADB);

(h) Publicize the Draft EIA and Pollution Control Laws and raise the public and community awareness on the environment in terms of climate change (annual programme);

30. The Government has adopted Millennium Development Goals (MDGs), which in its seventh goal specifies the need to achieve environmental sustainability.

31. A National Directorate for International Environmental Affairs (NDIEA) was established in January 2008 to facilitate and implement the international environmental agreements adopted by the Government. Climate change programmes and activities have been planned under this new Directorate, including the preparation of the *National Adaptation Programme of Action (NAPA),* which has received US$200,000 from the GEF and completed its inception phase in June 2009, and the preparation of the *Initial National Communication*, among others.

32. The Government has ratified the Kyoto Protocol and is preparing accession to the Vienna Convention on the Protection of the Ozone Layer and Montreal Protocol on Substances that Deplete the Ozone Layer.

33. The Government incorporated sustainable development concept into its National Development Plan (NDP) for the period of 2002-2007 and as part of its preparations for their future strategy plan currently in development, prepared a State of the Nation Report, focusing a chapter on the Environment.

34. Pollution control monitoring, especially used oil disposal from reparation sites in Dili, is a current programme undertaken by NDES with funding from the Government.

35. Planning for formulation of Environmental Law funded by the Government will be undertaken within the period of 2008-2012.

Environmental legislation

36. The National Constitution of Timor-Leste recognizes a sustainable environment and natural resource management. Article 61 of National Constitution states that:

    (a) Everyone has the right to a humane, healthy, and ecologically balanced environment and the duty to protect it and improve it for the benefit of the future generations.
    (b) The State shall recognize the need to preserve and rationalize natural resources.
    (c) The State should promote actions aimed at protecting the environment and safeguarding the sustainable development of the economy.

37. Article 139 (3) of the National Constitution further states that "the exploitation of the natural resources shall preserve the ecological balance and prevent destruction of ecosystems".

38. Although there is no specific law that deals with climate change issues, a few environmental laws and regulations may have implications for climate change. UNTAET (United Nations Transitional Administration in East Timor) Regulation no.1/1999 enables the use of other laws from both Indonesia and UNTAET to address environmental issues in the country while appropriate laws and regulations of TL are being developed.

39. Both UNTAET and Indonesian environmental laws have been used for the protection and conservation of Timor-Leste's environment since 2002. Other environmental and sectoral laws, policies and regulations that have been promulgated or being formulated and that have implications for climate change include the following:

    (a) UNTAET Regulation No.2000/17 prohibits logging and the export of wood products;
    (b) UNTAET Regulation No.200/19 about protected areas;
    (c) The Indonesian Government Regulation No. 28, 1985 on Forest Protection;
    (d) Government Regulation No. 51, 1993 on Environmental Impact Analysis (AMDAL) (Indonesian Regulation that is still being used);
    (e) Environmental Law of Indonesia No.23, 1997 that is still adopted now;
    (f) Pollution Control Law (formulated by NDES in 2003 and still under the discussion at the Council of Ministries);
    (g) Environmental Impact Assessment (formulated by NDES in 2003 and now is still under discussion of the Council of Ministries);
    (h) National Forest Policy (formulated by NDCF-MFF in 2005 and had been approved in 2007);
    (i) National Disaster Risk Management Plan (Plano Nacional de Gestão de Riscos de Desastres) from National Disaster Management office;
    (j) A Policy on Natural Disaster Risk Management formulated by the Secretary of State For Disaster Management had been approved by the Council of Ministries in the beginning of March 2008;
    (k) Plan and Strategy of Environmental Health from the Ministry of Health;
    (l) Decree law of Forest Management is currently being formulated by the National Directorate for Coffee and Forestry (NDCF)[3]. Funding for this law formulation is sourced from FAO (Food and Agriculture Organization);

[3] Mr. Luis Gudinho, Director for reforestation and forest rehabilitation (MAFF) was consulted on 4/03/07

(m) Technical Framework for the Implementation of Forest Management is currently being formulated by the NDCF. Funding for formulating this law is from FAO[4];
(n) Decree Law of Government No. 6/2004 dated 21 April 2004 about Fisheries and Aquaculture management (formulated by National Directorate for Fisheries-MAFF);

Project objectives

40. Article 12.5 of the UNFCCC requires non-Annex 1 Parties to make their initial national communications "*...within three years of the entry into force of the Convention for that Party, or of the availability of financial resources in accordance with Article 4.3. Parties that are least developed countries may make their initial communication at their discretion...*".

41. While the majority non-Annex I Parties prepared and submitted their Initial National Communication (INC) based on the recommended guidelines adopted at COP 2 in 1996 and funded by the Global Environment Facility (GEF), Timor-Leste, as a new country, has just started the process after it has acceded to the UNFCCC in October 2006.

42. The main objective of this proposal is to enable Timor-Leste to fulfil its commitments and obligations as required by Articles 4.1 and 12.1 of the Convention by preparing and reporting its Initial National Communication (INC) based on the recommended *Guidelines for the preparation of National Communications from non-Annex I Parties to the UNFCCC* adopted at COP 8 (decision 17/CP.8) in 2002 and the format recommended by the *Operational Procedures for the Expedited Financing of National Communications from non-Annex I Parties* provided by the GEF in 2003. Through the process, Timor-Leste will gradually build its institutional, scientific, technical, informational and human capacity at all levels as highlighted in Decision 2/CP.7 of the COP 7, so as to facilitate the country's effective implementation of the Convention in a sustainable manner.

Stocktaking and stakeholders consultation workshop

43. Stocktaking and stakeholder consultations had been undertaken by a national consultant since December 2007, with a view to generating essential information that could be used for the preparation of INC project proposal. The report on this self-assessment exercise is given in Annex 1.

44. In order to share the results of the stocktaking and stakeholders consultations as mentioned above, a one-day national workshop attended by 37 relevant stakeholders from different ministries and directorates was held on 8 February 2008. Based on the GEF guidelines for the preparation of national communications from non-Annex I Parties, the existing data and information, as well as the gaps and the challenges (e.g., lack of past activities on climate change; lack of data and capacity; limited financial resources; etc.) in the following thematic areas have been identified in the following key areas:

(a) Greenhouse gases inventory;
(b) Mitigation options;
(c) Adaptation and vulnerability assessment;
(d) Education, training and public awareness;
(e) Transfer technology; and
(f) Research and systemic observation.

[4] Mr. Luis Gudinho, Director for reforestation and forest rehabilitation (MAFF) was consulted on 4/03/07

45. The Report of the above Workshop is given in Annex 2.

INC project proposal development Workshop

46. A second workshop focusing on the development of the INC project proposal was held on 25 March 2008 with the participation of 43 relevant stakeholders from different ministries and directorates. The Workshop was opened by the Vice Minister of Economy and Development, H.E. Rui Manuel Hanjam, while the Secretary of State for Environment, Mr Abilio de Deus de Jesus Lima; and UNDP Senior Assistant Country Director, Mr Pradeep K. Sharma, also gave opening remarks. The international consultant, Dr Pak Sum Low, gave two presentations, the first on *Climate Change: Science, Impacts, Adaptation and Mitigation,* which covered a wide range of scientific, technical, technological and policy issues related to climate change; and the second on the *Guidelines for the Preparation of National Communications from Non-Annex I Parties to the UNFCCC* provides by Decision 17/CP.8 adopted at COP 8 in 2002. Dr Low highlighted the objectives and the scope of the Guidelines, which have now superceded the COP 2 Guidelines (Decision 10/CP.2) adopted in 1996 recommended for the INC. The scope includes GHG inventory; programmes containing measures to facilitate adequate adaptation to climate change; programmes containing measures to mitigate climate change; and other information considered relevant to the achievement of the objective of the Convention, including transfer of technologies (for mitigation and adaptation), research and systematic observation, education, training and public awareness, information and networking, and capacity-building, as well as the constraints and gaps and related financial, technical and capacity needs, and any other relevant information. Mr Adao Soares Barbosa and Mr. Abilio Fonseca, the national experts, gave a presentation on *Climate change in Timor-Leste*. Later, Mr. Adao Soares Barbosa gave another presentation on the results of *Self Assessments*. Each of the thematic group leaders also gave a brief presentation on the existing activities, the proposed activities and associated costs, and the specific needs for undertaking their respective activities in the preparation of the INC. The Report of the above Workshop is given in Annex 3.

Linkages with past & ongoing climate change activities

47. So far climate change activities have been very limited in Timor-Leste. The recently completed NCSA project and the planned NAPA project will provide synergies to this proposed project.

48. As a new Party to the UNFCCC, Timor-Leste has participated in the recent Subsidiary Bodies meetings and the Conference of Parties of the UNFCCC.

Project activities, outputs and indicators

49. This proposal is formulated in accordance with the Guidelines adopted at COP 8 (Decision 17/CP.8) in 2002 and the *GEF Operational Procedures for the Expedited Financing of National Communications from non-Annex I Parties (November 2003)* (GEF Secretariat, 2003). It consists of 11 clearly defined components, each of which is briefly described as follows. Each component first highlights the previous activities (if any), identifies the major gaps, and then proposes new activities to be undertaken within the framework of the COP 8 Guidelines. An estimated cost, as well as expected major outputs and indicators of achievement, based on the results of the stocktaking and stakeholders consultations, as well as the outputs of the two workshops, are also provided in the proposal.

Component 1: Establishment of the Project Management Team and National Study Team

50. A Project Management Team (PMT) and a National Study Team (NST) will be established under the auspices of the SoSE in consultation with other relevant government departments, private sector and

NGOs. A National Climate Change Committee (NCCC) with representation of senior level officials from various ministries, as well as a representative from the academia, private sector and an NGO, and to be chaired by the Secretary of State for Environment, will also be established to provide guidance to the PMT. This NCCC would include members of the Inter-Ministerial Working Group (IMWG)[5].

51. The NST will comprise seven Working Groups dealing with (i) GHG Inventory; (ii) Mitigation Options Analysis; (iii) Vulnerability and Adaptation Assessment; (iv) Development and Transfer of Environmentally Sound Technologies (ESTs); (v) Research and Systematic Observation; (vi) Education, Training and Public Awareness; and (vii) Compilation of National Communication. Some members of the NST may be drawn from the National Thematic Working Group on Climate Change[6] established in 2005 under the NCSA project. Each Working Group is composed of a number of experts drawing from both public and private sectors, including NGOs and academia. The NST will be coordinated by a Project Coordinator, who will be appointed by the SoSE to coordinate the day-to-day project activities. The Project Coordinator, together with the leader of each Working Group, will form the PMT, which will be administratively supported by a secretary, who also plays the role of administrative assistant. The PMT and each Working Group will have adequate and appropriate computer and telecommunication facilities, including Internet, to enable them to efficiently and effectively undertake their activities.

52. The institutional arrangement for the proposed project is further elaborated in paragraphs 159-160 and shown in Figure 2.

Major outputs and success indicator

53. The major outputs of this Component will be the successful establishment of the PMT and NST, which, with appropriate resources, will be fully committed to the successful implementation of the project.

54. The major success indicator will be the successful operation and coordination of the PMT and NST under the SoSE and the NCCC.

Component 2: National GHG Inventory

55. GHG inventory is an important component of national communication, as it forms the basis for mitigation measures. A reliable and accurate GHG inventory would also be very useful for the formulation of any projects for further bilateral and multilateral funding, including those under the Clean Development Mechanism (CDM) of the Kyoto Protocol (KP), so that appropriate baseline for emission reduction can be derived. The key outcome of this component is that of establishing a system for archiving and managing the GHG emission inventory data and information sources, including assumptions used in the calculations.

[5] The memberships of IMWG are: (1) Mr Januario Pereira, Secretary of State for Electricity, Water & Urbanization; (2) Mr Abilio de J. Lima, Secretary of State for Environment; (3) Mr Eduardo de Carvalho, Secretary of State for Fisheries and Aquaculture; (4) Mr Domingos S. Cairo, Secretary of State for Public Works; (5) Mr Jacinto R. G. de Jesus, Secretary of State for Natural Disasters & Social Assistance; (6) Mr Avelino C. da Silva, Secretary of State for Energy Policy ; (7) Ms Madalena Hanjam CS., Vice Minister, Ministry of Health; (8) Mr Alfredo Pires, State Secretary, Natural Resources; (9) Mr Gil da Costa Alves, Minister of Tourism, Trade and Industry; (10) Mr Marcos da Cruz, State Secretary Agriculture and Crops; and (11) Mr Paulo Aziz Belo, Vice Minister, Education and Culture

[6] The members of the thematic working group are: Mr. Carlos Conceição, Head of Pollution Control Unit of the National Directorate for Environmental service (NDES); Mr. Antonio da Costa, Head of Tourism Sub-Division, Ministry of Development; Ms. Tomasia de Sousa, Head of Environmental Health Department, Ministry of Health; Mr. Joao Antalmo, Chief of Forest Production, MAFF; Mr. Terencio Fernandes Moniz, Director of Meteorology and Geophysics, Ministry of Communication; Mr Antonio Delimas, Staff of Haburas Foundation; and Mr Adao Soares Barbosa, National Focal Point on climate change.

Previous activities

56. Timor-Leste has not undertaken any national GHG inventory before.

Gaps

57. The major gaps are:

    (i) No GHG inventory data have been collected before, and hence there is no experience on GHG inventory;

    (ii) There could be lack of data in some source categories (e.g., methane emission from agricultural soils), as well as the lack of country-specific emission factors;

    (iii) Capacity-building in IPCC methodologies for GHG Inventory is very much needed.

Proposed activities

58. A comprehensive national GHG Inventory for direct greenhouse gases carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O) and for indirect greenhouse gases carbon monoxide (CO), nitrogen oxides (NO_x) and non-methane volatile organic compounds (NMVOC), as well as sulphur dioxide (SO_2), will be undertaken for the year 2000 in five source categories "*Energy*" (i.e., fuel combustion, energy industries; transport; commercial, residential; solid fuels), "*Industrial Processes*", "*Agriculture*" (i.e., enteric fermentation from domestic livestock; manure management; rice cultivation, agricultural soils and field burning of agricultural residues), "*Land-Use Changes and Forestry*" (i.e., changes in forest and other woody biomass stock; forest and grassland conversion; abandonment of managed lands) and "*Waste*" (i.e., solid waste disposal on land; wastewater handling; human sewage), using the *IPCC 1996 Revised Guidelines for National Greenhouse Gas*. Emissions of methane and nitrous oxide from international bunkers and aviation will also be estimated for the year 2000. In addition, some attempt will be made to estimate the GHG emissions from slash and burn, especially in rural areas. Both the reference and the sectoral (bottom-up) approach will be used to estimate CO_2 fuel combustion emissions as recommended by the Guidelines.

59. The activity data of hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6), which are controlled by the Kyoto Protocol, will also be collected for the same base year where available.

60. An improved factor of CO_2 emission/sink from/to soils in Land-Use Change and Forestry in the region with similar conditions to Timor-Leste will be assessed and identified, as well as methane emission factor from rice fields and agricultural soils, with a view to reducing the uncertainties and enhancing the data quality in these sources and sinks.

61. This component will aim to improve the GHG inventory by reducing the uncertainties through the use of improved emission factors in the above-mentioned sectors. In particular, it will apply quality assurance and quality control (QA/QC) procedures based on the *IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gases Inventories,* so as to ensure that the results of the inventory will be as reliable and accurate as possible.

62. An electronic database for CO_2, CH_4 and N_2O, NO_x, CO, NMVOC, SO_2, HFCs, PFCs, SF_6 (where available) will be established. An efficient and user-friendly database system will be developed for these

gases and their emission factors for ease of archiving, updating and maintenance. To this end, a manual on the database and its use will be developed.

63. Tables 2 (a) and 2 (b) as provided by the COP 8 Guidelines will be used for reporting the national GHG inventory.

64. This activity will be coordinated with any regional efforts whenever and wherever possible.

65. A review workshop will be held during mid-term and at the end of the proposed activities to assess progress. Policy makers and other stakeholders will be invited to participate in the workshop, so as to enhance their awareness on the importance of GHG inventory, which should be taken into consideration in national development planning. If possible, a long-term programme on the improvement of future GHG inventories will be developed.

66. The above activities will be undertaken by the GHG Inventory Group. Capacity-building for the group members on the application of IPCC methodology, including data collection, analysis and management, will be needed. It may include the participation of the Group members in the subregional, regional and international training workshops, so as to share experiences and lessons learned with other countries. In addition, there is a need for a training workshop on *IPCC Good Practice Guidance and Uncertainty Management in National GHG Inventories.*

67. A total of **US$68,250** is requested to undertake the above proposed activities, including the costs for capacity-building, equipment and other operational expenses over the 3-year project cycle.

Major outputs and success indicators

68. The major outputs of this Component will be:

(i) Establishment of the GHG inventory team;

(ii) Inventory data for CO_2, N_2O, CH_4, CO, NO_x, NMVOC and SO_2, HFCs, PFCs and SF_6 for the year 2000, and these data will be used as a basis for assessment and selection of mitigation options.

(iii) A user-friendly GHG inventory database;

(iv) New factor of CO_2 emission/sink from/to soils in "Land-Use Changes and Forestry" sector; and new methane emission factor from rice fields and agricultural soils, as feasible;

(v) A comprehensive GHG inventory report, including technical annexes that detail the inventory procedures and calculations;

(vi) Further identification of shortcomings and gaps of the IPCC Guidelines in relation to the local conditions, as feasible;

(vii) A description of any original research needed to develop and/or apply new emission factors for specific activities, as feasible;

(viii) Recommendations on areas of targeted research to improve future inventories and to suggest revisions to the existing IPCC GHG inventory methodology, as feasible;

(ix) Strengthened human, scientific, technical and institutional capacity;

(x) The reports of the review workshops, including major papers presented.

69. The major success indicator will be the comprehensive and reliable GHG inventory that can be used for baseline assessment of future CDM projects.

Component 3: Programmes Containing Measures to Facilitate an Adequate Adaptation to Climate Change

Previous activities

70. No previous studies on the vulnerability of Timor-Leste to climate change have been undertaken, and hence no adaptation strategy or action plan has been developed. However, Timor-Leste is expected to start the process for the preparation of NAPA in August 2008.

Gaps

71. The major gaps are:

(i) Lack of assessment of the impacts of climate variability and extreme weather events on key socio-economic sectors;

(ii) Lack of vulnerability assessment, including the integrated and quantitative vulnerability assessment;

(iii) Lack of analysis of various cost-effective adaptation options, including adaptation technologies;

(iv) Lack of national strategy and action plan for adaptation to climate change and its related disaster prevention, preparedness and management;

(v) Lack of local expertise in the field of vulnerability and adaptation (V&A) assessment and integrated assesment (including integrated assessment modelling);

(vi) Capacity-building is urgently needed in V & A assessment, including training in using relevant methodologies.

Proposed activities

72. Relevant global and/or regional circulation models[7] may be used to generate climate change scenarios for the region that includes Timor-Leste. Detailed climate scenarios for Timor-Leste up to the year 2100 based

[7] For example, MAGICC-SCENGEN - a user-friendly interactive software suites that allow users to investigate future climate change and its uncertainties at both the global-mean and regional levels may be used. MAGICC carries through calculations at the global-mean level using the same upwelling-diffusion climate model that has been and is employed by the IPCC. The latest version gives the same global-mean warming and sea-level rise results as published in the IPCC Third Assessment Report (TAR). SCENGEN uses these results, together with results from a set of coupled Atmosphere/Ocean General Circulation Models (AOGCMs) and detailed baseline climatology, to produce spatially-detailed information regarding future changes in temperature and precipitation, changes in their variability, and a range of other statistics.

on "downscaling" of the outputs provided by these models will be developed to assess the vulnerability of the key socio-economic sectors to climate change;

73. A cross-cutting assessment will take place to verify the impacts of climate change in Timor-Leste in a holistic and integrated manner where possible. Existing modelling tools may be used to support this analysis, these will be discussed during the inception phase of the project. Based on these quantitative analyses, appropriate cost-effective adaptation options and measures will be assessed. The impacts of climate change on national development strategies, plans and programmes will be evaluated. Appropriate policy framework will be developed, and options will be identified for response strategies.

74. Two of the possible major impacts of climate change are the shift in seasonal and latitudinal precipitation patterns, and the increase in extreme weather events, both of which could have significant implications for Timor-Leste. In addition, the frequency, persistence and magnitude of El Niño are projected to increase under the climate change scenario. El Niño could induce drought in Timor-Leste. Thus, in collaboration with relevant government directorates and university research groups[8], it is proposed to undertake the following research activities:

    (a) Assessment of the effects of climate variability, as well as the impacts of increased probability of extreme weather events (flood, drought, cyclone) associated with climate change on the key socio-economic sectors;

    (b) Trend analysis on the rainfall patterns in Timor-Leste based on the best available data;

    (c) Assessment of existing water resources, including the underground water resources (e.g., the loss of various springs), and its implications for socio-economic development;

    (d) The trends of ENSO (El Niño and La Niña) and their impacts in Timor-Leste;

    (e) Assessment of the impacts of climate change on oceanographic processes and ocean productivity;

    (f) Assessment of the reef systems and associated resources for better management of reef resources which are the main sources of protein source for Timor-Leste (food security);

    (g) Development and construction of vulnerability maps for key socio-economic sectors and in key areas which are most vulnerable under various climatic scenarios;

    (h) Climate change and sustainable development in Timor-Leste.

75. The above activities will be coordinated with any national disaster preparedness and management activities, as well as with any regional efforts whenever and wherever possible.

76. Based on the above assessment and in coordination with the work developed under the National Adaptation Programme of Action, a draft *National Climate Change Adaptation Strategy* for key socio-economic sectors will be developed. The *Strategy* will include: (i) the review of both analysis of measures and technologies for minimizing damages and for mitigating negative impacts of climate change; (ii) the

[8] Postgraduate scholarships may be awarded to Masters and PhD students to undertake research on certain topics relevant to the proposed activities of this Component. This is one innovative and cost-effective way for capacity-building as well as collection of useful research data.

development of interactive mechanism between key socio-economic sectors, and their sub-sectors, as well as between public and private sectors; (iii) the identification of least-cost adaptation measures; (iv) a climate change-induced disaster prevention, preparedness and management plan; (v) development of special information materials (e.g., maps, diagrams, decision matrices) for policy makers; (vi) the list of the top priority measures recommended for inclusion in sustainable development strategy; (vii) analysis of barriers and necessary activity for integration of adaptation measures in the mid- and long-term national development plans.

77. At the end of the assessment, a workshop will be held to review the results and the draft *National Climate Change Adaptation Strategy*. Policy makers and other stakeholders will be invited to participate in the workshop, so as to enhance their awareness on the various adaptation options, which should be taken into consideration in national development planning.

78. The Vulnerability and Adaptation (V&A) Group will undertake the above tasks. Available methodologies[9] that may better reflect the national situation will be used to undertake the assessment. The application of integrated assessment methodology, such as IAM, which is an important tool for assessing impacts and adaptation options for climate change at the global, regional and national levels, will be explored. This will also include the development of integrated vulnerability indices for key socio-economic sectors where possible.

79. Capacity-building for the V&A Group on the application of various assessment methodologies, including data collection, analysis and management, will be needed. This may include the participation of the V&A Group members in the subregional, regional and international training workshops, so as to share experiences and lessons learned with other countries.

80. At the end of the proposed activities, further gaps, constraints and research needs, as well as related financial, technical, institutional and capacity-building needs will be identified and highlighted, complementing the NAPA and its findings.

81. This component of activities will complement the NAPA project activities. A total of **US$281,000** is requested to undertake the above proposed activities, including the costs for capacity-building, equipment and other operational expenses over the 3-year project cycle. This is very modest in view of the scope and extent of the proposed activities.

Major outputs and success indicators

82. The major outputs of this Component will be:

    (i) Climate change scenarios for Timor-Leste and important baseline data for key socio-economic sectors required for assessing the vulnerability of Timor-Leste to climate change and its adaptation options;

[9] These include the IPCC Technical Guidelines for Assessing Climate Change Impacts and Adaptations (Carter et. al., 1994); the UNEP Handbook on Methods for Climate Change Impact Assessment and Adaptation Strategies (Feenstra et al., 1998); the International Handbook on Vulnerability and Adaptation Assessments (Benioff et al., 1996); Developing Socio-Economic Scenarios for Vulnerability and Adaptation Assessments; Methodologies and Tools to Evaluate Strategies for Adaptation to Climate Change (UNFCCC, 2000; see www.unfccc.int/issues/meth_tools.html); the MAGICC/SCENGEN Climate Scenario Generator: Version 2.4, Technical Manual (Wigley et al., 2000); and the Compendium of Decision Tools to Evaluate Strategies for Adaptation to Climate Change (May, 1999); Adaptation Policy Frameworks for Climate Change - Developing Strategies, Policies and Measures (Edited by Bo Lim *et al.*, 2005; Cambridge University Press) (see http://www.cambridge.org/uk/catalogue/catalogue.asp?isbn=052161760X, and other regional methodologies where appropriate.

(ii) A comprehensive integrated and quantitative V&A assessment for key socio-economic sectors based on established methodologies, including integrated assessment modelling, possible least-cost adaptation options and adaptation technologies;

(iii) Integrated vulnerability indices and maps for key socio-economic sectors;

(iv) Targeted research on climate variability, climate change, tropical storms, drought and precipitation trends and their relation with El Niño;

(v) Policy options for adequate adaptation and response strategies for climate change impacts on key socio-economic sectors, including a draft *National Climate Change Adaptation Strategy*;

(vi) Strengthened and enhanced human, scientific, technical and institutional capacity;

(vii) The review workshop report, including major papers presented.

83. The major success indicator will be the comprehensive V&A assessment that will be used for national sustainable development planning.

Component 4: Programmes Containing Measures to Mitigate Climate Change

Previous activities

84. No analysis of mitigation options has been undertaken for GHG emission reduction by sources and removal by sinks in any socio-economic sectors.

Gaps

85. The major gaps are:

(i) Cost-effective mitigation options assessment for CO_2, N_2O, CH_4, CO, NO_x, NMVC, SO_2, HFCs, PFCs and SF_6 for the year 2000, including appropriate mitigation technologies;

(ii) Lack of policy, legal and economic instruments for mitigation measures,

(iii) Lack of a national strategy for GHG mitigation;

(iv) Lack of technical capacity in quantitative mitigation options analysis, including application of relevant methodologies, and hence capacity-building is very much needed.

Proposed activities

86. The Mitigation Analysis Group will quantitatively assess and evaluate the most realistic, practical and cost-effective mitigation options in Timor-Leste based on the results of the GHG inventory (sources and sinks). Relevant analytical tools and methodologies[10] will be used to undertake the analysis.

[10] These include (a) *Technologies, Policies and Measures for Mitigating Climate Change (IPCC Technical Paper I)*; (b) *Greenhouse Gas Mitigation Assessment: A Guidebook by the U.S. Country Studies Programme*; and (c) *Climate Change 2001: Mitigation* (Contribution of Working Group III to the Third Assessment Report of the IPCC).

87. Appropriate mathematical or computer models may be identified and applied for assessing the various cost-effective mitigation options. These may include macro-economic models, such as MARKAL (MARKet ALlocation) – a partial equilibrium bottom-up energy system technology optimization model, and LEAP (Long-range Energy Alternatives Planning) models[11]. Further improvement or research on the above-mentioned methodologies based on the local conditions and situations may be needed.

88. Afforestation, reforestation and avoided deforestation could be the important mitigation options in Timor-Leste that will need to be assessed.

89. Based on the mitigation options analysis, a draft *National Mitigation Strategy for GHG Emission Reduction* for key socio-economic sectors will be developed. This Strategy will highlight the barriers for adopting cleaner technologies, as well as for promoting cleaner production and consumption. Both legal (e.g., law and legislation) and economic (e.g., tax incentives) instruments may be necessary for promoting mitigation measures. A list of environmentally friendly mitigation technologies, including renewable energy technologies, will be identified and assessed. Appropriate mitigation projects will also be identified for bilateral and multilateral funding, including those under the Clean Development Mechanism (CDM) of the Kyoto Protocol.

90. The private sector in Timor-Leste can play an important role in GHG emission reduction. Mechanisms will be explored to promote the participation of private sector in mitigation measures, perhaps through public-private partnership. For example, in the industrial sector, including hotel industry, eco-practice, such as measures for conservation of water and energy, will be promoted.

91. At the end of the proposed activities, a workshop will be held to review the results and the draft *National Mitigation Strategy for GHG Emission Reduction*. Policy makers and other stakeholders will be invited to participate in the workshop, so as to enhance their awareness on the importance of GHG emission reduction, which should be taken into consideration in national development planning.

92. Capacity-building for the Mitigation Options Analysis Group on the application of the relevant methodologies, including data collection, analysis and management, will be needed. It activities may include the participation of the team members in the subregional, regional and international training workshops, so as to share experiences and lessons learned with other countries. Training workshop on the application of macro-economic models and relevant energy models will be organized with the assistance of both national and, where appropriate, regional or international consultants. In particular, the energy expertise of the UNDP Regional Centre in Bangkok (Dr Nandia Mongia) could be tapped in this area.

93. In addition, capacity-building is needed for the technical group members to identify, assess, develop, monitor and evaluate mitigation projects for bilateral and multilateral funding, including the opportunities that are available under the CDM of the Kyoto Protocol.

94. At the end of the proposed activities, further gaps, constraints and research needs, as well as related financial, technical, institutional and capacity-building needs will be identified and highlighted.

[11] In particular, LEAP 2000 has many features that may make it ideal for least-cost mitigation analysis and hence for GHG mitigation action plan. For example, it is capable of detailed analysis and tracking of all costs associated with a GHG mitigation action plan, including capital, operating and maintenance, and fuel costs, and any indirect costs such as taxes associated with emissions. It can also track the externality co-benefits arising from the avoided emissions of criteria pollutants.

95. A total of **US$44,750** is requested to undertake the proposed activities, including capacity-building, equipment and operational costs for three years. This is very modest in view of the scope and extent of the proposed activities.

Major outputs and success indicators

96. The major outputs of this Component will be:

(i) Important baseline data for key socio-economic sectors required for assessing GHG mitigation options;

(ii) A comprehensive quantitative mitigation options assessment for key socio-economic sectors based on established methodologies, including possible cost-effective mitigation options and environmentally friendly mitigation technologies;

(iii) A draft *National Strategy on GHG Emission Reduction*, including appropriate legal and economic instruments, and public-private partnership for mitigation measures;

(iv) Strengthened human, scientific, technical and institutional capacity;

(v) The review workshop report, including major papers presented.

97. The major success indicator will be the identification and assessment of the most cost-effective mitigation options for the country that can be used for national sustainable development planning.

Component 5: Development and Transfer of Environmentally Sound Technologies (ESTs)

Previous activities

98. No previous assessment on the development and transfer of environmentally sound technologies (ESTs) for both climate change mitigation and adaptation in Timor-Leste has been undertaken.

Gaps

99. The major gaps are:

(i) Lack of needs assessment for the development and transfer of environmentally sound technologies (ESTs) for both climate change mitigation and adaptation, including the identification and removal of barriers to the adoption of these technologies;

(ii) Lack of user-friendly database on ESTs, including endogenous technologies;

(iii) Lack of human and institutional capacity in assessing, evaluating and verifying ESTs;

Proposed activities

100. Agenda 21 defines "*Environmentally sound technologies*" (ESTs) as technologies that "*protect the environment, are less polluting, use all resources in a more sustainable manner, recycle more of their wastes and products, and handle residual wastes in a more acceptable manner than the technologies for*

which they were substitutes". Thus, ESTs encompass technologies that have the potential for significantly improved environmental performance relative to other technologies. ESTs are the focus of the CDM projects under the Kyoto Protocol.

101. The ESTs Group will undertake the following activities:

(a) A comprehensive review, analysis and assessment of the country-specific technological requirements and opportunities of their use in mitigation (e.g., solar, hydro and biogas for community in rural areas) and/or adaptation (e.g., climate adaptive crop variety selection; alley cropping to deal with drought, etc.), transfer (including South-South) and introduction in key socio-economic sectors, as well as their social, economic and environmental impacts;

(b) Assessment of existing endogenous ESTs so that they could be promoted or further developed;

(c) The barriers to the adoption of ESTs in Timor-Leste will be identified, with a view to facilitating their removal. Special attention will be paid on the following barriers:
   (i) Access to and dissemination of information on ESTs;
   (ii) Institutional development for technological change;
   (iii) Enabling environment (including legal and economic instruments);
   (iv) Appropriateness of technology to the local condition, including socio-economic, environmental and cultural consideration;
   (v) Adaptive capacity; and
   (vi) Financial and partnership arrangement.

(d) Establishment of national information clearing house on ESTs through Internet and other appropriate means with regional and global networks;

(e) Mainstreaming ESTs into national science and technology policy;

(f) Promotion of ESTs in both public and private sector, perhaps through public-private partnership.

102. Based on the mitigation and adaptation technologies that have been identified in Components 3 and 4 above, a user-friendly database for ESTs and their potential for development and transfer to Timor-Leste will be established. To this end, it is proposed to adopt the EST information system (ESTIS) that has been developed by UNEP's International Environment Technology Centre (IETC) based in Osaka, Japan (see: *http://www.entis.net*). Capacity-building for the ESTs Group members will be needed to learn how to use this system, and a national system may then be developed based on ESTIS as appropriate. Other regional and international technology databases will be assessed and adopted where appropriate. Indeed, a study of technology information networking with relevant regional and international organizations will be an important activity for this proposed project.

103. It is necessary to build or strengthen the human, scientific, technical and institutional capacity for identifying, assessing, designing, developing, monitoring, evaluating and hosting technological projects, including targeted research projects, for bilateral and multilateral funding. Training workshop on UNEP IETC's ESTIS will be needed with the support of UNEP IETC. The ESTs Group may participate in relevant subregional, regional and international training workshops and conferences to share experiences and lessons learned, as appropriate.

104. At the end of the proposed activities, a workshop will be held to review the results and outcomes, which will serve as important inputs for both the *National Climate Change Adaptation Strategy and the National Strategy for GHG Emission Reduction.* Further gaps, constraints and research needs, as well as related financial, technical, institutional and capacity-building needs will be identified and highlighted in the *Strategy.*

105. A total of **US$12,000** is requested to undertake the proposed activities, including capacity-building and other relevant expenses over the 3-year project cycle. This is very modest indeed in view of the scope and extent of the proposed activities.

Major outputs and success indicators

106. The major outputs of this Component will be:

(i) A comprehensive report on technology needs assessment;

(ii) A database for ESTs based on UNEP IETC's ESTIS;

(iii) A list of emission reduction projects based on ESTs for bilateral and multilateral funding, including those for CDM under the Kyoto Protocol;

(iv) Important inputs for both the *National Climate Change Adaptation Strategy* and *the National Strategy for GHG Emission Reduction*;

(v) Technology information networks and information clearing house established;

(vi) Strengthened human, scientific, technical and institutional capacity;

(vii) The review workshop report, including major papers presented.

107. The major success indicator will be the development and transfer of ESTs in the country.

Component 6: Research and Systematic Observation

Previous activities

108. No previous assessment on the Research and Systematic Observation (RSO) in Timor-Leste has been undertaken.

Gaps

109. The major gaps are:

(i) Lack of meteorological equipment for providing climate-related hazards information;

(ii) Lack of early warning systems for climate-related hazards;

(iii) Lack of analysis of existing hydrological and meteorological data by local expertise

(iv) Lack of local forecasts of ENSO events in Timor-Leste;

(v) Lack of human and institutional capacity in climate data monitoring.

Proposed activities

110. The Research and Systematic Observation (RSO) Group will report on all existing research and systematic observation activities related to climate change undertaken by the National Directorate for Meteorology and Geophysics, as well as by universities and research institutes. The RSO Group members may also undertake some research in collaboration with the Vulnerability and Adaptation Assessment Group where appropriate. In particular, the RSO Group may pay special attention on the following issues:

(a) Improvement in data collection, analysis and management, with emphasis on data quality assurance;

(b) Trend analysis in existing temperature and rainfall data;

(c) Strengthening of existing early warning systems for ENSO, tropical storms, floods and droughts;

(d) Analysis of frequency of extreme climatic events in relation to climate change; development of trends and their analysis, including research of ENSO phenomena impact on climatic fluctuation and frequency of extreme climatic anomalies in the country and the region;

(e) Assessment of the amount of rainfall in Timor-Leste associated with tropical storms using satellite techniques;

(f) Participation in and contribution to the activities and programmes, as appropriate, of regional and global research networks and observing systems;

(g) Climatic information networking with relevant regional and international organizations;

(h) Preparation of a draft *National Strategy for Research and Systematic Observation*, with special focus on ENSO, tropical storms, flood and drought, so as to provide technical and policy guidance for a more sustainable programme. Further gaps and constraints, as well as related financial, technical, institutional and capacity-building needs will be identified and highlighted in this Strategy.

111. The RSO Group will be composed of staff members from the National Directorate for Meteorology and Geophysics and relevant research scientists. The capacity of this Group will be strengthened where necessary, including the participation in sub-regional/regional/international workshops. Special training in data collection, analysis and management on climate monitoring, as well as the establishment of early warning system for ENSO, tropical storms, floods and droughts will be required.

112. At the end of the proposed activities, a workshop will be held to review the results and outcomes, including the draft *National Strategy for Research and Systematic Observation*, with the participation of all stakeholders from both public and private sectors, including NGOs, communities and civil societies.

113. A total of **US$16,000** is requested to undertake the proposed activities, including the costs for capacity-building, equipment and other relevant expenses over the 3-year project cycle. This is very modest in view of the scope and extent of the proposed activities.

Major outputs and success indicators

114. The major outputs of this Component will be:

(i) Improved climatic database;

(ii) Specific research relating to ENSO, tropical storms, floods and droughts, including possible early warning systems for these events;

(iii) Participation in and contribution to the regional programmes;

(iv) Climatic information networks with regional and international organizations;

(v) *Draft National Strategy for Research and Systematic Observation;*

(vi) Strengthened human, scientific, technical and institutional capacity;

(vii) The review workshop report, including major papers presented.

115. The major success indicator will be the gradual development of research and systematic observation on climate change, including early warning systems for climate-related hazards.

Component 7: Education, Training and Public Awareness

Previous activities

116. Article 6 (a) of the UNFCCC requires the Parties to, among others, "*promote and facilitate at the national and, as appropriate, subregional and regional levels, and in accordance with national laws and regulations, and within their respective capacities*": (i) "*The development of implementation of educational and public awareness programmes on climate change and its effects*"; *(ii) "Public access to information on climate change and its effects*"; *(iii) "Public participation in addressing climate change and its effects and developing adequate responses"; and (iv) "Training of scientific, technical and managerial personnel."*

117. Due to the lack of financial resources, so far not much has been done in Timor-Leste to raise the public awareness on climate change issues.

Gaps

118. The major gaps are:

(i) Very low public awareness on environmental regulation and climate change issues due to very limited outreach activities;

(ii) Lack of climate change policy, strategy and programmes, as well as the integration of these into sustainable development;

(iii) Lack of public awareness activities on climate change issues, including climate-induced disaster preparedness; hence there is a need to introduce and strengthen community education on climate change and disaster preparedness;

(iv) General lack of outreach materials (especially in Tetum) on climate change issues for different target groups (general public, community, especially for children and young people; policy makers, and private sector)

(v) Lack of climate change science at the primary, secondary and post-secondary levels and through non-formal public education;

(vi) Lack of financial resources for climate change outreach programmes and activities.

Proposed activities

119. The Education, Training and Public Awareness (ETPA) Group will provide information on activities relating to climate change education, training and public awareness that has been or will be undertaken in the country. In addition, the Group proposes to undertake the following activities:

(a) A national programme on education, training and public awareness on climate change targeted at different groups and audiences, will be developed;

(b) Climate change public awareness surveys will be conducted among the general public at all levels in major urban and community centres, with a view to assessing the extent and the existing level of public awareness on climate change issues, including science and policy, so as to facilitate the development of better strategy for further public awareness programmes and campaigns. NGOs will be invited to assist in this endeavour;

(c) Development of outreach materials (leaflets, booklets, calendars, posters, quarterly newsletters, video, CD) and dissemination of these materials through mass media (TV, radio, newspapers, magazines, Internet, etc.). The information provided by IPCC, WMO, UNEP, UNITAR, UNIDO, FAO and the UNFCCC Secretariat through their web pages would be used as sources of information for outreach activities where appropriate. However, there is a need to translate these materials into Tetum for wider dissemination of information. New local words on specific climate terminology may need to be created. A special video documentary on the vulnerability of Timor-Leste to climate change and its potential impacts would be very useful;

(d) A special 25-30 minutes video documentary on the vulnerability of Timor-Leste to climate change and its potential impacts, as well as possible adaptation options may be produced and shown at national TV stations and educational institutions. The V&A Group may assist in producing this video documentary;

(e) All workshop events of this project will be turned into public awareness events with the presence of the mass media;

(f) Regular seminars on issues related to climate change will be organized for school and university students, as well as for communities in both urban and rural areas;

(g) A user-friendly database that include all activities of the project will be established with the inputs of other Working Groups;

(h) Establishment of a national website for climate change under this project, so as to publicize climate change issues and the results of the project. This will facilitate information dissemination and sharing of experiences and lessons learned among communities. Capacity-building for updating and maintaining this website is essential in order to ensure its sustainability even after the completion of the project;

(i) Strengthening of education on climate change issues by mainstreaming these issues into the different levels (primary, secondary and tertiary) of national curricula of the formal education and non-formal education systems;

(j) Strengthening of the Climate Change Resource Centres based in SoSE and National Directorate for Meteorology and Geophysics, both in terms of resource materials and personnel, and promoting its use by the general public;

(k) Continuous public awareness campaigns in all major urban and community centres, including establishment of billboards to publicize climate change issues;

(l) Encouragement of scientific and policy research relating to climate change at the universities and research institutes through scholarship and/or fellowship programmes;

(m) Establishment of climate change research centres in the universities and research institutes.

120. In order to achieve the above proposed activities, which will be undertaken nationally throughout the project cycle by the ETPA Group, reasonable financial resources will be needed, not only for human and institutional capacity strengthening, but also for the acquisition of certain relevant communication equipment. The EAPA Group members would need to learn all the relevant skills related to public awareness campaigns.

121. At the end of the proposed activities, a workshop will be held to review the results and outcomes. Further constraints and specific financial, technical and institutional needs for capacity-building on public awareness, education and training will be identified and highlighted at the end of the activities.

122. A total of **US$40,500** is requested to undertake the proposed activities, including the costs for capacity-building, outreach materials and other relevant expenses over the 3-year project cycle. This amount is very modest indeed in view of the scope and extent of the proposed activities.

Major outputs and success indicators

123. The major outputs of this Component will be:

(i) Educational and public awareness programmes at national and local levels;

(ii) Outreach materials in Tetum;

(iii) Enhanced scientific and policy research relating to climate change;

(iv) Strengthened curriculum on climate change at formal (primary, secondary and tertiary levels) and non-formal education systems;

(v) Strengthened Climate Change Resource Centres based at SoSE and National Directorate for Meteorology and Geophysics;

(vi) Strengthened human, scientific, technical and institutional capacity;

(vii) The review workshop report, including major papers presented.

124. The major success indicator will be the strengthened national education curricula and enhanced public awareness on climate change issues in the country.

Component 8: Integration of Climate Change Concerns into Sustainable Development Plans and Programmes

Previous activities

125. At the moment, the issue on the integration of climate change concerns into sustainable development plans and programmes has not been addressed. Indeed, the public awareness on climate change issues in the country is low.

Gaps

126. The major gaps are:

(i) Lack of policy measures to integrate climate change concerns into national long-term socio-economic and environmental planning;

(ii) Lack of technical capacity to effectively integrate V&A assessment and mitigation options analysis into sustainable development programmes, and hence to develop national adaptation and mitigation programmes of action.

Proposed activities

127. National planners and policy makers play an important role to ensuring that climate change concerns will be taken into consideration in their planning and decision-making processes. Thus, they must be made aware of the results of the V&A assessment in key socio-economic sectors. To this end, training workshops will be organized for the national and local planners, as well as policy and decision makers from all relevant ministries and government agencies, especially those of the Ministry of National Planning and Economic Development.

128. There is a need to review and analyse existing national programmes on sustainable development, and based on the review and analysis, a national climate change policy, as well as a national strategy to integrate climate change concerns into sustainable development programmes for various key socio-economic sectors, including strengthening the cooperation between the public and private sectors, will be developed.

129. The national climate change policy and strategy will be submitted to the Cabinet for review and consideration, with a view to developing relevant legislation for integrating climate change concerns into the national environmental legislation, as well as into the development planning process.

130. The above activities will be undertaken by the PMT, which will work closely with NCCC and NDES.

131. A total of **US$1,500** is requested to undertake the proposed activities, including capacity-building and other relevant expenses over the 3-year project cycle. This amount is very modest in view of the scope and extent of the proposed activities.

Major outputs and success indicators

132. The major outputs of this Component will be:

(i) Capacity-building programmes that integrate climate change concerns into sustainable development plans and programmes for national planners, policy and decision makers at the national and local levels;

(ii) *Draft National Climate Change Policy* and a *National Strategy* to integrate climate change concerns into sustainable development programmes for various key socio-economic sectors;

(iii) Strengthened human, scientific, technical and institutional capacity;

(iv) The reports of the training workshops that include the papers presented.

133. The major success indicator will be the integration of climate change concerns into the future NDP.

Component 9: Information and Networking

Previous activities

134. Access to and the use of information technology, such as Internet, will be essential to ensure efficient exchange and sharing of information both within and outside the country. Information networking is an important activity in any project cycle.

Gaps

135. The major gaps are:

(i) Inadequate computers and Internet access;
(ii) Difficult and time-consuming (because of slow connection) access to Internet;
(iii) Inadequate` information networking.

Proposed activities

136. The following activities are proposed:

(i) Establishment of Internet facilities for project team members so as to facilitate their information networking;

(ii) Establishment of a project website for information sharing;

(iii) Participation and contribution to subregional and regional information networks on climate change issues, especially those relating to national communications;

(iv) Provision of a list of national experts, including their expertise, who have participated in climate change and other environmental projects;

(v) Assessment of current capacity in information communication technologies (ICT);

(vi) Institutional strengthening, including human resources development, technical and technological capabilities, on the use of information communication technologies for climate change information sharing.

137. The above activities will be coordinated by the Project Coordinator in consultation with the Chair of the NCCC and the PMT members.

138. A total of **US$2,000** is requested to undertake the proposed activities, including capacity-building and other relevant expenses over the 3-year project cycle. This amount is very modest in view of the scope and extent of the proposed activities.

Major outputs and success indicators

139. The major outputs of this Component will be:

(i) Information networks for the project team members, including the establishment of a project website;

(ii) Strengthened human, scientific, technical and institutional capacity in information networking.

140. The major success indicator will be the increased networking among project team members and other experts in the region or other regions, as well as the successful operation and function of the project website.

Component 10: Capacity-Building

Previous activities

141. As revealed in the Self Assessment Exercise, Timor-Leste has very limited human, scientific, technical, technological, organizational, institutional and resources capabilities that are required for the country to fulfil its commitments to the Convention, including the reporting requirements. The following capacity-building needs have been identified during the Self Assessment Exercise:

- There is a need for a continuing training and capacity-building programme that covers all major aspects relating to climate change at educational, scientific, technical, technological (mitigation and adaptation), legal, policy and political levels, both nationally and locally;

- Regular participation in regional and international forums to share information and experiences;

- Training in V&A assessment in the following sectors are: coastal zone (including tidal movement and sea level measurements), marine resources and coral reefs, forestry, agriculture and waste management;

- Capacity-building in identifying, evaluating and verifying appropriate and environmentally sound technologies;

- Capacity-building in assessment of the impacts of both technological and policy measures for mitigation and adaptation;

- Training of legal officers and policy makers;

- Improvement in international negotiation skills, so as to better protect Timor-Leste's special needs and conditions as a least-developed country;

Gaps

142. The major gaps are:

(i) Limited capacity at all levels (human, scientific, technical, technological, organizational, institutional and resources capabilities) relating to climate change issues;

(ii) Limited capacity in climate change negotiation;

(iii) Limited capacity in preparation of climate change projects for bilateral and multilateral funding;

(iv) Limited capacity in assessing the impacts of both technological and policy measures for mitigation and adaptation;

(v) Limited capacity in effective implementation of various multilateral environmental agreements, including the UNFCCC.

Proposed activities

143. Within the constraint of the limited financial resources, this proposal aims to address the specific needs to the extent possible, taking into consideration of decision 2/CP.7, which provides that "*Capacity building is a continuous, progressive and iterative process, the implementation of which should be based on the priorities of developing countries.*"

144. It is expected that a significant portion of the requested funding will be used for capacity-building activities in Components 2 to 9. An integrated approach will be used to harmonize the capacity-building activities between the components.

145. As far as capacity-building is concerned, it would be appropriate to maximize the synergies for implementing the UNFCCC and other global environmental agreements, such as Convention on Biological Diversity (CBD) and United Nations Convention to Combat Desertification (UNCCD). The NCSA project has identified such synergies.

146. In addition, a *Capacity-Building Strategy* that highlights the priorities and options, including the development of South-South capacity-building programmes, will be developed.

147. The above activities will be coordinated by the Project Coordinator in consultation with NCCC and NDES.

148. A total of **US$8,500** is requested to undertake the proposed activities over the 3-year project cycle. This is very modest in view of the e scope and extent of the proposed activities.

Major outputs and success indicators

149. The major outputs of this Component will be:

(i) Strengthened human, scientific, technical and institutional capacity at all levels on major aspects relating to climate change;

(ii) A *Capacity-Building Strategy*.

150. The major success indicator will be the strengthened capacity of the country on climate change issues at all levels.

Component 11: Preparation and presentation of the Initial National Communication (INC)

151. Based on Components 1 to 10 as described above, the INC will be compiled, edited and prepared. This task will be undertaken by a national consultant under the supervision of the Project Coordinator, who will liaise with the PMT and NST for their inputs. It will involve all members of the technical working groups, each of which will prepare the relevant sections/chapters to be included in the INC.

152. The proposed contents of the INC are as follows:

- Executive Summary (not more than 10 pages)
- Chapter1: Introduction
- Chapter 2: National Circumstances
- Chapter 3: GHG Inventory
- Chapter 4: Programmes containing measures to facilitate adequate adaptation to climate change (i.e., V&A Assessment on key socio-economic sectors)
- Chapter 5: Programmes containing measures to mitigate climate change (i.e., mitigation options analysis on key socio-economic sectors)
- Chapter 6: Development and transfer of environmentally sound technologies
- Chapter 7: Research and Systematic Observation
- Chapter 8: Education, Training and Public Awareness
- Chapter 9: Integration of climate change concerns into sustainable development programmes
- Chapter 10: Information and Networking
- Chapter 11: Capacity-Building
- Chapter 12: Other information considered relevant to the achievement of the objective of the Convention
- Chapter 13: Constraints and Gaps, and Related Financial, Technical and Capacity Needs
- Chapter 14: Conclusions and Recommendations
- Annex: List of projects for bilateral and multilateral funding

153. The draft INC will be first reviewed by all members of NST. Based on this review, a revised version will be produced. A workshop, with the participation of all members of NST, PMT SoSE and NCCC, policy and decision makers, private sector, communities, and NGOs, will then be organized to review this revised draft INC before it is finalized, printed and submitted to the UNFCCC Secretariat. The INC will be translated into Tetum for wider dissemination.

154. A total of **US$25,000** is requested to undertake the proposed activities, including translation to Tetum and printing cost.

Major output and success indicator

155. The major output of this Component will be a comprehensive INC based on the COP 8 Guidelines, which will be submitted to the UNFCCC Secretariat after June 2011, perhaps before or at COP 17 in 2011.

156. The major success indicator will be the successful completion and submission of the INC that has the country ownership.

Institutional framework for project implementation

157. Figure 2 provides the institutional framework and project management structure. The project will be executed by UNDP in close partnership with the State Secretariat for Environment and with the support of various government departments (e.g., Ministry of Agriculture; Ministry of Forestry, etc.), as well as private sector, local communities and NGOs. A National Climate Change Committee (NCCC), to be chaired by the Secretary of State for Environment, will be established to provide overall policy guidance and advice, and to guide the implementation of this project. The NCCC will be represented by various ministries and relevant departments, as well as distinguished representatives from the academia, private sector, communities and NGOs, respectively. UNDP will report to the SoSE and NCCC, which, in turn, will ensure that the recommendations of the project are to be integrated into overall national development planning process.

158. A National Project Coordinator will be appointed to coordinate the day-to-day project execution activities. The NST will be supported by the seven technical working groups, which will include experts from public and private sectors, education institutions, local communities and NGOs, as appropriate. The PMT will be supported by a full-time secretary, who will also act as an Administrative Assistant.

159. A total of **US$141,500** is allocated for project management for three years. This includes the salaries for the Project Coordinator and a secretary/administrative assistant as well as operational cost for 3 years.

Technical Support

160. UNDP, as the GEF Implementing Agency for the project, will be consulted on all aspects during the execution of the project. It will be fully informed of all activities and invited to actively participate in all technical and policy workshops related to the project, so that it can provide useful inputs and contributions to ensure the successful implementation of the project.

161. Technical support will also be sought from the National Communication Support Programme (NCSP) based in UNDP/GEF New York where appropriate.

162. Technical support from other UN (e.g., UNEP, UNESCAP, FAO, WMO) and international and regional agencies (e.g., ADB, ADPC), as well as from national, regional or international organizations and consultants will also be sought where and when necessary and as appropriate.

Proposed work schedule

163. Although Article 12.5 of the UNFCCC provides that "*...Parties that are least developed countries may make their initial communication at their discretion...*", Timor-Leste still aims to submit its INC after 3 years, as the fixed amount of the financial resources provided for the INC under the GEF expedited procedure would not allow the country to go beyond the three-year project cycle.

164. It is expected that the proposed 3-year project will commence in July 2008 and end in June 2011. The preliminary plan for allocation of funding for each proposed activity for a 3-year project cycle is shown in Table 4, while the estimated timeline for executing each of the proposed activities within the 3-year project cycle is shown in Table 5. **However, this plan and time schedule are only indicative at this stage, and adjustments will likely be needed after the Project Inception Workshop and during the implementation of the project as new circumstances arise**. The matrix of proposed activities, outputs/outcomes and indicators is shown in Table 6.

Appropriate sequencing

165. The proposed activities will be undertaken in appropriate sequence so as to maximize the synergies between each component of the proposed activities, as well as the efficiency and cost-effectiveness for the implementation throughout the project cycle. Some proposed activities that are not directly related to each other, such as GHG inventory and vulnerability assessment will be undertaken in parallel, as indicated in Table 5.

Good practices in project implementation

166. Good practices in project implementation, such as the efficient use of financial and human resources, the engagement of qualified local and regional consultants, public participation throughout the project cycle, will be adopted where appropriate. Established guidelines will be followed, while established tools and methodologies will be used.

Project financing, budget and justifications

167. As the proposed activities are standard enabling activities required for the preparation of national communication, so the incremental cost for undertaking these activities are also full cost, and hence no incremental cost analysis is required.

168. As a least-developed country "*with low-lying coastal areas*" (Article 4.8 (b));"*with... forested areas and areas liable to forest decay*; (Article 4.8 (c)), "*with areas prone to natural disasters*" (Article 4.8 (d)), "*with areas liable to drought ...*" (Article 4.8 (e); "*with areas with fragile ecosystems, including mountainous ecosystems*" (Article 4.8 (g)); "*whose economies are highly dependent on income generated from the production, processing and export, and/or on consumption of fossil fuels and associated energy-intensive products*" (Article 4.8 (h)), Timor-Leste deserves special consideration under Article 4, paragraph 8 of the Convention, including necessary actions related to funding, insurance and the transfer of technology, to meet its specific needs and concerns arising from the adverse effects of climate change and/or the impact of the implementation of response measures. In addition, Timor-Leste's "*specific needs and special situations*" "

with regard to funding and transfer of technology" need to be taken full account" under Article 4 paragraph 9.

169. Thus, the total requested funding of **US$405,000**[12] reflects the current real needs and concerns of the country in order to fulfilling its commitments for the preparation of its INC. Due to very limited capacity, a significant portion of the funding would be used for human and institutional capacity-building, with a view to building up a solid technical team that would be responsible for preparing future national communications in a sustainable manner.

170. The proposed budget for each proposed component of activities has been realistically estimated by SoSE in consultation with relevant ministries and other stakeholders, and thoroughly reviewed by UNDP before it is fully endorsed by the national GEF Operational Focal Point and the UNFCCC Focal Point.

171. The in-kind contribution of the GoTL, which is estimated to be **US$60,000** over the three-year project cycle, will include some logistical support, basic communication and office facilities, library and information facilities, among others. UNDP will contribute **US$70,000** of TRAC funds and AusAID will contribute **US$166,000**, towards project activities.

Rationale for GEF support

172. This is a standard enabling activities proposal that will facilitate the preparation of the INC of Timor-Leste based on the COP 8 Guidelines as provided by decision 17/CP.8, and hence it will assist Timor-Leste to fulfil its reporting requirements under the UNFCCC. As GEF is the international entity entrusted to operate the financial mechanism for the UNFCCC, the proposed activities are eligible for GEF funding.

Sustainability and public participation

173. The GoTL is fully committed to the implementation of the UNFCCC, and hence the goals and objectives of this project. The strengthening of scientific, technical and institutional capacity of Timor-Leste in various aspects of the proposed activities, as well as the leading role taken by the SoSE to execute the project would enable the country to fulfil its obligations and commitments to the UNFCCC on a sustainable basis. Indeed, the whole project management structure is designed in such a way that full participation by local experts in all aspects of activities are ensured, so that further activities in the future are sustainable.

174. Public participation in certain aspects of the project activities will be encouraged where appropriate and possible. For example, the promotion and development of endogenous technologies in Component 5 would require the participation of local communities and the private sector. The outreach activities to be undertaken in Component 7 would also need the extensive support of the local communities and NGOs in order for the activities to be effective and successful. Local communities, NGOs and the media will be invited to participate in all workshops as appropriate.

175. On the completion of this project, it is expected that further institutional and technical capacity of the country would have been considerably strengthened to enable Timor-Leste to better respond to the challenges and opportunities presented by climate change, as well as to better fulfil its commitments under the UNFCCC.

Issues and risks

[12] Non-Annex 1 Parties were provided up to US$350,000 for their INC based on COP 2 Guidelines under expedited financing plus US$100,000 top-up funding.

Issues

176. In order to successfully implement the project, close coordination and consultation between the PMT, NST, SoSE, NCCC and relevant stakeholders, including policy and decision makers, are essential.

Risks

177. The potential risks which may mask the objectives and goals of the project are:

(a) Longer time period than expected to establish the technical working groups, as highly-skilled professionals who are knowledgeable may not be easy to find due to the unattractiveness to the remuneration that may be offered;

(b) Longer time than expected for the collection and analysis of the data and the preparation of the INC;

(c) Inadequate or lack of consultations between PMT, NST, SoSE, NCCC, and other relevant stakeholders;

(d) Inadequate or lack of a number of approved sectoral development programmes and uncertainties related to national development trends.

(e) Lack of standardized methodology for economic assessment of projects;

(f) Inadequate or lack of involvement of high-level policy and decision makers in the formulation of various strategies;

(g) Inadequate or lack of reliable data for V&A assessment and mitigation options analysis in certain socio-economic sectors,

(h) Lack of young specialists who can participate in the various modelling exercises, such as the LEAP, WEAP and the Integrated Assessment Modelling (IAM), and longer time taken to build capacity in such modelling activities.

178. Necessary action will be undertaken to avoid all the risks mentioned above. A strong project team will be established under the guidance of the SoSE and UNDP so as to minimize the risk for failure.

Monitoring and evaluation

179. UNDP's established guidelines and procedures on reporting, monitoring and evaluation will be followed throughout the project cycle.based on the proposed activities and approved budget. The PMT will prepare annual work plans based on the three-year-overall work plan.

Project reporting

Quarterly and Annual Progress Reports

180. The Project Coordinator will provide a Quarterly Progress Report (QPR) and an Annual Progress Report (APR) to UNDP and copy to all members of NST, SOSE and NCCC. These reports will enable NST, SOSE, NCCC and UNDP to evaluate the progress of the project on a regular basis and identify difficulties and shortcomings at an early stage. They will be reviewed by UNDP for their quality and standard,

comprehensiveness, and conformity to the proposed terms of reference and dates of completion. If possible, these reports may be compiled into electronic newsletters and distributed to all participating institutions. A mid-term review between UNDP and SoSE may be conducted. An independent evaluation by a qualified consultant will be conducted at the end of the project.

Inception Report (IR)

181. 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.

182. The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changes in external conditions that may effect project implementation.

183. The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changes in external conditions that may effect project implementation.

184. When finalized the report will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to this circulation of the IR, the UNDP will review the document.

Technical Reports

185. Technical Reports are detailed documents covering specific areas of analysis or scientific specializations within the overall project. As part of the Inception Report, the PMT will prepare a draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent Annual Progress Reports. Technical Reports may also be prepared by external consultants and should be comprehensive, with specific 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 the local, national, and international levels.

Monitoring

186. The NCCC will meet on a quarterly basis to review project implementation and provide scientific, technical, policy and strategic guidance, so as to avoid any major deviations from the plan and deciding necessary actions to remedy the situations as appropriate. The minutes of these meetings will be shared with all participating institutions.

187. Local consultants will submit regular progress reports to the Project Coordinator, who will share it with PMT, NST, SoSE and NCCC. It must be ensured that all consultants' progress reports, including those for surveys, trainings, workshops, meetings and field activities, must be submitted on a timely basis.

188. The GEF procedures require the Project Implementation Revision (PIR) to be carried out annually. The Project Coordinator will prepare the preliminary project report for revision and, where necessary, specific recommendations will be made for any revisions that may be required during the course of the implementation of the project.

189. The Project Coordinator will monitor the work of the NST based on the project's Annual Work Plan and its indicators, and informed the UNDP of any delays or difficulties faced during implementation so that appropriate support or corrective measures can be undertaken in a timely manner.

Audit arrangement

190. A mid-term review of the project resources will be carried out by an accredited auditor who shall, in addition to the national government requirements, pay particular attention to the UNDP financial regulations, policies and procedures that apply to projects; the project document and work plans, including activities, management arrangements, expected results, monitoring, evaluation and reporting provisions; and the key considerations for management (indicators and outputs), administration and finance. The audit shall not cover expenses incurred by the UNDP.

Project review meetings

191. A detailed schedule of project review meetings will be developed by the PMT, in consultation with project implementation partners and stakeholders representatives and incorporated in the Project Inception Report. Such a schedule will include: (i) tentative time frames for NCCC meetings, including relevant advisory and/or coordination mechanisms; and (ii) project related Monitoring and Evaluation activities.

192. A total of **US$7,500** is allocated for monitoring and evaluation, including the mid-term review and the final evaluation at the end-of the project.

Correspondence between UNDP and SoSE

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UNDP Timor-Leste

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Figure 2. Institutional Framework for Project Management.

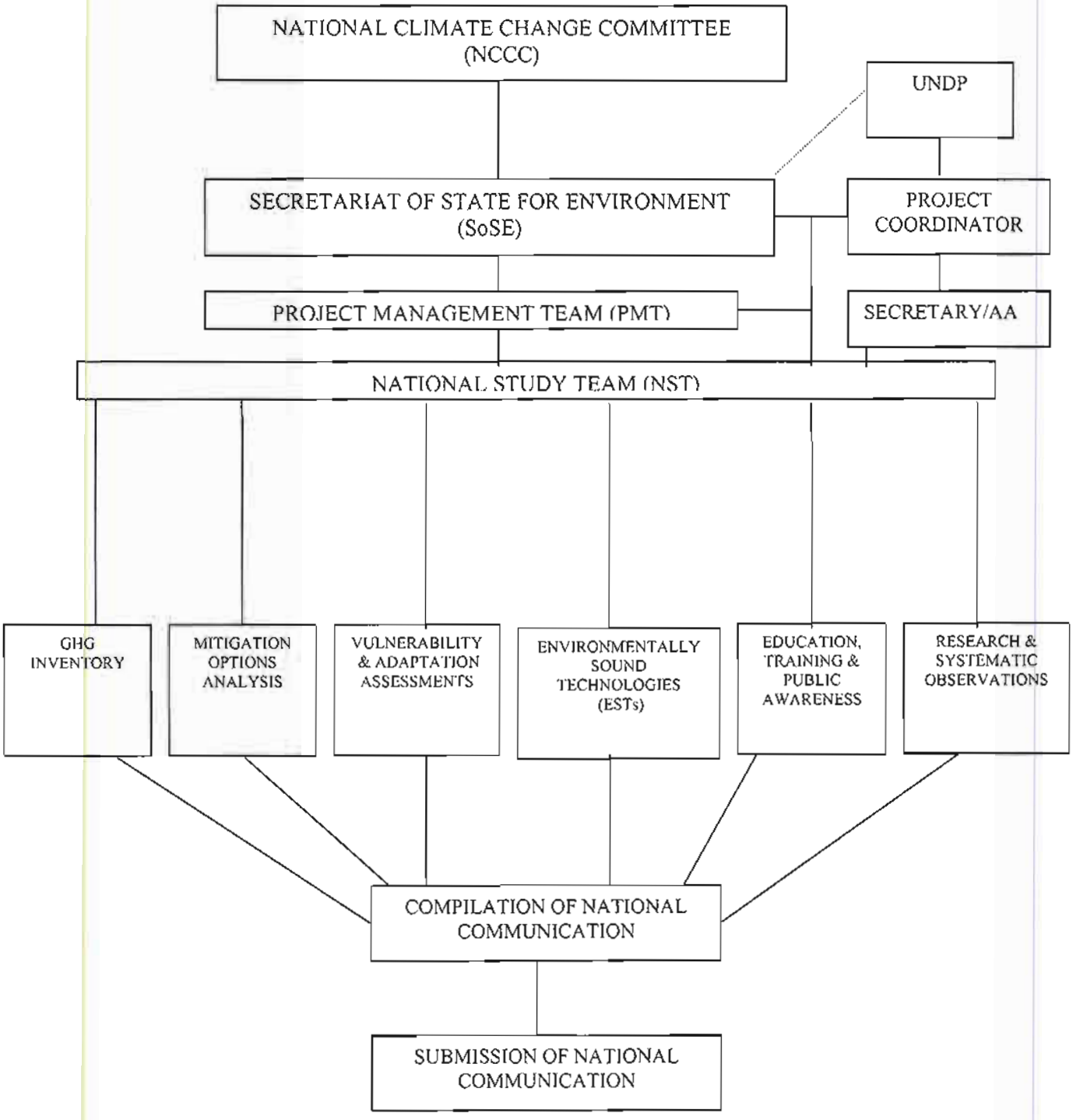

Table 1. Matrix to assist in assessing existing activities financed by the GEF enabling activities and other efforts. The boxes marked with an "x"simply mean that some activities had been undertaken.

Activity in Initial National Communications	NAPAs	NCSAs	Phase II	INCs	Other
II. NATIONAL CIRCUMSTANCES					
Description of development priorities, objectives and circumstances, etc.		X			
Description of existing institutional arrangements for preparing communications continuously					
III. NATIONAL GREENHOUSE GAS INVENTORIES					
Estimation of national GHG Inventories for '90, '94, 2000, depending on circumstances					
Formulation of cost-effective programs to develop country-specific emission factors and activity data					
Description of arrangements to collect and archive data to make inventory preparation a continuous process					
Information on the level of uncertainty associated with the inventory data					
IV. GENERAL DESCRIPTION OF STEPS					
Description of steps taken towards formulating programs containing measures to facilitate adequate adaptation					
Information on vulnerability to the adverse effects of climate change and on adaptation measures being taken					
Information on evaluation of strategies and measures for adapting to climate change					
Policy frameworks, national adaptation programmes, plans and policies for developing and implementing adaptation strategies					
Description of steps taken for formulating programs containing measures to mitigate climate change					
V. OTHER RELEVANT INFORMATION					
Information on integrating climate change considerations into social, economic and environmental policies and actions					
Information on transfer of, and access to ESTs and know-how, development of endogenous capacities; measures to enhance enabling environment for transfer of technologies					
Information on Climate change research and systematic observation					
Information on CC education, training and public awareness					
Capacity Building Activities, Options and Priorities					
Information on efforts to promote information sharing and networking					
VI. CONSTRAINTS AND GAPS; RELATED FINANCIAL, TECHNICAL, AND CAPACITY NEEDS					

Constraints and Gaps and related financial, technical and capacity needs, and activities for overcoming gaps and constraints for national communications, and climate change measures and programs					
Financial resources and technical support for preparing national communications provided by themselves, GEF, Annex II Parties, bilateral or multilateral institutions					
Financial resources and technical support provided by various sources					
List of projects proposed for financing or in preparation for arranging technical/financial support					
Opportunities, barriers for implementation of adaptation measures, including pilot and/or demonstration projects					
Country-specific technology needs and assistance received from developed country Parties and the GEF, and how assistance was utilized					

Table 2 (a). National greenhouse gas inventory of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol[a] and greenhouse gas precursors

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2 emissions (Gg)	CO_2 removals (Gg)	CH_4 (Gg)	N_2O (Gg)	CO (Gg)	NO_x (Gg)	NMVOCs (Gg)	SO_x (Gg)
Total national emissions and removals								
1. Energy								
A. Fuel combustion (sectoral approach)								
1. Energy industries								
2. Manufacturing industries and construction								
3. Transport								
4. Other sectors (Commercial institution)								
5. Other (please specify)								
B. Fugitive emissions from fuels								
1. Solid fuels								
2. Oil and natural gas								
2. Industrial processes								
A. Mineral products								
B. Chemical industry								
C. Metal production								
D. Cement production								
E. Production of halocarbons and sulphur hexafluoride								
F. Consumption of halocarbons and sulphur hexafluoride								
G. Other (please specify)								
3. Solvent and other product use								
4. Agriculture								
A. Enteric fermentation								
B. Manure management								
C. Rice cultivation								
D. Agricultural soils								
E. Prescribed burning of savannahs								
F. Field burning of agricultural residues								
G. Other (please specify)								
5. Land-use change and forestry								
A. Changes in forest and other woody biomass stocks								
B. Forest and grassland conversion								
C. Abandonment of managed lands								
D. CO_2 emissions and removals from soil								
E. Other (please specify)								
6. Waste								
A. Solid waste disposal on land								
B. Waste-water handling								
C. Waste incineration								
D. Other (please specify)								
7. Other (please specify)								
Memo Items								
International bunkers								
Aviation								
Marine								
CO_2 emissions from biomass								

Notes: Shaded cells do not require entries.

[a] The following standard indicators should be used, as appropriate, for emissions by sources and removals by sinks of GHGs: NO (not occurring) for activities or processes that do not occur for a particular gas or source/sink category within a country, NE (not estimated) for existing emissions and removals which have not been estimated, NA (not applicable) for activities in a given source/sink category which do not result in emissions or removals of a specific gas, IE (included elsewhere) for emissions and removals estimated but included elsewhere in the inventory (Parties should indicate where the emissions or removals have been included), C (confidential) for emissions and removals which could lead to the disclosure of confidential information.

[b] Do not provide an estimate of both CO_2 emissions and CO_2 removals. "Net" emissions (emissions - removals) of CO_2 should be estimated and a single number placed in either the CO_2 emissions or CO_2 removals column, as appropriate. Note that for the purposes of reporting, the signs for removals are always (-) and for emissions (+).

Table 2 (b). National greenhouse gas inventory of anthropogenic emissions of HFCs, PFCs and SF_6

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	HFCs[a,b] (Gg)			PFCs[a,b] (Gg)			SF_6[a] (Gg)
	HFC-23	*HFC-134*	*Other (to be added)*	*CF_4*	*C_2F_6*	*Other (to be added)*	
Total national emissions and removals							
1. Energy							
A. Fuel combustion (sectoral approach)							
1. Energy industries							
2. Manufacturing industries and construction							
3. Transport							
4. Other sectors							
5. Other (please specify)							
B. Fugitive emissions from fuels							
1. Solid fuels							
2. Oil and natural gas							
2. Industrial processes							
A. Mineral products							
B. Chemical industry							
C. Metal production							
D. Other production							
E. Production of halocarbons and sulphur hexafluoride							
F. Consumption of halocarbons and sulphur hexafluoride							
G. Other (please specify)							
3. Solvent and other product use							
4. Agriculture							
A. Enteric fermentation							
B. Manure management							
C. Rice cultivation							
D. Agricultural soils							
E. Prescribed burning of savannahs							
F. Field burning of agricultural residues							
G. Other (please specify)							
5. Land-use change and forestry							
A. Changes in forest and other woody biomass stocks							
B. Forest and grassland conversion							
C. Abandonment of managed lands							
D. CO2 emissions and removals from soil							
E. Other (please specify)							
6. Waste							
A. Solid waste disposal on land							
B. Waste-water handling							
C. Waste incineration							
D. Other (please specify)							
7. Other (please specify)							
Memo items							
International bunkers							
Aviation							
Marine							
CO_2 emissions from biomass							

[a] Parties may wish to express HFC, PFC and SF_6 emissions as either potential or actual. Potential emissions should be estimated using the tier 1 approach of the IPCC Guidelines. Actual emissions should be estimated using the tier 2 approach of the IPCC Guidelines.

[b] Parties reporting HFCs and PFCs should provide emission estimates on a gas-by-gas basis, that is, disaggregated estimates by chemical expressed in units of mass (Gg), as indicated in the table (e.g. HFC-23), where information is available. This should be done by inserting a column for each HFC and PFC gas for which emissions do occur in the country. The gases in the column headings are given as examples only. Other gases to be reported in this table include HFC-32, HFC-41, HFC-43-10, HFC-125, HFC-134a, HFC-152a, HFC-43-10mee, HFC-143a, HFC-227ea, HFC-236fa, HFC-245ca, C_3F_8, C_4F_{10}, c-C_4F_8, C_5F_{12}, C_6F_{14}, and any other GHG with high global warming potential not covered in this list.

Table 3. Indicative budget for proposed activities over three years for the preparation of Initial National Communication of Timor-Leste

GEF

Award ID:	00046921							
Award Title:	PIMS 2969 CC EA: INC to UNFCCC							
Project ID	00056122							
Project Title:	PIMS 2969 CC EA: Enabling Activities for the Preparation of Timor-Leste's Initial National Communication to the UNFCCC							
Executing Agency:	UNDP							
OUTPUTS (And Corresponding Indicators)	**RESPONSIBLE PARTY**	**PLANNED BUDGET**						
		Source of Funds	**Budget Code**	**Budget Description**	**Year 1 (US$)**	**Year 2 (US$)**	**Year 3 (US$)**	**Total Budget (US$)**
National Greenhouse Gas Inventories	UNDP	GEF	71200	International Consultants	12,500	10,000	0	22,500
			71600	Travel	6,000	3,000	0	9,000
			71300	Local consultants	15,000	5,000	0	20,000
			72200	Equipment	10,000	0	0	10,000
			72500	Supplies	2,500	1,000	0	3,500
			74500	Miscellaneous Expenses	2,500	750	0	3,250
				Sub-total	**48,500**	**19,750**	**0**	**68,250**
Programmes containing measures to facilitate adequate adaptation to climate change	UNDP	GEF	71200	International Consultants	25,000	12,500	0	37,500
			71600	Travel	6,000	6,000	1,500	13,500
			71300	Local consultants	15,000	30,000	22,500	67,500
			72200	Equipment	5,000	0	0	5,000
			74200	Audio visual and printing production costs	0	2,500	0	2,500
			74500	Miscellaneous Expenses	2,500	2,500	2,000	7,000
				Sub-total	**53,500**	**53,500**	**26,000**	**133,000**

Programmes containing measures to mitigate climate change	UNDP	GEF	71300	Local consultants	11,250	22,500	0	33,750
			71600	Travel	1,500	1,500	0	3,000
			74200	Audiovisual and printing costs	0	3,000	0	3,000
			72200	Equipment	3,000	0	0	3,000
			74500	Miscellaneous Expenses	1,000	1,000	0	2,000
				Sub-total	**16,750**	**28,000**	**0**	**44,750**
Education, Training and Public Awareness	UNDP	GEF	72100	Service Contract - companies		5,000	0	5,000
			71300	Local consultants		7,500	2,500	10,000
			74200	Audiovisual and printing costs		5,000		5,000
			74500	Miscellaneous Expenses		2,500		2,500
				Sub-total	0	**20,000**	**2,500**	**22,500**
Project Management (inception and final project workshop, mid-term review, Project Management team costs)	UNDP	GEF	73100	Rental and Maintenance Premises	1,000	0	1,000	2,000
			71400	Contractual Services – Indiv	33,000	33,000	33,000	99,000
			71200	International Consultants	0	7,500	0	7,500
			71600	Travel	0	4,500	0	4,500
			72200	Equipment	5,000	0	0	5,000
			72500	Supplies	3,000	1,000	2,000	6,000
			74200	Audiovisual and printing costs	0	0	5,000	5,000
			74500	Miscellaneous Expenses	2,500	2,500	2,500	7,500
				Sub-total	**44,500**	**48,500**	**43,500**	**136,500**
				GRAND TOTAL	**163,250**	**169,750**	**72,000**	**405,000**

AUSAID

Award ID:	00046921							
Award Title:	PIMS 2969 CC EA: INC to UNFCCC							
Project ID	00056122							
Project Title:	PIMS 2969 CC EA: Enabling Activities for the Preparation of Timor-Leste's Initial National Communication to the UNFCCC							
Executing Agency:	UNDP							
OUTPUTS (And Corresponding Indicators)	RESPONSIBLE PARTY	PLANNED BUDGET						
		Source of Funds	Budget Code	Budget Description	Year 1 (US$)	Year 2 (US$)	Year 3 (US$)	Total Budget (US$)
Programmes containing measures to facilitate adequate adaptation to climate change	UNDP	AUSAID	71200	International Consultants	12,500	12,500	7,500	32,500
			71600	travel	5,000	25,000	2,000	32,000
			71300	Local consultants	2,000	5,000	1,000	8,000
			72600	Grants	15,000	45,000	10,000	70,000
			74200	Audio visual and printing production costs	1,500	2,500	1,500	5,500
				Sub-total	**36,000**	**90,000**	**22,000**	**148,000**
Education, Training and Public Awareness	UNDP	AUSAID	71300	Local consultants		7,500	2,500	10,000
			74200	Audiovisual and printing costs			5,000	5,000
			74500	Miscellaneous Expenses		2,000	1,000	3,000
				Sub-total	**0**	**9,500**	**8,500**	**18,000**
				GRAND TOTAL	**36,000**	**99,500**	**30,500**	**166,000**

TRAC

Award ID:	00046921
Award Title:	PIMS 2969 CC EA: INC to UNFCCC
Project ID	00056122
Project Title:	PIMS 2969 CC EA: Enabling Activities for the Preparation of Timor-Leste's Initial National Communication to the UNFCCC
Executing Agency:	UNDP

OUTPUTS (And Corresponding Indicators)	RESPONSIBLE PARTY	PLANNED BUDGET						
		Source of Funds	Budget Code	Budget Description	Year 1 (US$)	Year 2 (US$)	Year 3 (US$)	Total Budget (US$)
Development and Transfer of Environmentally Sound Technologies	UNDP	TRAC	71300	Local consultants	0	7,500	2,500	10,000
			74500	Miscellaneous Expenses	0	1,000	1,000	2,000
				Sub-total	**0**	**8,500**	**3,500**	**12,000**
Research and Systematic Observation	UNDP	TRAC	71300	Local consultants		15,000	0	15,000
			74200	Miscellaneous Expenses		1,000		1,000
				Sub-total	**0**	**16,000**	0	**16,000**
Integration of Climate Change Concerns into Sustainable Development Plans and Programmes	UNDP	TRAC	74500	Miscellaneous Expenses	0	1,000	500	1,500
				Sub-total	**0**	**1,000**	**500**	**1,500**
Information and Networking	UNDP	TRAC	74000	Miscellaneous Expenses	0	1,500	500	2,000
				Sub-total	**0**	**1,500**	**500**	**2,000**
Constraints & Gaps, related financial, technical and capacity-building needs	UNDP	TRAC	71300	Travel	2,000	3,000	2,000	7,000
			74000	Miscellaneous Expenses	500	500	500	1,500
				Sub-total	**2,500**	**3,500**	**2,500**	**8,500**
Preparation of the INC report	UNDP	TRAC	71200	International Consultants			12,500	12,500
			71600	Travel			6,000	6,000
			71300	Local consultants			5,000	5,000

			74500	Miscellaneous Expenses			1,500	1,500
				Sub-total	**0**	**0**	**25,000**	**25,000**
Project Management (inception and final project workshop, mid-term review, Project Management team costs)	UNDP	TRAC	74100	Audit costs	0	0	5,000	5,000
				Sub-total	**0**	**0**	**5,000**	**5,000**
				GRAND TOTAL	**2,500**	**30,500**	**37,000**	**70,000**

Summary of Funds

GEF	405,000
AusAID	166,000
UNDP – TRAC	70,000
Government (In-kind)	60,000
Total	**701,000**

Table 5. Indicative workplan for proposed activities over three years for the preparation of Initial National Communication of Timor-Leste

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Proposed activities under the Initial National Communication												
I. Project Inception Workshop (1 day)	X											
II. Project Mid-Term Evaluation (2 weeks)							X					
III. End of Project Review Workshop (1 day)												X
IV. NATIONAL CIRCUMSTANCES												
Output 1.1: Review of national circumstances based on most updated data and draft relevant chapter	X											
V. PROPOSED ACTIVITIES												
Activity 1: Establishment of Institutional Framework												
Activity 1.1: Establishment of PMT and NST and operation	X	X	X	X	X	X	X	X	X	X	X	X
Activity 1.1: Establishment of NCCC and quarterly meetings	X	X	X	X	X	X	X	X	X	X	X	X
Activity 2: National GHG Inventory												
Activity 2.1: Establishment of GHG Inventory and Mitigation Options Analysis team, including regular team meetings (e.g., review of past and existing data)	X	X	X	X	X	X	X	X				
Activity 2.2: GHG inventory data for CO_2, N_2O, CH_4, HFCs, PFCs and SF_6 as well as for CO, NO_x, NMVOC, SO_2 for the year 2000 and a GHG inventory report that includes the technical annexes that detail the inventory procedures and calculations; further identification of shortcomings and gaps of the IPCC Guidelines in relation to the local conditions; a description of any original research needed to develop and/or apply new emission factors for specific activities; recommendations on areas of targeted research to improve future inventories and to suggest revisions to the existing IPCC GHG inventory methodology *(Note: fees for national experts are included)*	X	X	X	X	X	X	X					
Activity 2.3: Development of new emission factors for specific activities; New factor of CO_2 emission/sink from/to soils in "Land-Use Changes and Forestry" sector; and new methane emission factor from rice fields and agricultural soils where possible (Note: this task may be subcontracted to a university research group)	X	X	X	X	X	X	X					
Activity 2.4: A user-friendly GHG inventory database						X	X	X				
Activity 2.5. Training workshop on IPCC Technical guidelines and IPCC Good Practice Guidance application, including uncertainties assessment.	X	X										
Activity 2.6: Preparation of the chapter on *National GHG Inventory* to be included in the INC						X	X	X				
Activity 2.7: Acquisition of computer, printer and consumables	X											
Activity 3: Programmes Containing Measures to Facilitate an Adequate Adaptation to Climate Change												
Activity 3.1: Establishment of V&A team, including regular team meetings (e.g., review of past and existing data)	X	X										
Activity 3.1: Climate change scenarios for Timor-Leste and important baseline data for key socio-economic sectors required for assessing the vulnerability of Timor-Leste to climate change and its adaptation options	X	X	X	X	X							
Activity 3.2: A comprehensive integrated and quantitative V&A assessment for key socio-economic sectors based on established methodologies, including integrated assessment modelling, possible least-cost adaptation options and adaptation technologies	X	X	X	X	X	X	X	X	X	X		
Activity 3.3: Integrated vulnerability indices and maps for key socio-economic sectors									X	X	X	
Activity 3.4: Targeted research on climate variability, climate change, tropical storms, drought and precipitation trends and their relation with El Niño	X	X	X	X	X							
Activity 3.5: Policy options for adequate adaptation and response strategies for										X	X	

climate change impacts on key socio-economic sectors, including a draft *National Climate Change Adaptation Strategy*												
Activity 3.6: Training on modeling and assesments	X	X	X	X								
Activity 3.7: Preparation of the chapter on *Programmes Containing Measures to Facilitate an Adequate Adaptation to Climate Change* to be included in the INC											X	X
Activity 3.8: Acquisition of computer, printer and consumables (x 2)	X											
Activity 4: Programmes Containing Measures to Mitigate Climate Change												
Activity 4.1: Establishment of GHG inventory and Mitigation Options Analysis team, including regular team meetings (e.g., review of past and existing data)	X	X										
Activity 4.2: Important baseline data for key socio-economic sectors required for assessing GHG mitigation options	X	X	X	X	X	X						
Activity 4.3: A comprehensive quantitative mitigation options assessment for key socio-economic sectors based on established methodologies, including possible cost-effective mitigation options and environmentally friendly mitigation technologies *(Note: fees for national experts are included)*						X	X	X				
Activity 4.4: A draft *National Strategy on GHG Emission Reduction*, including appropriate legal and economic instruments, and public-private partnership for mitigation measures							X	X				
Activity 4.5: Training on LEAP and MARKAL models	X	X	X	X	X	X	X	X				
Activity 4.6: Preparation of the chapter on *Programmes Containing Measures to Mitigate Climate Change* to be included in the INC							X	X				
Activity 4.7: Acquisition of computer, printer and consumables	X											
Activity 5: Development and Transfer of Environmentally Sound Technologies												
Activity 5.1. A comprehensive technology needs assessment, including endogenous technologies and report					X	X	X					
Activity 5.2: A database for ESTs based on UNEP IETC's ESTIS, including training on the use of ESTIS. The database will also include a list of emission reduction projects based on ESTs for bilateral and multilateral funding, including those for CDM under the Kyoto Protocol							X	X	X			
Activity 5.3: Establishment of technology information networks and information clearing house										X	X	
Activity 5.4: Preparation of the chapter on *Development and Transfer of Environmentally Sound Technologies* to be included in the INC											X	X
Activity 6: Research and Systematic Observation (Note: This task may be led by Department of Meteorology and Hydrology)												
Activity 6.1: Review of all existing climatic data in Timor-Leste, including rainfall and temperature data, frequency of extreme climatic events in relation to climate change; trends analysis	X	X	X	X								
Activity 6.2: Research on ENSO impact on climatic fluctuation and frequency of extreme climatic anomalies in the region and in Timor-Leste	X	X	X	X								
Activity 6.2: Assessment of the amount of rainfall in Timor-Leste associated with tropical storms using satellite techniques	X	X	X	X								
Activity 6.4: Climatic information networking with relevant regional and international organizations	X	X	X	X	X	X	X	X	X	X	X	X
Activity 6.5: Preparation of a draft *National Strategy for Research and Systematic Observation*, with special focus on ENSO, tropical storms and drought, so as to provide technical and policy guidance for a more sustainable programme. Further gaps and constraints, as well as related financial, technical, institutional and capacity-building needs will be identified and highlighted in this Strategy.										X	X	
Activity 6.6: Strengthening of human, scientific, technical and institutional capacity, including computers, internet and subregional/regional/global workshops and training on research networks and observing systems	X	X	X	X	X	X	X	X	X	X	X	X

Activity 6.7: Preparation of the chapter on *Research and Systematic Observation* to be included in the INC										X	X	
Activity 7: Education, Training and Public Awareness (This task may be undertaken with NGOs)												
Activity 7.1: Development of education, training and public awareness programmes at national, provincial and local levels, including strengthening of curriculum on climate change at formal (primary, secondary and tertiary levels) and non-formal education systems	X	X	X	X								
Activity 7.2: Development of outreach materials in English and in Timor-Leste	X	X	X	X	X	X	X	X	X	X	X	X
Activity 7.3: Household awareness survey	X	X	X	X								
Activity 7.4: Continuous public awareness campaigns in all provinces, including establishment of billboards to publicize climate change issues	X	X	X	X	X	X	X	X	X	X	X	X
Activity 7.5: Strengthening of Climate Change Resource Centres based at DES and Department of Meteorology and Hydrology	X	X	X	X	X	X	X	X	X	X	X	X
Activity 7.6: Preparation of the chapter on *Education, Training and Public Awareness* to be included in the INC										X	X	
Activity 8: Integration of Climate Change Concerns into Sustainable Development Plans and Programmes												
Activity 8.1: Capacity-building programmes that integrate climate change concerns into sustainable development plans and programmes for national planners, policy and decision makers at the national and local levels, including the UNFCCC and Kyoto Protocol negotiation processes			X			X			X			X
Activity 8.2: *Draft National Climate Change Policy* and a *National Strategy* to integrate climate change concerns into sustainable development programmes for various key socio-economic sectors										X	X	X
Activity 8.3: Preparation of the chapter on *Integration of Climate Change Concerns into Sustainable Development Plans and Programmes* to be included in the INC										X	X	
Activity 9: Information and Networking												
Activity 9.1: Assessment and enhancement of information communication technologies	X	X										
Activity 9.2: Establishment of information networks for project team members	X	X										
Activity 9.3: Preparation of the chapter on *Information and Networking*										X	X	
Activity 10: Capacity-building												
Activity 10.1: Capacity-building needs assessment											X	X
Activity 10.2: Preparation of a Capacity-Building Strategy, including options and priorities											X	X
Activity 10.3: Enhancement of international negotiation skills											X	X
Activity 10.4: Preparation of the chapter on *Capacity-Building* to be included in the INC											X	X
Activity 11: Constraints & Gaps, related financial, technical and capacity-building needs												
Activity 11.1: Constraints, gaps and needs, and activities for overcoming gaps etc											X	
Activity 11.2: Financial resources and Technical support provided by various sources											X	
Activity 11.3: Proposed projects for financing or in preparation for arranging support											X	
Activity 11.4: Opportunities, barriers for implementation of adapting measures											X	
Activity 11.5: Country specific technology needs and assistance received											X	
Activity 11.6: Preparation of the chapter on *Constraints & Gaps, related financial, technical and capacity-building needs* to be included in the INC											X	
Activity 12: Preparation and presentation of the INC											X	X

Activity 12.1: Compilation and preparation of INC, including a National consultant for compilation and preparation of INC for 6 months											X	X
Activity 12.2: Translation of INC into Timor-Leste language and printing												X
VI. TECHNICAL ASSISTANCE	X	X	X	X	X	X	X	X	X	X	X	X
VII. PROJECT MANAGEMENT												
VII.1 Project Coordinator	X	X	X	X	X	X	X	X	X	X	X	X
VII.2 Project Secretary/Administrative Assistant	X	X	X	X	X	X	X	X	X	X	X	X
VII.3 Independent Audit							X					X
VII.4 Staff Travel				X				X				X
VII.5 Equipment (2 PCs + laser printer) including consumables	X											
VII.6 Operational expenses (e.g., transportation, communication, etc)	X	X	X	X	X	X	X	X	X	X	X	X
VIII. MONITORING AND EVALUATION	QR	QR	QR	AR	QR	QR	QR M	AR	QR	QR	QR	AR E

Note: QR = Quarterly report; AR = Annual report;

M = Mid-term independent review; E = End of project independent evaluation

Table 6. Matrix of activities, outputs/outcomes and indicators

Proposed activities under the Initial National Communication	Outputs/Outcomes	Indicators
I. Project Inception Workshop (2 days)	Working groups discussion and reports; detailed annual and 3-year work plans; workshop reports	Stakeholders representation; active participation of certain number of stakeholders
II. Project Mid-Term Review Workshop (all working groups) (2 days)	Workshop reports; identification of gaps	Stakeholders representation; active participation of certain number of stakeholders
III. End of Project Review Workshop (all working groups) (2 days)	Workshop reports; further identification of gaps and needs	Stakeholders representation; active participation of certain number of stakeholders
IV. NATIONAL CIRCUMSTANCES		
Output 1.1: Review of national circumstances based on most updated data and draft relevant chapter	Chapter on National Circumstances	Input for INC
V. PROPOSED ACTIVITIES		
Activity 1: Establishment of Institutional Framework		
Activity 1.1: Establishment of PMT and NST	PMT and NST established	PMT and NST operational
Activity 1.1: Establishment of NCCC and quarterly meetings	NCCC established	NCCC operational
Activity 2: National GHG Inventory		
Activity 2.1: Establishment of GHG Inventory and Mitigation Options Analysis team, including regular team meetings (e.g., review of past and existing data)	GHG group established	GHG group operational
Activity 2.2: GHG inventory data for CO_2, N_2O, CH_4, HFCs, PFCs and SF_6 as well as for CO, NO_x, NMVOC, SO_2 for the year 2000 and a GHG inventory report that includes the technical annexes that detail the inventory procedures and calculations; further identification of shortcomings and gaps of the IPCC Guidelines in relation to the local conditions; a description of any original research needed to develop and/or apply new emission factors for specific activities; recommendations on areas of targeted research to improve future inventories and to suggest revisions to the existing IPCC GHG inventory methodology *(Note: fees for national experts are included)*	GHG inventory report	Input for chapter
Activity 2.3: Development of new emission factors for specific activities; New factor of CO_2 emission/sink from/to soils in "Land-Use Changes and Forestry" sector; and new methane emission factor from rice fields and agricultural soils where possible (Note: this task may be subcontracted to a university research group)	New emission factors developed	Input for GHG inventory
Activity 2.4: A user-friendly GHG inventory database	User-friendly GHG database established	Database useful for project team and other relevant stakeholders

Activity 2.5. Training workshop on IPCC Technical guidelines and IPCC Good Practice Guidance application, including uncertainties assessment.	Training workshop completed	GHG group members familiar with IPCC methodologies and Good Practice Guidance
Activity 2.6: Strengthening of human, scientific, technical and institutional capacity, including computers, internet and regional/subregional workshops and training	Human, scientific, technical and institutional capacity strengthened	Enhancement of human, scientific, technical and institutional capacity, including certain number of project team members trained
Activity 2.7: Preparation of the chapter on *National GHG Inventory* to be included in the INC	Chapter on *National GHG Inventory* prepared	Input for INC
Activity 2.8: Acquisition of computer, printer and consumables	Computer, printer and consumables acquired	The work of GHG group facilitated
Activity 3: Programmes Containing Measures to Facilitate an Adequate Adaptation to Climate Change		
Activity 3.1: Establishment of V&A team, including regular team meetings (e.g., review of past and existing data)	V&A team established	V&A team operational
Activity 3.1: Climate change scenarios for Timor-Leste and important baseline data for key socio-economic sectors (i.e., water resources (including underground water); agriculture and food security; land use change and forestry; industry; coastal zone and reefs; fisheries; ecosystems (biodiversity, vegetation, wetlands); human health; transportation; public health; and public infrastructure, among others) required for assessing the vulnerability of Timor-Leste to climate change and its adaptation options	Climate change scenarios generated	Basis for V&A assessment
Activity 3.2: A comprehensive integrated and quantitative V&A assessment for key socio-economic sectors based on established methodologies, including integrated assessment modelling, possible least-cost adaptation options and adaptation technologies *(Note: fees for national experts are included)*	Integrated V & A Assessment completed	Input for chapter; results used for policy development and national planning and development
Activity 3.3: Integrated vulnerability indices and maps for key socio-economic sectors	Integrated vulnerability indices and maps developed	Input for chapter; results used for policy development and national planning and development
Activity 3.4: Targeted research on climate variability, climate change, tropical storms, drought and precipitation trends and their relation with El Niño	Target research completed	Input for chapter; results used for policy development and national planning and development
Activity 3.5: Policy options for adequate adaptation and response strategies for climate change impacts on key socio-economic sectors, including a draft *National Climate Change Adaptation Strategy*	Adaptation policy options developed	Policy options used for national planning and development
Activity 3.6. Training on GCMs, including MAGICC-SCENGEN and "downscaling" methodologies	Training undertaken and completed	V&A group members familiar with relevant models and methodologies
Activity 3.7: Training on WEAP model, Integrated Assessment (IA) and IA Modelling	Training undertaken and completed	V&A group members familiar with WEAP model, IA and IAM
Activity 3.8: Strengthening of human, scientific, technical and institutional capacity, including computers, internet and regional/subregional workshops and training	Human, scientific, technical and institutional capacity strengthened	Enhancement of human, scientific, technical and institutional capacity, including certain number of project team members trained
Activity 3.9: Preparation of the chapter on *Programmes Containing Measures to Facilitate an Adequate Adaptation to Climate Change* to be included in the INC	Relevant chapter prepared	Input for INC
Activity 3.10: Acquisition of computer, printer and consumables (x 2)	Computer, printer and consumables acquired	The work of V&A group facilitated
Activity 4: Programmes Containing Measures to Mitigate Climate Change		
Activity 4.1: Establishment of GHG inventory and Mitigation Options Analysis	Mitigation Options Group	Mitigation Options Group

team, including regular team meetings (e.g., review of past and existing data)	established	operational
Activity 4.2: Important baseline data for key socio-economic sectors required for assessing GHG mitigation options	Baseline data collected	Input for mitigation options analysis
Activity 4.3: A comprehensive quantitative mitigation options assessment for key socio-economic sectors based on established methodologies, including possible cost-effective mitigation options and environmentally friendly mitigation technologies *(Note: fees for national experts are included)*	Cost-effective mitigation options assessed	Input for policy options
Activity 4.4: A draft *National Strategy on GHG Emission Reduction*, including appropriate legal and economic instruments, and public-private partnership for mitigation measures	*National Strategy on GHG Emission Reduction developed*	Input for national planning and development
Activity 4.5: Training on LEAP and MARKAL models	Mitigation Options Analysis Group members trained	Mitigation Options Analysis Group members familiar with relevant models
Activity 4.6: Strengthening of human, scientific, technical and institutional capacity, including computers, internet and regional/subregional workshops and training	Human, scientific, technical and institutional capacity strengthened	Enhancement of human, scientific, technical and institutional capacity, including certain number of project team members trained
Activity 4.7: Preparation of the chapter on *Programmes Containing Measures to Mitigate Climate Change* to be included in the INC	Relevant chapter	Input for INC
Activity 4.8: Acquisition of computer, printer and consumables	Computer, printer and consumables acquired	The work of Mitigation Options Analysis Group facilitated
Activity 5: Development and Transfer of Environmentally Sound Technologies		
Activity 5.1. A comprehensive technology needs assessment, including endogenous technologies and report	Technology needs assessment completed	Input for chapter
Activity 5.2: A database for ESTs based on UNEP IETC's ESTIS, including training on the use of ESTIS. The database will also include a list of emission reduction projects based on ESTs for bilateral and multilateral funding, including those for CDM under the Kyoto Protocol	ESTIS database established	Database useful for project team and other relevant stakeholders
Activity 5.3: Establishment of Technology information networks and information clearing house	Technology information networks and information clearing house established	The work of project team facilitated
Activity 5.4: Preparation of the chapter on *Development and Transfer of Environmentally Sound Technologies* to be included in the INC	Relevant chapter prepared	Input for INC
Activity 6: Research and Systematic Observation (Note: This task may be led by Department of Meteorology and Hydrology)		
Activity 6.1: Review of all existing climatic data in Timor-Leste, including rainfall and temperature data, frequency of extreme climatic events in relation to climate change; trends analysis	Literature review report completed	Input for chapter
Activity 6.2: Research on ENSO impact on climatic fluctuation and frequency of extreme climatic anomalies in the region and in Timor-Leste	Research on ENSO completed	Input for national planning and development
Activity 6.2: Assessment of the amount of rainfall in Timor-Leste associated with tropical storms using satellite techniques	Rainfall from tropical storms assessed	Input for chapter
Activity 6.4: Climatic information networking with relevant regional and international organizations	Climatic information networking established	The work of RSO group facilitated
Activity 6.5: Preparation of a draft *National Strategy for Research and Systematic Observation*, with special focus on ENSO, tropical storms and drought, so as to provide technical and policy guidance for a more sustainable programme. Further gaps and constraints, as well as related financial, technical, institutional and capacity-building needs will be identified and highlighted in this Strategy.	Drafi *National Strategy for Research and Systematic Observation* prepared	Input for national planning and development
Activity 6.6: Strengthening of human, scientific, technical and institutional capacity, including computers, internet and subregional/regional/global workshops and training on research networks and observing systems	Human, scientific, technical and institutional capacity strengthened	Enhancement of human, scientific, technical and institutional capacity, including certain number of project team members

		trained
Activity 6.7: Preparation of the chapter on *Research and Systematic Observation* to be included in the INC	Chapter on RSO prepared	Input for INC
Activity 6.8: Acquisition of computer, printer and consumables	Computer, printer and consumables acquired	The work of RSO Group facilitated
Activity 7: Education, Training and Public Awareness (This task may be undertaken with NGOs)		
Activity 7.1: Development of education, training and public awareness programmes at national, provincial and local levels, including strengthening of curriculum on climate change at formal (primary, secondary and tertiary levels) and non-formal education systems	Education, training and public awareness programmes developed	Comprehensiveness of relevant programmes
Activity 7.2: Development of outreach materials in English and in Timor-Leste	Outreach materials developed	Extent of information dissemination
Activity 7.3: Household awareness survey	Household awareness survey undertaken	Input for chapter
Activity 7.4: Continuous public awareness campaigns in all provinces, including establishment of billboards to publicize climate change issues	Public awareness campaigns undertaken	Extent of enhancement of public awareness on climate change issues
Activity 7.5: Strengthening of Climate Change Resource Centres based at DES and Department of Meteorology and Hydrology	Resource Centres strengthened	Frequent use of the Resource Centres by stakeholders
Activity 7.6: Preparation of the chapter on *Education, Training and Public Awareness* to be included in the INC	Chapter on *Education, Training and Public Awareness* completed	Input for INC
Activity 8: Integration of Climate Change Concerns into Sustainable Development Plans and Programmes		
Activity 8.1: Capacity-building programmes that integrate climate change concerns into sustainable development plans and programmes for national planners, policy and decision makers at the national and local levels, including the UNFCCC and Kyoto Protocol negotiation processes	Capacity-building programmes for policy and decision makers on climate change issues developed	Extent of enhancement of capacity of policy and decision makers on climate change issues, including number of people trained
Activity 8.2: *Draft National Climate Change Policy* and a *National Strategy* to integrate climate change concerns into sustainable development programmes for various key socio-economic sectors	*Draft National Climate Change Policy* and a *National Strategy* developed	Input for national planning and development
Activity 8.3: Preparation of the chapter on *Integration of Climate Change Concerns into Sustainable Development Plans and Programmes* to be included in the INC	Relevant chapter prepared	Input for INC
Activity 9: Information and Networking		
Activity 9.1: Assessment and enhancement of information communication technologies (ICT)	ICT assessed and enhanced	The work of project team facilitated
Activity 9.2: Establishment of information networks for project team members	Information networks established	The work of project team facilitated
Activity 9.3: Preparation of the chapter on *Information and Networking*	Relevant chapter prepared	Input for INC
Activity 10: Capacity-building		
Activity 10.1: Capacity-building needs assessment	Capacity-building needs assessed	Input for national planning and development
Activity 10.2: Preparation of a *Capacity-Building Strategy*, including options and priorities	*Capacity-Building Strategy* prepared	Input for national planning and development
Activity 10.3: Enhancement of international negotiation skills	International negotiation skills enhanced	Active participation of negotiators in COP process
Activity 10.4: Preparation of the chapter on *Capacity-Building* to be included in the INC	Chapter on *Capacity-Building* prepared	Input for INC
Activity 11: Constraints & Gaps, related financial, technical and capacity-building needs		

Activity 11.1: Constraints, gaps and needs, and activities for overcoming gaps etc	Relevant constraints, gaps and needs identified	Input for INC and for bilateral and multilateral technical assistance
Activity 11.2: Financial resources and Technical support provided by various sources	Relevant constraints, gaps and needs identified	Input for INC and for bilateral and multilateral technical assistance
Activity 11.3: Proposed projects for financing or in preparation for arranging support	Relevant constraints, gaps and needs identified	Input for INC and for bilateral and multilateral technical assistance
Activity 11.4: Opportunities, barriers for implementation of adapting measures	Relevant constraints, gaps and needs identified	Input for INC and for bilateral and multilateral technical assistance
Activity 11.5: Country specific technology needs and assistance received	Relevant constraints, gaps and needs identified	Input for INC and for bilateral and multilateral technical assistance
Activity 11.6: Preparation of the chapter on *Constraints & Gaps, related financial, technical and capacity-building needs* to be included in the INC	Relevant chapter prepared	Input for INC and for bilateral and multilateral technical assistance
Activity 12: Preparation and presentation of the INC		
Activity 12.1: Compilation and preparation of INC, including a National consultant for compilation and preparation of INC for 6 months	INC prepared	INC submitted to UNFCCC Secretariat
Activity 12.2: Translation of INC into Timor-Leste language and printing	Translation of INC in Timor-Leste completed and printed	Dissemination of INC (in Timor-Leste) to stakeholders
VI. TECHNICAL ASSISTANCE	Consultants recruited	Project team capacity developed
VII. PROJECT MANAGEMENT		
VII.1 Project Coordinator (PC)	PC recruited	PC functioning
VII.2 Project Secretary/Administrative Assistant (AA)	Secretary/AA recruited	Secretary/AA functioning
VII.3. Independent Audit	Audit report	Good practice certified
VII.4 Staff Travel	Mission report	Results from missions implemented
VIII. MONITORING AND EVALUATION	Quarterly and annual reports; Mid-term and end of project evaluations conducted	Project implementation met all objectives and goals

Annex 1: Report on the Stocktaking and Stakeholders Consultation Workshop

Annex 2: Report of the Workshop for the Preparation of Initial National Communication

Annex 3: Terms of References for National Climate Change Committee

Annex 4: Terms of References for National Project Coordinator

Annex 5: Terms of References for Secretary/Administration Assistant

Annex 6: Terms of References for National Consultant for Compiling INC

Annex 7: Terms of References for Thematic Working Groups

Annex 8: Generic terms of reference for scoping and implementing the V&A component of the National Communication

Generic terms of reference for scoping and implementing 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 very 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;
    b. 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 advice 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

13. 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.

SIGNATURE PAGE

Country: TIMOR-LESTE

UNDAF Outcome(s)/Indicator(s):
Outcome 2 - By 2013, vulnerable groups experience a significant improvement in sustainable livelihoods, poverty reduction and disaster risk management within an overarching crisis prevention and recovery context.

Expected Outcome(s)/Indicator (s):
Outcome 2.2 Local communities, national and district authorities practice more effective environmental, natural resource and disaster risk management

Expected Output(s)/Indicator(s):
CPAP Outcome 6 - Improved capacities of government institutions & communities for environmental resource management, & implementation of adaptation strategies.

CPAP Output 6.1 - By 2013, Enhanced capacity of relevant government institutions and established mechanisms to mainstream environment in development planning, fulfill obligations and achieve the set goals of international environmental conventions.

Implementing partner: UNDP

Other Partners: State Secretariat for Environment, Ministry of Agriculture and Fisheries, State Secretariat for Energy Policy, State Secretariat for Disaster Management

Programme Period: 2009-2012
Programme Component: Energy and Environment for Sustainable Development
Project Title: Enabling Activities for the Preparation of Timor-Leste's Initial National Communication to the UNFCCC
PIMS No. 2969
Project / Award ID: 00056122 / 00046921
Project Duration: 3 years
Management Arrangement: DEX

Total budget:	**US$ 701,000**
GEF:	US$ 405,000
Allocated resources:	
Co-financing	
• AusAID	US$ 166,000
• UNDP TRAC	US$ 70,000
• Government (in kind)	US$ 60,000
Total Co-financing	**US$ 296,000**

Agreed by (Government): _____

Agreed by (UNDP): _____

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