



UNDP Project Document

Government of Peru

United Nations Development Program

Second National Communication of Peru to the UNFCCC

This project aims at enabling Peru to prepare its Second National Communication (SNC) to the United Nations Convention on Climate Change (UNFCCC), according to decision 17/CP.8 and Peru's National Strategy on Climate Change, which is the framework for all the policies and activities performed in Peru regarding Climate Change. The geographical areas of influence and addressed topics considered by the project reflect the diverse situation and different issues encountered throughout the country, and allow the allocation of resources in the most effective manner. The project will apply bottom up and participatory approaches for those sectors and geographic areas prioritized, generating Climate Change Scenarios and Vulnerability and Adaptation Assessments as an input for the Adaptation Strategy. The development of a GHG inventory management system is considered, in order to make possible the periodical reporting of comparable and verifiable GHG emission inventories. Focus is given to the LULUCF sector, due to its influence in the balance of GHG emissions in the country. Mitigation Options for prioritized sectors will be identified as inputs for a mitigation strategy proposal. Moreover, the development of a detailed analysis of constraints and gaps related to technical and capacity needs of the climate information system and research agenda in Peru is considered to be an important part of the project. Indicators will be also developed to assess the impact of the National Communication process in national policy, sectoral planning, and in the development agenda (sustainable development and poverty reduction policies and the Millennium Development Goals). Finally this project is expected to build on the existing information and strengthen the ongoing capacity building activities, to support Peru's strategy to incorporate climate change in its development and poverty reduction processes.

SIGNATURE PAGE

Country: PERU

UNDAF Outcome(s)/Indicator(s):
(Link to UNDAF outcome. If no UNDAF, leave blank)

Strengthening of technical capacities for programing, implementation, evaluation and monitoring, reporting fund utilization to government, national, regional and local organizations.

Expected Outcome(s)/Indicator (s):
(CP outcomes linked t the SRF/MYFF goal and service line)

National framework and capacities for dealing with climate change and adaptation issues strengthened.

Expected Output(s)/Indicator(s):
(CP outcomes linked to the SRF/MYFF goal and service line)

Second National Communication on Climate Change produced.

Implementing partner:
(designated institution/Executing agency)

National Environmental Council – CONAM

Other Partners:

N/A

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○ Donor GEF	1,800,000
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Acronyms

APF	Adaptation Policy Framework
BCR	Central Reserve Bank
CC	Climate Change
CDM	Clean Development Mechanism
CP	Country Program
CEPLAN	National Strategic Planning Center
CENTRO	Center for Gender Studies
CEPAL	Latin American Commission for Economic Development
CO ₂	Carbon Dioxide
CONAM	National Environmental Council
CONCYTEC	National Council on Science and Technology
CONFIEP	Business Confederation of Peru
FONDEBOSQUE	Forestry Development Fund
FSP	Full Size Project
CCA	Common Country Assessment
GCF	Global Cooperation Framework
GCM	Global Circulation Models
GDP	Gross domestic product
GEF	Global Environment Facility
GHG	Green House Gases
GIS	Geographic Information System
IGP	Geophysical Institute of Peru
IMARPE	The Peruvian Sea Institute
INAGGA	Andean Institute of Glaciology and Environment
INRENA	National Institute of Natural Resources
I&M	Inventories and Mitigation
FEN	El Niño Phenomena
FNC	First National Communication
FONAM	National Fund for the Environment
LULUCF	Land use, land use change and forestry
M&E	Monitoring and Evaluation
MDGs	Millennium Development Goals
MEF	Economics and Finance Ministry
MINEM	Ministry of Energy and Mines
MMF	Multi-annual macroeconomic framework
MTC	Ministry of Transport and Telecommunications
NC	National Communication
NCCC	National Commission on Climate Change

NES	National Environmental System
NSCC	National Strategy on Climate Change
NCOS	National Climate Observation System
NGO	Non-governmental organization
NSS	National Strategy Study
OAS	Organization of American States
PCM	Presidency of the Ministers' Council
PESEM	Sectoral Strategic Multi-annual Plan
PROCLIM	National Program on Climate Change and Air Quality
PRODUCE	Production Ministry
PROFONANPE	Fund for Protected Natural Areas
QA/QC	Quality Assurance/Quality Control
SENAMHI	National Meteorological Hydrological Service
SNC	Second National Communication
SNIP	Public Investment National System
SRES	Special Reduction Emission Scenario
UEP	Implementation Unit of PROCLIM
UN	United Nations
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
V&A	Vulnerability and Adaptation

SECTION I: Second National Communication of Peru to the UNFCCC. A Narrative Description

PART I: Situation Analysis

Context and global significance

1. Peru is located in the Western Coast of South America (Pacific Fire Rim). This nation spans an area of 1,285,215 square km, being the third-largest country in South America after Brazil and Argentina, and is among the world's 20 largest nations. It is located at a seismic zone and consequently is affected by earthquakes. The territory of Peru has a highly uneven morphology, which greatly determines its highly diversified climate. The Andes range, which runs longitudinally from South to north of the country, is one of its most significant landmarks. It does not only originate three geographical regions known as coast (Chala), highlands (Andes) and rainforest (Amazonian), but also divides the air masses from the Pacific and the Atlantic Oceans hence acting as a barrier against the circulation of winds between the Pacific and Atlantic basins. This feature is one of the most important factors to climate heterogeneity making Peru's climate extremely diverse and complex to monitor and model.
2. Peru holds the origin of the Great Amazon River and co-hosts with Brazil its path to the Atlantic Basin. This great river produces approximately 20 percent of all the fresh water coming from all the world's rivers. Approximately 75% of Peruvian territory is located within the Amazonian Watershed. The country has the second largest Amazonian forest after Brazil, the longest Andean mountain chains, 71%¹ of the world tropical glaciers and, 84 of the 117 life zones identified worldwide. Peru is one of the 16 Mega diverse Countries, holds its way over the sea up to 200 miles from the Peruvian coast and has territorial rights to an area of 60 million hectares in the Antarctic, which enrich its biodiversity and territorial assets.
3. Peru has approximately 28 million inhabitants mostly settled along the arid coastline. Peru is a nation of mixed ethnic origins. Throughout its history, Peru has been the meeting ground for different nations and cultures. The Spaniards joined the indigenous population 500 years ago. As a result of this encounter, and later enriched by the migration of African blacks, Asians and Europeans, Peruvian man emerged as the representative of a nation whose rich ethnic mix is one of its leading characteristics.
4. To date Peru's GDP (measured in purchasing power parity) reaches US\$155.3 billion², mostly fed by the revenues associated to its strong mining industry and high prices for copper, gold and zinc. However, this dependence on minerals and metals makes its economy very sensitive to fluctuations in world prices. This fact and a lack of infrastructure decelerate the general growth of trade and investment. After several years of volatility, the Peruvian economy grew by an average 4 percent per year during the period 2002-2004, with a stable exchange rate and low inflation. Risk premiums on Peruvian bonds on secondary markets reached historically low levels in late 2004, reflecting investor optimism regarding the government's prudent fiscal policies and openness to trade and investment. Despite the strong macroeconomic performance, unemployment and poverty have stayed persistently high.
5. Hydroelectric energy is the main source of electricity of Peru, representing 85%³ of the total electricity produced in the country. However, the recent development of its natural gas fields is generating

¹ INAGGA, High Mountain Hydro Resources Vulnerability Study, 1998.

² Central Reserve Bank, Economic Report, June 2005.

³ 2004 Energy Balance, Ministry of Energy and Mines.

new energy options, revealing a need to guide and support the energy policy-making process to ensure its long-term sustainability.

6. Peru has been ranked third⁴ on the list of countries with more risks to climate hazards, after Bangladesh and Honduras. According to preliminary national climate change scenarios (PROCLIM, 2004), future climate change would exacerbate this condition. Statistics from the National Institute of Civil Defense (in charge of managing hazard impacts and disaster responses) show that emergencies due to natural hazards have increased about 650% in the last 10 years (1995-2004), and at least 72% of these hazards were climate related.

7. The annual loss of nearly 261,000 hectares of forests (National Institute of Natural Resources, INRENA, 2002), fueled by ever increasing migrant agriculture activities, is the major emission source for LULUCF activities totaling 55% of the Net CO₂ emissions and 73%⁵ of the total CO₂ national GHG emissions. Furthermore, the Andean glaciers melting pose significant risks to food, energy, water security and sustainability of the Pacific basin cities. Basic studies demonstrate that in the last 30 years, Peru has lost 22% of its glaciers' surface, representing the loss of at least 7,000 million cubic meters of water.

8. Although there is no direct quotation to climate change into the CP/GFC/CCA UNDAF situation analysis, there are lines devoted to energy, environment and capacity strengthening areas. A quick look into GEF supported activities within Peru showed an important allocation of GEF support into a number of projects focused on specific topics, such as technical assistance to obtain bio-fuels and non-wood cellulose fiber, rural electrification projects, among others, with scope and benefits at the local level. To date, GEF activities in Peru have not included an overall assessment of policy options to mitigate GHG emissions from the energy and industry sides, nor the strategies for their possible implementation within Peru's institutional context or the integration of climate change adaptation and mitigation factors into the sustainable development agenda of Peru. This proposal is structured in response to this gap, in line with the Strategic Priority of "Enabling Activities in support of National Communications for Non Annex I Parties of the Convention" within the GEF Operational Strategy for "Climate Change" and in line with the UNFCCC guidelines for Non Annex I National Communications (Decision 17/CP. 8).

Threats, root causes and barriers analysis

9. Although Peru has gathered and generated information and has been developing capacities to deal with climate change through its First National Communication to the UNFCCC and the PROCLIM⁶ program, there is still insufficient information for decision making, coupled with lack of awareness of the issues, and inadequate institutional capacities to deal with climate change and comply with its UNFCCC commitments. Much progress has been achieved in terms of raising the technical capabilities of government institutions regarding diverse thematic areas of climate change. However, Peru still requires considerable effort to integrate and mature institutional know-how and responses to climate change. These facts prompt us to propose an enabling activity for the Second National Communication, which by building on the existing information and strengthening the ongoing capacity building activities, will be essential to the Peruvian strategy to incorporate climate change into the development and poverty reduction processes.

⁴Brooks, N. and Adger, N. 2003. Country level risk from outcome data on climate – related disasters: an exploration of the Emergency Events Database. Tyndall Centre, University of East Anglia.

⁵First National Communication to the United Nations Framework Convention on Climate Change, 2001.

⁶PROCLIM, National Program on Climate Change and air quality, Jan. 2003-Sep 2005.

10. The fact that 52% of the population lives under the poverty line increases the country's vulnerability conditions. Especially for poor populations, climate change threatens to exacerbate this situation.

11. On the road to development, all Peruvians do not go at the same pace. Strong differences in education, socioeconomic level, gender and geographical location jeopardize the synchronized progress of the whole society. In a society where the principle of "first come, first served" applies, the socioeconomic development gap along Peru can be enhanced through the differentiated exposure to climate change, therefore leaving the poor even further behind. Different socioeconomic groups and geographical areas of Peru have different exposure to Climate Change. This may prevent the timely achievement of, at least, two of the Millennium Development Goals: "Eradicate extreme poverty and hunger" and "Ensure environmental sustainability".

12. The ongoing development of Peru and the upcoming logging activities to be boosted by the Inter Oceanic Peru-Brazil highways menace any effort to mitigate much of Peru's emissions. More than 55% of Peruvian GHG of the net CO₂ emissions comes from LULUCF sector. This share could rise sharply if there is no GHG inventory management system in place to foresee or monitor the impact, in terms of emissions, of policies and programs implemented along the Peruvian Amazonian (the second largest after Brazil).

13. In light of the recent availability of natural gas resources, Peru has focused most of its recent efforts to materialize the Camisea Natural Gas project. While it is of common interest to count on a reliable energy supply, most political and government settings are not aware of the need to diversify Peruvian energy options including those representing climate friendly alternatives such as hydro, wind, geothermal and biomass sources. In this context, the threat to Peru is to base energy supply and usage decisions solely on short-term criteria without considering the long-term implications. This is exacerbated by the lack of long-term policies and planning capacities within the industry, transport, and forestry and, to a lesser degree, the energy sector.

14. The only agenda for most sectors across Peru is of a short-term nature. This poses the menace of allocating resources to issues or targets that in principle could be useful for the day-to-day needs of Peru, but do not necessarily reflect the real needs of Peru in terms of Climate Change. Much of the knowledge generated regarding the Peruvian response to Climate Change can be easily overlooked in the future. This know how is at risk of being excluded from the policy making decision process not only in Peru but in other countries where some of the Peruvian practices can shed light on how to proceed regarding Climate Change. The natural venue to disseminate this knowledge and information is the SNC.

15. A detailed analysis of the rationale behind the identification of needs and the definition of outcomes and outputs as well as the rationale for prioritizing addressed problems is presented in Section IV. For further information relating the barrier analysis undertaken for the SNC project proposal, see the barrier analysis matrix on Section IV Part V

Institutional, sector and policy context

16. Unlike other countries where environmental management is centralized through a Ministry, Peru uses a coordinated and participative environmental management system where the National Authority and Policy Maker role is assumed by the National Environmental Council (CONAM). CONAM started to operate in October 1995 as a subsidiary institution of the Presidency of the Ministers' Cabinet. Since then, this agency has designed and is currently implementing the National System for Environmental Management as a framework to harmonize sectoral policies with the national environmental policy, and to promote the coordination of the inter sectoral management and the decentralization of environmental

management capabilities. Through this framework, CONAM coordinates the formulation, development and implementation of national environmental policies, leaving the execution and day-to-day operations to the Ministries, regions and local governments. This framework fosters an approach to Climate Change based on a participative and socially owned process. Peru signed the UNFCCC on June 12th, 1992, ratified it on June 7th, 1993 and entered into force by March 21st, 1994. The Congress of the Republic of Peru through Legislative Resolution N° 27824, dated September 6th, 2002, approved the Kyoto Protocol. The ratification of the Kyoto Protocol received the status of national law through Supreme Decree N° 080-2002-RE dated September 9th, 2002.

17. The National Commission on Climate Change (NCCC) was created through supreme Resolution N° 359-RE. The main task of the NCCC is to coordinate with the different sectors the fulfillment of the Climate Change Convention (UNFCCC). The NCCC members are the National Council on Science and Technology (CONCYTEC), the National Meteorological and Hydrological Service (SENAMHI), the Ministry of Foreign Affairs, the Business Confederation of Peru (CONFIEP), the National Fund for the Environment (FONAM), the Peruvian Sea Institute (IMARPE), the National Institute of Natural Resources (INRENA), the Economics and Finance Ministry (MEF), the Ministry of Transport and Telecommunications (MTC), the Ministry of Energy and Mines (MEM), the Production Ministry (PRODUCE), NGOs and Universities. The presidency of the NCCC was handed to the National Environmental Council (CONAM) through Supreme Resolution No. 085-96-RE dated March 13th, 1996.

18. One of the first results of the Commission was the National Strategy on Climate Change, which was approved through supreme decree 086-2003-PCM from the Presidency of the Ministers' Cabinet. The National Strategy on Climate Change is the framework for all Peruvian policies and activities regarding Climate Change. In addition, based on the findings and recommendations of a National Strategy Study (NSS) performed in 2002, CONAM devised a National Strategy for the Clean Development Mechanism Implementation, which has contributed to improve basic climate change awareness within a fraction of the business sector.

19. Based on a prioritized section of the National Strategy of Climate Change, Peru carried out the Peruvian Program on Climate Change and Air Quality (PROCLIM). This program, coordinated by CONAM and conceptually designed by 13 Peruvian institutions, seeks the internalization of Climate Change and Air Quality issues in the management of their respective jurisdiction. The primary objective of the program is to strengthen national capabilities for an effective performance of the human, institutional, and financial resources to face Climate Change and manage Air Quality in prioritized geographic areas and cities of Peru. The institutions participating in PROCLIM are the National Environmental Council, the National Fund for the Environment, the Ministry of Energy and Mines, the Ministry of Production, the Ministry of Transport and Telecommunications, the Piura Chira Hydrographic Basin Autonomous Authority, the National Council for Science and Technology, the Geophysical Institute of Peru, the National Service of Meteorology and Hydrology, the General Directorate of Environmental Health associated to the Ministry of Health, the National Institute of Natural Resources, the international NGO Intermediate Technology Development Group and the Center for Gender Studies CENTRO NGO, all of them working on 21 mutually-articulated sub-programs for the period January 2003-September 2005.

20. The National Environmental Council (CONAM) is the CDM Designated National Authority while the promotion of the CDM is performed by the National Fund for the Environment (FONAM) through the execution of a sub-program in the context of PROCLIM.

21. Within the framework of the National Strategy on Climate Change and in the context of PROCLIM, the first effort to strengthen capabilities to generate climate scenarios and bottom up V&A assessments was done. The Geophysical Institute of Peru (IGP) and the National Service of Meteorology

and Hydrology (SENAMHI) conducted studies on the generation of Climate Scenarios for the basins of Mantaro and Piura, and the dynamic downscaling of Climate Change Models from the global to the regional level. On the other hand, seven institutions have developed climate change adaptation proposals to be implemented at the basins of Mantaro and Piura, based on the results of the climate change scenarios mentioned above. These proposals have been developed through a participatory process, which ensures its social ownership and increases its sustainability. Gender issues and socio-human approach are being complemented by a simultaneous public awareness strategy.

22. Within the thematic line of Vulnerability and Adaptation to Climate Change, the main gaps include lack of capacities to mainstream risk management, vulnerability and adaptation policies into the short and long term development planning, and national capacities to generate a continuous stream of climate information vital for any attempt to model climate change scenarios and assess future climate change vulnerability. Within the SNC we expect to continue the process of increasing knowledge on climate change vulnerability, promote adaptation and promote decentralized capabilities on prioritized areas and sectors. All this in line with the UNFCCC guidelines for Non Annex I National Communications (Decision 17/CP. 8) and Peruvian aspirations to Sustainable Development.

23. Within the thematic line of Inventories and Mitigation, there is a gap on emissions inventory development since the detail and availability of activity level information are not homogeneous among sectors and the need to develop a GHG inventory management system is crucial to the sustainability of capacities built by PROCLIM. Important capacity gaps were identified during PROCLIM in the non-energy side. One of the main constraints found was the lack of available basic and updated data, collection procedures and official reports especially from the LULUCF sector. Therefore capabilities to quantify emissions associated to this sector are still at an early stage of development. A considerable amount of work and investment shall be performed to boost the institutional capabilities of actors in the LULUCF sector to have basic data available, comparable information and standardized procedures to assure the accuracy and sustainability of the GHG inventory management system.

24. Regarding policies and measures to protect / enhance GHG sinks, the National Forestry law promotes conservation, sustainable management, reforestation and forestation activities fostering in a sense the protection and enhancement of GHG sinks. Besides that, there is still insufficient information regarding roots and main drivers that influence land use change processes especially in the Amazon region. Therefore a coordinated study among relevant institutions will be developed within the SNC project.

25. The energy sector, however, seems to enjoy an effective medium to long term planning capacity. It currently produces an energy referential plan, as well as long-term policy frameworks but it is somehow divorced from the development paths of the other sectors and does not seem to have developed a recurring, regular long-term policy coordination process. This sector has not developed to the same degree its capacity to strategically assess emissions trends nor general environmental impacts. Likewise, its relations to the CONAM remain loose. Most other line ministries lack long term planning capacity, and superficial review of their technical capacity suggest that their ability to evaluate long term environmental impacts is reduced.

26. As can be seen, some general progress has been achieved through the FNC and the PROCLIM Program. It is apparent, though, that there are areas for further improvement of capabilities for i.e. generating inventories and developing mitigation and adaptation assessments, and that much could be gained if mitigation and adaptation policies were cross sectoral in nature. Bearing this in mind, it is important to notice that the critical success factor to fully develop and implement a cross sector capacity regarding mitigation as well as adaptation is related to the institutional strength of the National Environmental System, and CONAM itself. While CONAM, as the head of the NES, has transversal

capacity to coordinate policy, it still need to develop long term capacity planning as well as the capacity required to carry forward transversal policies required to correct significant impacts to the environment.

Stakeholder analysis

27. The First National Communication constituted the first step into promoting and bringing climate change issues to a limited number of stakeholders in the country (including the Climate Change Commission and relevant Ministries). For the first time, institutions were exposed to topics related to Climate Change effects in Peru. Important information was generated by consultants and specialists hired to develop the National Communication, but the level of knowledge and resources available at that time did not allow to envisage the participatory process needed. Further capacity building activities were developed within the PROCLIM program, creating technical capacity among the project's stakeholders whose learning now allows them to approach climate change with more confidence and technical competence that, however, needs to be strengthened. Considering that a good level of coordination and multi-institutional teamwork culture has been developed within PROCLIM, most stakeholders involved in the previously mentioned project have roles in the upcoming Second National Communication. Through meetings and workshops additional institutions that, due to their competence and action range were identified as relevant, have been also incorporated.

28. The design process of the SNC has involved the participative work of institutions from the private and public sectors, as well as civil sector representatives that will help implement the project. Their involvement in the whole process is expected to set the ground for future implementation of adaptation and mitigation strategies. This SNC aims to be a relevant and reliable information source for decision-making regarding climate change, development planning and management of the country. The geographical areas of influence and topics considered by the project reflect the diverse situations and issues encountered throughout the country. The transversal nature of climate change and the diversity of Peru oblige to involve as many and diverse stakeholders as possible from all over the nation, in order to develop long lasting and sound results and proposals. Stakeholders involved, at the moment, include 6 co-executing and 50 participating institutions (see classification in Part III Management Arrangements), with more than 200 specialists to be involved from all over the country. In Section IV, Part IV, a detailed Stakeholder Involvement Plan and a description of the design process are included, as well as a Stakeholders' Matrix describing their role in implementing the SNC project.

PART II: Strategy

Project Rationale and Policy Conformity

29. Peru, as a developing country Party, has agreed under the UNFCCC to undertake actions and comply with commitments described under article 4, paragraph 1, of the Convention according to its specific national and regional development priorities. One of these commitments refers to providing to the UNFCCC with adequate information on the status of implementation of these commitments. As called for in Article 12.1, National Communications are required to include an inventory of net anthropogenic emissions of GHG and a general description of steps taken or envisaged to implement the Convention.

30. All the previous statements prompt us to propose an enabling activity for the Second National Communication, which by building on the existing information and strengthening of the ongoing capacity building activities, will be essential to Peru's strategy to incorporate climate change in the development and poverty reduction processes.

31. This project has been prepared considering the UNFCCC guidelines for Non Annex I National Communications (decision 17/CP.8), and therefore, fits in the Strategic Priority of "enabling activities in support of the National Communication for Non Annex I parties of the convention" within the GEF operational Strategy for Climate Change.

32. The GEF provides the agreed full costs for Peru to fulfill the UNFCCC commitments and guidelines for the preparation of the Second National Communication to the Conference of Parties.

33. In the default scenario, without GEF intervention climate change activities in Peru would be limited to the financial resources in the National Peruvian Budget, which would not be sufficient to allow the implementation of the UNFCCC in the country. Furthermore, it would be difficult to continue the implementation of Peru's National Climate Change Strategy, with the possibility of jeopardizing the progress already achieved through previous efforts in capacity building and institutional strengthening.

Project Goal, Objective, Outcomes and Outputs/activities

34. Although Peru has gathered and generated Climate Change information and has been developing capacities to deal with Climate Change through its First National Communication to the UNFCCC and the PROCLIM program, there is still insufficient information for decision making, lack of awareness of the issues and inadequate capabilities to comply with the commitments in accordance to article 4.1 and 12.1 of the UNFCCC.

35. Therefore, an enabling activity for the Second National Communication, building on the existing information and strengthening the ongoing capacity building activities, is considered essential to ensure Peru's strategy to incorporate Climate Change in the development and poverty reduction processes and continue Peru's progress towards the implementation of the UNFCCC.

36. The **development objective** of this project is to develop and enhance national capacities and facilitate the process of mainstreaming climate change issues into national development and poverty reduction processes, thus enabling the country to deal with climate change and consider it not only as a separate environmental issue but as an issue of sustainable development.

37. The **project objective** is to enable Peru to prepare and submit its Second National Communication to the UNFCCC, in accordance with guidelines in decision 17/CP.8 and with articles 4 and 12 of the

Convention. The project is envisaged as comprising the six outcomes and their related outputs and activities outlined below (for further information see Section IV, Part X and XI)

Outcome 1: Adaptation Strategy for prioritized areas and sectors

38. As has been already stated, Peru is a very diverse country because of its location and the presence of the Andes Range, which gathers various climates (28 of 35 identified climates around world), ecosystems and life zones (84 of 117 worldwide life zones). This diversity also makes Peru more vulnerable to climate hazards as floods, droughts, hailstorms, freezing fronts, heat waves, among others, that impact severely our society and its assets. The fact that 52% of its population live under poverty conditions, a high hydropower dependence (located on glacier basins) and an important fraction of the economy based on primary activities (i.e. agriculture and fisheries) deepens our conditions of vulnerability. Just as an example, El Niño Phenomenon of 1997/98 caused about US\$ 3,500 millions in economic losses, about 4.5% of the GDP on that year.⁷ Climate change is expected to exacerbate climate hazards and increase extreme weather events. Therefore, climate change issues must be considered in the development planning and management of the country.

39. Currently, there is a lack of linkages among environmental management, development planning, investment (main guidelines for public and private investment) and public budget allocation. For a country with such a dependence on climate variability, vulnerability reduction and increase of resilience, particularly for the poorest populations and the most vulnerable infrastructure to current climate risks, are important variables to be taken into account.

40. The NSCC considers in its 2 first strategic lines the promotion of scientific research and policies, measures and projects to adapt to climate change. With the FNC, information regarding climate variability (in particular El Niño Phenomena) impacts was gathered and with PROCLIM we were able to build some capacity and generate information on climate change scenarios, including V&A assessments in two previously prioritized river basins (Piura and Mantaro). These assessments, with the gathered information and capacity building activities provided the necessary tools to identify adaptation options and general policies for this two prioritized river basins, but the development of adaptation projects and strategies were not achieved.

41. Therefore the SNC aims to reinforce current capabilities to allow the preparation of an Adaptation Strategy that comprises measures to enhance resilience to climate change while generating complementary and necessary information to support the efforts of mainstreaming these concepts into the sustainable development and poverty reduction processes in the country (refer to the adaptation strategy scheme in Annex XI, Output 1.5).

42. This will be done with the involvement of the major possible group of stakeholders at the national level and in prioritized river basins. It is expected that with the number of institutions involved in the SNC project and the information gathering, the quality of the assessments will be improved considerably. This, coupled with new institutional arrangements, will provide a sound basis for the development of an Adaptation Strategy.

43. Supporting effective adaptation to climate change in the context of sustainable development requires a deep knowledge of the institutional framework for the planning and policy making processes and mainly, the potential barriers and gaps set by economical policies and national decisions for budget allocation and investments processes.

⁷ Corporación Andina de Fomento, CAF, Lecciones del Fenómeno El Niño, 2001

44. Due to Peru's diversity already referred, the SNC will apply a bottom up participatory approach for developing V&A assessments for those sectors (national level), geographical areas (two river basins) and ecosystems (glaciers) that are considered most vulnerable to climate change. This broad analysis will provide a good sample of different situations, processes, impacts and solution proposals to be included in a comprehensive Adaptation Strategy:

- *National level.* The four sectors prioritized for the SNC are agriculture, energy, transportation and water. These sectors were selected based on two criteria: (1) level of loss registered due to El Niño 1997/98 and (2) their importance for socio-economic development. The V&A assessments will be done at the national level, considering the impacts quantification and expected losses and damages to evaluate adaptation policy frameworks.
- *River basin level.* The two geographical areas of intervention are the Santa and Mayo river basins, in the highlands and the Amazonian region, respectively. They were selected based on two criteria: (1) current vulnerability on the basis of food security (presence of agro biodiversity), human development index (poverty level), and current climate-related risks; and (2) potential for replicability. The map of Prioritized Areas for V&A assessments (Section IV Part IX) shows the selected areas highlighted: in blue for V&A assessments to be developed in the SNC. The red circles on the map show areas where PROCLIM developed V&A assessments corresponding to the northern desert region (Piura River Basin) and Central Highland (Mantaro river basin); while the yellow circled areas correspond to prioritized areas for future assessments.
- *Ecosystem level.* The glaciers, as a fragile mountainous ecosystem, have been chosen because of the increasing evidence of the impact of global warming in glacier melting and the need of assessing potential impact of their retreat on water availability in the future. Most of glacier river basins flow to the Pacific Ocean through the coastal zone that presents about 70% of national population, mainly urban, and receives less than 2% of the water available in the country. The mayor irrigations projects are located in these coastal areas, with a current investment of more than US\$ 5 billion; these projects are the basis of Peruvian agricultural exports. Due to the Andean morphology, the main hydro electrical power plants and hydro electrical potential are placed near these areas, and there are no estimates of how these potential could be affected due to water scarcity or alteration of the hydrological cycle.

45. It is important to notice that all these assessments are interrelated, and as such, will be implemented coordinately and benefit from each other. Joint training and project planning activities will be performed among all stakeholders participating in this outcome. This will ensure that standardized methodologies for the assessments that are going to be used throughout all the outputs and that all the needed complementary information is generated on time at the different levels.

46. All the information generated by the above mentioned V&A assessments will contribute to the preparation of an integrated climate change assessment in Peru, which will be the basis for the preparation of an Adaptation Strategy that integrates sectoral and river basins V&A results, and proposal to incorporate climate change considerations into national economic models, budget allocation and public investment system.

47. Using UNDP's APF and with support of The Organization of American States (OAS), which will escort the entire preparation process for the proposed Adaptation Strategy, the process for developing the Adaptation Strategy considers training sessions, workshops and seminars; technical assistance on methodologies for assessing the impacts, selecting and prioritizing adaptation options; developing institutional frameworks; identifying barriers and opportunities to insert vulnerability reduction and

adaptation into policies and planning processes, and dissemination and validation of the Adaptation Strategy proposal.

48. A more detailed explanation of the five outputs that contribute to the achievement of this Outcome is presented below:

Output 1.1: Climate Change Scenarios at national level and 2 river basin level (see details in Section IV Part XI)

49. The FNC did not include a scenario generation, due to the lack of national capacities to generate and use them. Within the PROCLIM program, capacities have been created to downscale Global Circulation Models (GCM) and simulate future climate at the national level and in-country selected areas using SRES (A2 and B2), specifically in the Piura and Mántaro's river basins.

50. Current available capacities need to be strengthened to downscale GCM's and regional climate models (as CCM3 and RAMS) to produce NATIONAL climate change scenarios with a spatial resolution of 60 x 60 km grid, and climate change scenarios for the two prioritized river basins, with a spatial resolution of 20 X 20 km grid. This will be the basis for the assessments of expected impacts of climate change and evaluate adaptation options in prioritized sectors (national level) and river basins and glaciers. It is crucial to develop scenarios for each of the two prioritized river basins due to the difference in climate and geomorphology. The Santa river basin goes from "0" m.a.s.l. to about 6,700 m.a.s.l. It drains its waters in the Pacific Ocean and comprises many Andean and coastal differentiated ecosystems and populations. The Mayo River basin, on the other hand, is a trans Andean basin, located in the Amazonian tropical rainforest, in what is called the Selva Alta region (high tropical rain forest, that goes from 500 m.a.s.l to about 2,000 m.a.s.l) and drains its water to the Selva Baja areas (tropical rainforest located at less than 500 m.a.s.l).

Activities associated with this output are:

- a) Strengthening of capacities to generate climate change scenarios
- b) Compilation and preparation of basic information
- c) Identification of current climate variability and climate change trends
- d) Downscaling of models at a National Level (60 x 60 km)
- e) Downscaling of models for the two river basins with a resolution of a 20 x 20 km grid, adjusted to their specific conditions.

Output 1.2: Integrated V&A assessments in prioritized river basins and sectors that provide a representative sample of climate change impact and responses according to Peru's diversity (see details in Section IV Part XI)

51. The FNC only developed a preliminary general assessment of the impacts of El NIÑO phenomenon in different sectors and the impacts of climate variation in 4 Glaciers (for the years 1970 to 1998). However, no climate change scenarios were taken into account for these assessments and no sector analysis was performed. On the other hand, this first assessment did not enable Peru to propose any adaptation measures. With PROCLIM, two integrated V&A assessments were developed for the first time (in prioritized areas of Piura and Mantaro River Basins) using bottom-up approaches. Bottom-up participatory processes are increasingly considered the most appropriate approach for addressing local adaptation needs and adaptation policies (document FCCC/SBSTA/2004/INF.13).

52. The methodologies and processes to be carried out for the V&A assessments are those recommended by the IPCC and the UNDP's Adaptation Policy Framework, that comprises current

vulnerability assessments, the use of climate change and socioeconomic scenarios to assess future climate risks, and the formulation of an adaptation strategy. The involvement of stakeholders is considered during the whole process.

53. This assessments will be done considering the main sectoral and river basins assets (services, goods, natural resources, main livelihoods) and how they are affected by current climate variability (short term) and expected impacts due to climate change (long term). This will be the basis for the identification and formulation of adaptation options. Institutional frameworks assessments will be also carried out in order to identify planning and policy making processes that could be used to mainstream the incorporation of identified adaptation options at the river basin and sectoral levels

54. When developing these assessments, the knowledge and experience gained during the V&A assessments under the PROCLIM Program will also be applied. Socio economic scenarios will be developed using Climate Change scenarios provided by SENAMHI as a result of the previous output 1.1. This activity will be closely linked to national and regional development priorities. Key conditions as population size, water and food demand, urban growth, industrial and commercial growth will be modeled as part of the evaluation of vulnerability and adaptation⁸.

55. To generate integrated V&A assessments in two river basins, Santa and Mayo, and in four prioritized sectors, Agriculture, Energy, Transportation and Water, the project will carry out the following activities:

- a) Involvement of stakeholders at different levels (sectors, national planning institutions, river basin authorities) and responsibilities (technical people, decision makers, civil society) to participate in validating the vulnerability assessments and identifying adaptation options. This will be done through regular meetings, presentations and training sessions, as well as through emails updating them on the progress made and needs of information.
- b) Evaluation of vulnerability and damage costs caused by current climate variability and climate hazards in the selected river basin and sectors activities and assets.
- c) Evaluation of vulnerability and damage costs caused to river basin and sector activities and assets due to future impacts of climate change.
- d) Assessment of institutional frameworks and capacity needs to mainstream adaptation options and measures into prioritized sectors and river basins planning and policy making process.
- e) Evaluation and prioritization of adaptation measures, to mainstream vulnerability reduction and adaptation options into sector and river basin development planning and budgetary assignment process.

Output 1.3: Determination of the relationship between climate change, glaciers retreat, and impacts on water availability in Peru (see details in Section IV Part XI).

56. The FNC included only a preliminary general assessment of the impacts of climate variations in 4 Glaciers (for the years 1970 to 1998) and glacier retreat trends. A glacier surface loss of about 22% (around 500 Km²) was estimated in the Peruvian Andean tropical glaciers. Furthermore, PROCLIM generated climate change scenarios to estimate water availability for the next 200 years in the Santa River Basin, fed by glacier water. The study results show an initial increase of water availability due to glacier melt and a decrease in water availability 50 years later (2050), due to high dependence on rainfall. Since Peru is extremely dependant on water coming from glacier sources (i.e. 85% of the nation's energy comes

⁸ The development of scenarios is one of the tasks to be performed under outcome 3 (Mitigation Strategy Proposal), output 3.1. These tasks will be performed under the same terms of reference to ensure that requirements from both outcomes (adaptation and mitigation) are covered and that no overlapping occurs.

from hydroelectric power plants, most of which are located in the Andean Region), it is crucial to estimate the impacts of climate change in water availability in glacier basins for the whole country in the future.

57. In this sense, the SNC will update and validate a previous glacier retreat assessment and evaluate the impacts in water availability nationwide for the next 50 years. These results will be evaluated in conjunction with those obtained with the V&A assessment for the water sector (output 1.2) so the adaptation measures for the water availability due to climate change will be established in the sectoral assessment taking into account the results of this output.

Activities associated with this output are:

- a) Analysis of current glacier hydrology, including an update of previous glacier inventories, glacier variations, and record of glacier melt hazards and disasters. This activity will be accomplished through information gathering, use of GIS to systematize the records of local events in the year 2005, determination of Peru's national glacier surface area, and the determination of timely and spatial interrelationship between glacier behavior and hydro meteorological variables.
- b) Estimation of the availability of water resources due to glacier melt at the national level up to 2050. Climate change scenarios, rain fall and hydrological analysis of glacier river basins will be used to estimate water availability within the country. This activity will use as an input the results from previous studies developed in the Santa River Basin, where climate change scenarios were used to assess water availability due to glacier melt. The development of this activity will generate useful information for the V&A assessment to be developed in the Santa river basin (output 1.2). Tasks that will be also performed are: Evaluation of the local hydro climate conditions of the glacier basins, such as the extreme temperature values, daily thermal fluctuation and variation of the hydrologic records in rivers of glacier hydrographic system; projection of the impact of climate change on glacier cover, glacier melt volume, and modification of the hydrologic regime by climate change scenarios evaluated for the next 50 years.
- c) Evaluation of adaptation strategies in the management of hydro resources in the basins with a glacier component under climate change conditions. This activity will be performed in conjunction with the water sector V&A assessment of output 1.2.

Output 1.4: Proposal for the incorporation of climate variability and climate change variables into macroeconomic models, public budget allocation process and public investment system (see details in Section IV, Part XI).

58. The V&A assessments from previous outputs will enable us to gain a good understanding of Peru's vulnerability to climate change and adaptation options for different sectors and river basins. A critical success factor to the future implementation of adaptation options is the coherent allocation of public and private resources. The coherence in this process will be achieved if current and future investments in the country make an early identification of climate hazards and allocate resources (as part of the investment) to manage the related risks.

59. In the framework of the SNC we aim to incorporate the climate factor into the processes that influence public budget and investment allocation of Peru: the Multi Annual Sectoral Strategic Plans-PESEM and the National System for Public Investment (SNIP). The main actors in these processes are the Ministry of Economy and Finance, the Central Reserve Bank (BCR) and the Strategic Planning Center – CEPLAN annexed to the Presidency of the Ministerial Cabinet. The early involvement of these actors is one of the cornerstones of this output. This will favor a future implementation of the "corrected"

budget allocation processes and will be supported by detailed information on the benefits of incorporating the climate factor (e.g. losses, damages and impacts of climate-related hazards) into the development planning process.

60. This output will develop a strategy to link V&A issues within four main groups of instruments or systems: the Multi Annual Macroeconomic Framework (MMF) including the National Strategic Plan (developed by MEF) and PESEM, policy guidance documents prepared by the recently created Strategic Planning Center – CEPLAN, the National Public Investment System-SNIP, and the public budget allocation process. On this basis, a proposal that identifies ways and means to mainstream climate change into the development planning, budgetary process and national System for public Investment (SNIP) of Peru will be developed. The associated activities are:

- a) Estimation of the potential losses caused by climate change events in prioritized sectors (strong links and coordination with sectoral V&A assessments of output 1.2 will be established).
- b) Evaluation of ways to incorporate the impact of climate change in the MMF, the National Strategic Plan, and Policy guidance documents prepared by CEPLAN, PESEM and other policy guidance documents.
- c) Awareness raising through workshops for key government staff (MEF, BCR and PCM's CEPLAN).
- d) Long - and medium-term economic estimates for the MMF, including a consideration of potential climate change related shocks.
- e) Development of methodologies and procedures for including climate change into budget making cycles and multi-annual programming for the public sector and in the National System for Public Investment-SNIP.

Output 1.5: Adaptation Strategy (see details in Section IV Part XI)

61. The UNDP Adaptation Policy Framework for Climate Change (APF) will be adopted to guide the process of developing the Adaptation Strategy. The key issue is how to effectively incorporate the adaptation strategy into relevant existing processes and plans. Following the APF guidance, adaptation options identified in the assessments above mentioned will be prioritized and assembled into a comprehensive strategy. The strategy will outline types of measures and policy options, implementation plans, barrier analysis, institutional support needed, stakeholders involvement, capacity building needs, and monitoring activities. It will also address options for integrating adaptation within existing processes and plans. Outcomes of the Adaptation Strategy will be used as input for the Adaptation Learning Mechanism (ALM) that will be established by UNDP to enhance adaptive capacity and create an adaptation knowledge network. The project team will coordinate with UNDP on the procedures to gather information and lessons learned for the ALM. Furthermore, UNDP will provide guidance on adaptation learning resources and on the process to link the Adaptation Strategy with ALM activities.

62. Based on outputs 1.2 and 1.4, an Adaptation Strategy document will be prepared. The Adaptation Strategy will be the tool that consolidates the current information and capacities achieved with PROCLIM and complemented by the SNC. The adaptation strategy will place emphasis on incorporating climate hazard risk management into development planning of the prioritized sectors and selected river basins addressing short term and long term climate change issues (inputs from outcome 1.2). It will also incorporate guidance to include climate change consideration in the national development planning systems and instruments (inputs from output 1.4). As the Adaptation Strategy will outline ways to make local communities and sectors more resilient to the impacts of climate variability and climate change, the participation of organized communities in the process will be a key element in the development of this document.

63. The Adaptation Strategy in the context of this SNC is considered as a process that escorts the development of all these outputs from the beginning. It takes part of the initial involvement of stakeholders, and includes activities such as technical support to the V&A assessments, the systematization of previous experiences (i.e. PROCLIM), conducts the process of prioritizing the adaptation measures to be incorporated in the Adaptation Strategy and the drafting of it, and its process of consultation before its endorsement by the regional governments and ministries.

Activities associated with the development of an Adaptation Strategy Proposal include

- a) Synthesize previous information in V&A assessments: activities carried out under this component of the SNC seek to ensure the use of outputs and results from previous V&A assessments and synthesize the current state of what is known about vulnerability and adaptive capacity. This will involve results from PROCLIM and existing information in prioritized sectors and river basins.
- b) Support the process of V&A in prioritized river basins and sectors: technical support will be provided throughout the entire process of developing the Adaptation Strategy, to actors and representatives of sectors (including Economy and Finance) and river basin institutions. Participants from the public and private sector will acquire basic information and skills to develop V&A assessments and adaptation proposals (enhancing activities and results considered in output 1.2). Capabilities to be strengthened will focus on methods and approaches to incorporate climate hazard risk management into sector and river basins planning. This will be done by an initial general training workshop, seminars for specific thematic and training workshops for each sector and river basins. This will ensure that standardized procedures and methodologies are applied throughout the process and that compatible results are generated.
- c) Integration, prioritization and selection of adaptation options identified in river basins and sector assessments: Institutions and relevant stakeholders will support the integration and prioritization of sectoral, multisectoral and cross sectoral measures and adaptation policies considering the results of output 1.2 (V&A assessments in sectors and river basins) and output 1.4 (Proposal for macroeconomics, budget allocation and public investment). For this purpose qualitative and quantitative methods and criteria for the selection and prioritization of adaptation options will be used, such as cost-benefit analysis, expert judgment, among others.
- d) Formulation of an Adaptation Strategy (AS) for prioritized sectors, and river basins. An Adaptation strategy will be drafted comprising and integrating sectoral adaptation and territorially based strategies. It will include the diagnosis on V&A in Peru, proposals to mainstream climate variability and climate change into development planning and investment, action plan and the institutional framework needed for its implementation. The AS will be disseminated and validated by sectoral and river basin stakeholders.

Outcome 2: Development of a National GHG Inventory Management System

64. Peru developed and reported its first GHG inventory taking 1994 as its base year within the framework of its FNC. This inventory found constraints of diverse nature such as limited information availability across all sectors, not detailed fuel consumption, and scarce information from the LULUCF sector, among others. It also lacks of completeness and transparency since it presents poor documentation on activity data, emission factors and assumptions used, verification documents, archiving records and QA/QC procedures. This makes its detailed reviewing and comparison with further inventories a difficult

task. The fact that this inventory was developed by a group of external consultants did not help to create institutional capabilities.

65. Within the framework of the PROCLIM program, a second inventory was developed taking 2000 as the base year. For this endeavor, PROCLIM focused its efforts on creating institutional capabilities to develop GHG inventories. For this, it devised an inter-institutional task force to develop the 2000 GHG National Inventory. This team was composed of government officials and specialists (many of whom are now full time staff in the government sector) in the following institutions: Production Ministry, Energy and Mining Ministry, Transport and Telecommunications Ministry, the National Institute for Natural Resources, the Environmental Health Directorate and the National Environmental Council. Inventory preparation started a capacity building process across 20 different Peruvian institutions including the ministries above mentioned. The 2000 National GHG Inventory was developed following COP decision 17/CP.8, the Revised IPCC Guidelines for National GHG Inventories and the IPCC Good Practice Guidance. This second inventory made progress in improving the quality of activity data, documenting methodologies, data used and assumptions made, and archiving information, but serious constraints were still found in the process of collecting data especially from the industry, transport and LULUCF sectors. This limited progress has been only partially institutionalized within participating entities and is not homogeneous across the inventory process stakeholders. For instance, in the LULUCF sector a heterogeneous level of maturity in terms of land use information systems and GIS capabilities across Peruvian institutions prevents a complete accounting of LULUCF GHG emissions. In that sense, a coherent effort is necessary to advance on the task of quantifying GHG emissions and give robustness to the emissions inventories and the inventory process itself. Within the framework of the SNC, Peru will report its 2000 GHG National Inventory and will focus on the development of a national inventory management system to ensure the sustainability of the inventory process. It will address institutional arrangements, data base management and methodological issues, among others. The development of the inventory management system will be based on the experience gained in the preparation of the 1994 and 2000 national GHG inventories.

Output 2.1: Perform an analysis on information, legal, capacity and technological constraints and needs of the inventory process considering the FNC and PROCLIM experiences.

66. The results of this output will serve as a reality check and aim to feed the design of the inventory management system. Activities associated with this output will consider the learning points acquired during the FNC and PROCLIM. The activities included are:

- a) Analysis of the capacity needs for the inventory process at the individual (e.g. training), institutional (e.g. resources and jurisdiction) and systemic (e.g. procedures) levels.
- b) Analysis of the technological constraints and needs of the inventory process. This activity will undertake specific assessment of the technological baseline of potential inventory actors and the desired technological level for a sound inventory management system. Particular attention will be given to databases and statistical systems of the ministries, as well as to the LULUCF sector, where intensive computing and GIS use is foreseen as needed.
- c) Analysis of the legal issues related to the inventory process. Emphasis will be placed on identifying legal constraints and their corresponding solutions of the potential inventory actors. Issues to be addressed are: accessibility of information and its interinstitutional flow, confidentiality, institutional competences, the national statistical system, private company's information accessibility, etc. This will ease the drafting of feasible public and private resources allocation strategies for an inventory process, as well as institutional duties and inter-institutional arrangements for the information flow.
- d) Integration of the diagnosis of constraints and needs of the inventory process and presentation to the stakeholders that will participate in the design of the system.

Output 2.2: Participative design of an inventory management system.

67. Taking into account the diagnosis on constraints and needs of the inventory process, an inventory management system proposal will be developed jointly with key stakeholders. This points to increase its implementation feasibility. Activities associated with this output are:

- a) Stakeholder involvement for a sustainable inventory process. The activities carried out under this component of the SNC seek to ensure that the inventory process can become permanent. The strengthening of relations with national institutions will create a more proactive network and new relations within the government, and with other stakeholders, particularly for "win-win" joint activities such as utilizing inventory data for other national activities. These will comprehend: Awareness-raising activities on GHG inventory focused on promoting the importance of an institutionalized inventory process beyond the national GHG inventories to policymakers; presentations on the progress of the SNC project, beginning with a presentation of the integrated diagnosis on constraints and needs of the inventory process; an early definition of the roles of institutional stakeholders, that will be formally established for the short term through commitment documents and inter institutional agreements; a national information exchange network to promote the active participation of stakeholders, training activities and participative development of activities b and c stated below.
- b) Development of systemic tools and procedures. This will include activities such as developing procedures for documenting methodologies, emissions factors and their applications, activity data and assumptions; data management and collection; strategies for data generation and improvement; systems for data archiving and record keeping; mechanisms for synchronization and cross-feeding between emission inventories, national energy balances and relevant sector surveys; guidance for technical peer reviews and procedures for QA/QC. The QA/QC and a peer review procedures developed for every individual sector will be used against the 2000 GHG inventory, to both 'test' the applicability of these procedures and identify any pitfalls of the 2000 inventory. This process will also help the inventory team make any necessary changes or corrections to the 2000 inventory for the Second National Communication.
- c) Development of institutional arrangements for the national inventory management system. Based on the diagnosis developed in output 2.1, the definition of key stakeholders for the inventory, and the systemic tools and procedures developed, the institutional arrangements needed for developing a national management inventory system will be designed. This activity will outline the necessary legal (i.e. mandatory roles for participating in the inventory, free access to data and inter institutional information flow), technological and resource allocation measures to implement the inventory management system and ensure its sustainability.
- d) Development of the proposal of the National GHG Inventory Management System: With the inputs of the previous activities a proposal will be drafted, validated by key stakeholders and presented to high level decision makers.

Outcome 3: Strategy to mitigate GHG emissions in the Energy, Industry, Transport and LULUCF sectors.

68. Peru has various challenges to face at the same time in the energy (transport, industry and energy) and non energy side (LULUCF); its ability to address them effectively cannot be separated from climate change issues.

69. Regarding the energy side, Peru requires significant expansion of its energy supply in the most optimal and climate friendly way, to increase access of Peruvian households to modern energy sources if the current extreme income and energy imbalances throughout Peruvian population are to be redressed. Furthermore, in the current context of natural gas availability, Peru is focusing most of its efforts on the introduction of natural gas within the energy and industrial sectors. This is being done without taking into account its climate change implications and its impact on the Country's sustainable development priorities. For instance, the promotion of natural gas may be inhibiting the promotion of zero emission options such as hydraulic and other renewable energies in geographical areas where natural gas will not be available. This menaces not only the homogenous development of Peru but it works as an incentive to centralize the industrial development of Peru along its gas pipelines preventing long term energy schemes encompassing sound GHG mitigation and zero emission diversification measures.

70. Regarding the non energy side, Peru finds the biggest share of its emissions coming from the LULUCF activities. In that sense, it is of remarkable importance to demonstrate policy makers that GHG mitigation options of the LULUCF sector will bring benefits not only to the global environment, but will give inputs for a better land use planning and to the sustainable development process of Peru. The land use change process has a direct influence on the GHG emissions and removals by sinks and hence on the net national GHG emissions of Peru. According to the FNC, the emissions from LULUCF were 37 196.80 CO₂ Gg, that represents 55% of the net CO₂ Emissions in the country. The main geographical areas subject to land use changes have been identified and measured in the framework of PROCLIM, but information regarding the causes or drivers of these changes have not been analyzed. This information gap, that applies to the energy side as well, prevents the development of a mitigation strategy proposal for the LULUCF sector. The implementation of this proposal would be of remarkable importance not only because they could mitigate emissions but also for their impact over the country's biodiversity.

71. In the framework of the FNC, a very first analysis of mitigation projects was performed and consisted of an identification and preliminary assessment of project driven mitigation options such as reforestation projects, fuel change projects in electricity generators, technical test on transports fleets and efficiency improvement projects in boilers. However these projects did not constitute policy options nor were they analyzed in the framework of national and sectoral priorities. This early mitigation assessment included a preliminary estimation of the project's potential GHG emissions reductions and the identification of their implementation barriers. The IPCC methodology was employed to estimate potential GHG reductions. The UNEP Collaborating Center for Energy and Environment from RISOE was used to estimate incremental costs of energy projects while a cash flow analysis was performed on forestry projects. Furthermore, their project specific orientation prevented their use to shape mitigation policies for the energy, industry, transportation and LULUCF sectors.

72. Further efforts on the subject include a very first projection performed within the framework of a previous enabling activity. This projection was based on a macroeconomic model and gave us some insight on the future carbon intensity of the Peruvian economy for two scenarios: business as usual and a limited introduction of natural gas into the energy matrix of Peru. However, the lack of detail per sector and economic activity limited its usage to guide future mitigation policies and measures. In addition, the business as usual scenario used for that projection is now outdated and the energy options for Peru now go beyond natural gas. Within the framework of PROCLIM, the mitigation work was mainly addressed to the development of a National CDM Portfolio and no national or sectoral mitigation assessment was performed. Other energy projects have been financed by the GEF, but resources have focused on specific topics such as technical assistance for renewable energy systems to obtain biofuels and non-wood cellulose fibers, rural electrification projects, among others with a limited local scope and benefits. In terms of mitigation assessment technical resources, some experience exists in the country regarding the use of the LEAP bottom up model, but its application has been limited to estimate fuel consumption growth for energy balances from the Ministry of Energy and Mines.

73. In light of these facts and considering that Peru needs to define its sustainable development path, the SNC will help Peru to develop a mitigation strategy proposal closely linked with its political agenda in four prioritized sectors: energy (due to recent development as a result of the introduction of natural gas and urgent energy diversification), industry (identified as the main consumer of natural gas), transport (identified as having the fastest growing share of GHG emissions) and LULUCF (due to an ever increasing deforestation process). While the FNC mitigation assessment was project focused, the SNC will be policy based. This process comprehends a mitigation assessment and the development of a mitigation strategy proposal for the prioritized sectors. An early stakeholder involvement in all activities of this outcome will give a participative nature to the proposal, which will give cross sectoral ownership to the proposal and will favor a subsequent implementation of the mitigation strategy.

74. The prioritization of Climate Change in the political agenda of Peru will be possible only if we are able to demonstrate the ancillary benefits of putting in place mitigation policies. The definition of the following outputs and activities takes into account the need for sound projections and likely scenarios for the Peruvian future as a basis to construct cross sectoral coherent mitigation options and their integration into a mitigation strategy proposal.

Output 3.1: Assessment of options to mitigate GHG emissions in the Energy, Industry, Transport and LULUCF sectors.

Activities associated with this output are:

- a) Stakeholder involvement activities. These activities point to engage all possible stakeholders on the outcome process. The activities include a kick off meeting with identified stakeholders and the definition of their role within this output. In addition, training on mitigation assessment will be provided to government and private companies' representatives. The training will focus on developing capabilities on mitigation assessment for the Energy, Industry, transport and LULUCF sectors.
- b) Analysis of the main drivers and root causes for Peru's historical and current emissions regime.

Since the nature of emissions on the energy and non energy side have their own complexities, this analysis will differentiate the critical factors affecting emissions for the LULUCF, Energy, Industry and Transport sectors. Having said that, this activity will undertake specific analysis on the socio cultural factors influencing the dynamics of LULUCF GHG emissions in the Amazonian rainforest. In the transport sector the main socio cultural factors and practices that affect emissions (e.g. driving practices, cultural barriers to fuel change, etc) will be analyzed. In the energy and industry sectors, the main socio cultural factors affecting both business decisions and emissions regimes will be analyzed (e.g. a lack of efficiency culture, socio cultural barriers to the operation of Energy Service Companies-ESCOs, etc.).

Furthermore, an assessment of the main economic factors that influence GHG emissions will be performed. This will include an assessment of the energy costs, emissions regimes, electricity tariffs policies and how they affect final energy usage and emissions. In addition, large scale equipment replacement options and Peru's cogeneration potential will be outlined and analysis assessing the overall economic benefits associated to efficiency gains in the steel, cement, ceramic, and glass industries will be performed. On the LULUCF sector, case studies in prioritized geographical areas will be performed. This will include a cost-benefit and tax regime analysis of the main economic activities (e.g. logging, agriculture, etc.)

The influence of policies, plans and programs on GHG emissions will be assessed for the LULUCF, energy, industry and transport sectors. Furthermore, a detailed analysis of the institutional and legal framework ruling the LULUCF sector and its impact on GHG emissions will be performed. In addition, two types of case studies in prioritized geographical areas with a river basin approach trying to involve different ecosystems will be performed. The first type will focus on the assessments of the impact of the construction, rehabilitation and extension of the terrestrial transportation ways in the LULUCF GHG emissions. The second type will focus on the influence of the establishment of natural protected areas in LULUCF GHG emissions.

- c) Participative development of national scenarios to 2015 and 2050. These scenarios will be developed using prospective techniques such as Delphi, APC, HP, ROT and others and will take possible sectoral and country policy lines as one of the inputs. Three emissions projections (i.e. business as usual, optimistic and pessimistic) will be performed for each scenario. Technical resources to be used comprehend bottom up models such as LEAP for energy alternatives modeling, COPATH to estimate carbon flows related to forest use and top down models of the like of but not limited to ENPEP and MARKAL. The country background on the subject is limited to the experience of the Energy and Mines Ministry using LEAP to perform short term (1-4 years) fuel consumption projections to update national energy balances. In this framework training workshops will be conducted on the subject to enable institutions to perform their own scenario development and projections.
- d) Feasibility analysis of mitigation options. This will take into account the main drivers, root and causes of historical and current emissions, and results of the projections. Each option will comprehend sectoral as well as country policy lines. These options will be fed by specific policy assumptions giving origin to each scenario. For instance, in the transport sector these options could comprehend a political decision toward inhibiting private transport and taxing fuels. Under this assumption the projection will determine the degree of GHG emissions reduction and hence will help us to determine the effectiveness of the particular option. Using a similar methodology each option will be analyzed determining its effectiveness. Indicators for the referred effectiveness go from US\$ invested/CO₂ reduced to US\$ invested/ US\$ in energy savings passing by qualitative indicators such as degree of preservation of carbon sinks. Among the co benefits we may quote reduction in air pollution and healthy impact, competitiveness increase, technological improvements, positive environmental and social impacts, among others. These results will feed a final cost effectiveness, cost benefit and feasibility analysis (technical, social, environmental, economical and financial) for each mitigation option.

Output 3.2: Development of a Mitigation Strategy proposal for the Energy, Industry, Transport and LULUCF sectors.

The activities included are:

- a) Prioritization, consultation and validation process of the mitigation options with government officials of the Energy, Industry, Transport and LULUCF sectors and other key stakeholders. This activity seeks to ensure that the information generated in output 3.1 is understood by those stakeholders that would be in charge of implementing the mitigation strategy and make them themselves prioritize the options to be included in the mitigation strategy. This will include the dissemination of technical papers and organizing workshops to analyze and prioritize the options.
- b) Development of the Mitigation Strategy proposal and circulation for comments to governmental institutions and key stakeholders.

- c) Presentation of the Mitigation Strategy proposal and results of the assessment of mitigation options, focusing on their impact on GHG and Air pollutants emission reductions and their collateral benefits, to high level decision makers of governmental institutions and key stakeholders. This will include representatives from the MEF and CEPLAN (in charge of planning activities of the country). This activity seeks to ensure that the importance of the proposal is understood not only at the technical level, but at the highest level in the participating institutions, in order to prepare the path for its future implementation.

Output 3.3: Steps to be taken to mainstream the mitigation strategy proposal into national and sectoral policies.

75. This output will encompass activities leading to the mainstreaming of the mitigation strategy proposal into policies at the national and sectoral levels. The output activities will be:

- a) Dissemination, among high level decision makers, of policy papers on mitigation and sustainable development for the Energy, Industry, Transport and LULUCF sectors.
- b) Joint workshop with the Center for Strategic Planning (CEPLAN) to outline a mainstreaming plan.

76. Joint workshops with CEPLAN and the Energy and Mines Ministry, Economy and Finance Ministry, Agriculture Ministry, National Institute of Natural Resources, Production Ministry and Telecommunications and Transport Ministry to disseminate and obtain sectoral support to the mitigation strategy proposal.

Outcome 4: Description of Steps taken to integrate climate change and development

77. Several of the issues addressed by the Second National Communication of Peru (SNC) are, directly or indirectly, related to sustainable development and the Millennium Development Goals (MDGs).

78. As come out from the description of the preceding outputs, some of the most positive impacts of an enabling activity are the creation of conditions to facilitate, among others:

- Capacity development and strengthening.
- Improvement of energy efficiency, energy innovation and clean energy diffusion.
- Mitigation assessment for prioritized sectors
- Identification and assessment of vulnerability and adaptation strategies, based on vulnerability evaluation.
- Address rural area sustainable development, as part of the poverty reduction policies.

79. As an enabling activity, the SNC could create the adequate environment, contribute to capacity building and strengthening at systemic, institutional and human level, in line with the need to address sustainable development challenges. In addition, it gives an opportunity to identify and define criteria and measurable indicators to assess the impact of the national communication at different levels. This includes, specially, the impacts on technical capacity, institutional strengthening, policy-making, public awareness, community participation, and research activities.

80. The SNC will propose indicators to assess the relation between the National Communication processes. Such indicators will be tested, where possible, during the implementation of the national communication project. It is expected that, also, they provide insights on how to ensure the sustainability of the national communication process itself.

81. The involvement of key stakeholders, relevant institutions and decision makers from the beginning, should ensure the understanding of climate change and its several dimensions to push the integration of climate change issues in policy design and implementation. As Climate Change cannot be considered as a policy in itself, the key challenge is the crosscutting integration of adaptation or mitigation issues in national, regional and sectoral public policies.

82. The SNC strategy to facilitate the mainstreaming of climate change issues into national development priorities include the following:

- Making the relevant stakeholders and decision makers aware about the implications of climate change, the results of the V&A assessments, the options for adaptation and mitigation, and the tools for incorporating Climate Change into development policies and strategies.
- Maintaining them informed of the progress made within the SNC project while providing an open channel to discuss and incorporate their views and inputs throughout the preparation of the SNC.
- Involving them in the information flow, the prioritization exercises at the different levels to evaluate and prioritize the adaptation proposals and strategy as well as the mitigation options and determine ways to incorporate the results in their respective development planning (sector, regional, and national).
- Identify key relation and positive impacts between SNC expected results and the objectives included in the National Agreement, Climate Change Strategy and MDGs.

83. The strategic lines to generate positive impacts on technical capacity, institutional strengthening, policy-making, public awareness, community participation, and research activities, will include instruments and tools, which will be evaluated and proposed in the framework of the SNC, (i.e. learning by doing approach, workshops and training activities).

84. The evaluation and development of indicators to assess the impact of the SNC process in aggregated and sector policies and development agenda, such as poverty reduction policies and the MDGs will be based on the logical framework included in the correspond chapter.

85. In addition it seems that so far, studies related to sustainable development and MDG achievement have not been looking at what will be required on a more permanent basis. Experience has shown that if major support is not properly institutionalized, countries can easily reverse to their business as usual situation.

Output 4.1 Develop dissemination and capacity building activities for relevant stakeholders and decision makers to evaluate, prioritize and support generated mitigation and adaptation strategy proposals. (See details in Section IV Part XI).

86. During the FNC process, the basic foundations for this outcome were defined and built. This included capacity building and raising awareness activities for members of the National Commission on Climate Change (NCCC) that resulted on the elaboration of our National Climate Change Strategy (NCCS), and the construction of a basic climate change informative web site. The National Program for Climate Change and Air Quality (PROCLIM) worked on strategic lines of the NCCS, including the development of dissemination and capacity building activities through one of the four program components. The results of PROCLIM – such as raising awareness and dissemination campaigns for two prioritized areas designed and implemented through a participative process, institutional capacity strengthening, mainstreaming of climate change into regional policies and the generation of information

instruments such as a centralized web site and a preliminary climate change research agenda – represent an initial significant step forward on this issue.

87. Capacity Building is a crosscutting issue which transcends all of the activities relating to the preparation of the SNC, including dissemination activities for relevant stakeholders and decision makers to evaluate, prioritize and support generated mitigation and adaptation strategy proposals. The purpose of this output is to generate a participative mechanism that involves stakeholders and decision makers in an active flow of information exchange. It comprehends the participation of relevant actors in the collection, generation and validation of the information needed to develop the SNC and will lead to a sustainable process to generate this information. The proposed mechanism will include awareness raising and dissemination activities leading to capacity building activities. Since some of the SNC stakeholders participate in development planning at the national, regional and local level, this output will set the ground to effectively integrate climate change into medium and long term development planning.

88. Complementary outputs include the creation of interactive spaces for stakeholders to exchange and provide access to information (web networking, workshops) and the publication of generated information, in order to make it available to relevant actors.

89. Activities associated with this output are:

- a) Raising awareness activities for stakeholders and policy makers, capacity building activities, stakeholder consultation process and systematization of inputs, integration process of opinion flows into useful information for the SNC.
- b) Implementation of an interactive web based support platform.
- c) Printed and electronic publication and distribution of relevant information;

Output 4.2. Evaluation and development of indicators to assess the impact of the National Communication process in national policy, sectoral planning, and in the development agenda, such as poverty reduction policies and the Millennium Development goals (see details in Section IV Part XI).

90. In Peru, there are two main instruments for evaluating the progress made in achieving sustainable development in the country; the National Agreement, is the official document that constitutes the framework of basic lines to define the vision, key policies, objectives and related strategic lines to implement the priorities for sustainable development; and the Millennium Development Goals, an international commitment assumed by the Government of Peru. As such, any sector or general policies should be in line and in coherence with the aim and priorities of the National Agreement and the MDGs. Clearly, climate change will likely affect the ability of Peru to reduce poverty and achieve sustainable development objectives as captured in the MDGs and in the public policies (10 and 19) proposed by Peru's National Agreement.

91. This output seeks the development of clear relationships between the indicators of the SNC process (defined in the Log Frame), results and effects of the SNC (e.g. V&A assessments, mitigation strategy proposal, inventory management system, etc.) and indicators already defined for the implementation of the most relevant policies of the National Agreement (poverty reduction and sustainable development) and the MDGs. These indicators would be used to monitor how the NC process, results, and impacts lead the country to the achievement of its development goals.

92. A key contribution of the SNC is the opportunity to generate awareness, and identify feasible strategies to include Climate Change as part of a sustainable development path. While governments must build the initial frameworks for sustainable development, the private productive sector and civil society are key players in bringing about the economic, social and political viability of these plans.

93. This output will design quantitative and / or qualitative indicators to measure the results expected from the SNC process and the impact of the Second National Communication in the development process. These indicators will be measure these achievements and impacts in different moments of the process, as follows:

2. During the process of developing the Second National Communication, through the evaluation of process indicators detailed in the logical framework. These indicators are aimed to measure the impact, within the scope of the Second National Communication activities, on technical capacity, institutional strengthening, policy-making, public awareness, community participation, and research activities. As an example of indicators outlined in the Logical framework are: level of awareness of climate change issues, authors of the SNC, number of people and institutions trained, number of people and institutions that participate in the development of the SNC, options or strategies endorsed by ministries and regional (river basin) governments, technical reports generated and disseminated, among others.
3. Indicators to assess the mainstreaming of Climate Change issues onto national and sectoral development planning. These indicators will assess the level of implementation of the measures identified during the Second National Communication and their impact on technical capacity, institutional strengthening, policy-making, public awareness, community participation, and research activities. They will focus specifically on assessing how the measures identified have been incorporated in the national, regional and sectoral policies in the country. Some examples of the indicators that could be used are: number and level of additional political and institutional endorsement to the SNC proposals; amount of public budget allocated to climate change measures (e.g. inventory management system); number of mitigation and adaptation options adopted per sector; number of SNC stakeholders that participate in the implementation of SNC proposals and results; amount of public budget and investment allocated following the incorporation of the climate factor into the Multi Annual and SNIP processes; number of references made to the SNC within scientific, technical and policy making publications; policies at the national, sectoral and regional (river basins) levels that incorporate climate change considerations (i.e. shift in national and regional investments because of adaptation requirements); level of awareness of climate change issues; new technical and scientific research developed; among others.
4. Indicators that measure the impact of the SCN, after the implementation of the policies and measures that incorporate climate change measures. These indicators will be aimed to measure the impact in the sustainable development and poverty processes (key strategies and indicators of the MDGs and the National Agreement) of the implementation of policies and measures that incorporate climate change considerations. Some examples of the indicators that could be used are: Reduction in estimated air pollution emissions or concentrations per unit of GHG; fuel savings associated to efficiency improvement inspired by the SNC; reduction in expenses in rehabilitation projects related to climate hazards; percentage of reduction in losses after a extreme weather event; decrease in deforestation areas, etc.

The activities that will be developed under this output are:

- a) Identification of key policies and indicators established in National Agreement to reduce poverty and improve sustainable development
- b) Identification of relevant dimensions for Peru between CC and MDGs
- c) Prioritization of these policies and indicators as the result of an assessment of their relation to CC issues and SNC objectives;

- d) Identification of key components and outcomes of the adaptation strategy, GHG inventory system and mitigation strategy;
- e) Development of criteria to establish a verifiable relation between key outcomes of SNC and key policies or strategies identified by the National Agreement;
- f) Definition of a set of feasible indicators in accordance with expected applicability, availability of information, replicability in other regions, areas or sectors and scope and relevance of the added value generated by the indicator.
- g) Development of a report to measure the achievements of the SNC during its implementation.
- h) Development, with the participation of relevant stakeholders, a methodology that includes the criteria and indicators identified, to follow up on these indicators after finishing the SNC.

Outcome 5: Prioritized Analysis of Constraints, Gaps and Needs of a National Observation System and Climate Change Research.

Output 5.1. Identification and prioritization of constraints, gaps and needs (technical, methodological, institutional and financial) of the climate information system and climate change research (see details in Section IV-Part XI)

94. Preliminary needs related to financial, technical and capacity were identified in the FNC, and were confirmed and amplified through the PROCLIM program, involving different national institutions. Among these needs, the number one priority is related to the climate observation system and climate research. The NSCC, in its first Strategic Line includes as an objective the "Improvement of observing capacities in order to increase the understanding of the adverse effects of the climate system and the prediction abilities". The UNFCCC also recognizes⁹ the need to support climate change research and systematic observation. This priority is also supported in the fact that Peru comprises 28 of 35 world climates. There is a gap between the national needs and the current capabilities to observe processes and generate useful data for climate analysis and research. Efforts within PROCLIM were focused on strengthening capacities for climate scenarios generation at the national and sub-national levels. Part of the main obstacles found for developing these studies in the prioritized areas, was the lack of adequate climate information or the access to it.

95. Climate Change research in Peru is very scarce at the moment, though informal mechanisms have been implemented to promote it. The PROCLIM program developed a preliminary proposal of a Scientific Research Agenda that considers the needs of research in climate change issues.

96. The SNC will help to develop an integrated evaluation of the current status of the Peruvian national climate observation network, and the specific needs for climate observation and research.

The associated activities are :

- a. Assessment of current state of the climate observation network, identifying gaps and needs for a National Climate Observation System-NCOS, that includes:
 - Coordination and meetings with the National Weather Service managing staff and training of its regional offices to support the development of the assessments
 - Generation of information required for the inventories of the observation network and for the NCOS (including institutional, normative, financial and technological aspects)

⁹ UNFCCC, Art. 4, par. 1 (g), Art. 5

- b. Dissemination of the preliminary climate research agenda document, validation, and update and follow up of the preliminary climate research agenda document and explore mechanisms to promote it.
- c. Disseminate the results, achievements and benefits of a NCOS and the research needs on Climate Change.

Output 5.2: Proposal of a multi - phase national climate system focusing in the previously identified constraints, gaps and needs. (See details in Section IV Part XI).

97. Based on the previous output, a proposal of a National Climate Observation System will be developed. It will engage the main public and private climate observation networks (land, sea and upper air) and will be focused on ensuring the accessibility and availability of climate data for climate research priorities.

The associated activities are:

- a. Identification of deficit and possibilities of a possible/optimum hydro meteorological Observation Network;
- b. Evaluation of the implementation and operation costs of the NCOS;
- c. Quantification of the requirements and process for implementing the Possible/Optimum NCOS.

Outcome 6 : Report - Second National Communication

98. To comply with the Preparation, approval and submission of the National Communication to the UNFCCC there is a local process that has to be considered involving not only technical but also political aspects. This process was identified during the First National Communication, where the relevant authorities that need to review, comment and approve the National Communication were identified according to the national circumstances, and the average period of time that the approval process undertakes was for the first time set. Therefore, the need of separating the preparation, revision and approval process as an output considering the activities involved and assigning them the necessary time and budgetary allocation.

Output 6.1: Preparation, revision, approval and dissemination of the Second National Communication

99. The main result of this output is the Document of the Peruvian Second National Communication approved and published in Spanish and English (only the Executive Summary), presented to the UNFCCC and disseminated.

This output will include the following activities:

- a) Expert review of the Studies;
- b) Writing of Second National Communication Report;
- c) Revision process (Ministries, National Commission on Climate Change, CONAM Board; Transectoral Environmental Commission)
- d) Document Approval process
- e) Submission to UNFCCC.
- f) Final presentation of the Second National Communication

Project Indicators, Risks and Assumptions

100. Project indicators, risks and assumptions are detailed in the Logical Framework attached as Section IV Part X. These have been developed for each outcome and output.

101. The main risks identified and assumptions made for the implementation of the SNC communication are almost applicable to all objectives and outcomes, and are very similar to the ones assumed for the PROCLIM Program (of a similar size and complexity of the SNC project).

102. Taking into account the work that had been developed in the preparation of the FNC and the experience acquired with the PROCLIM program, it is assumed that all the reports and studies to be prepared under this project will be completed timely and with the highest quality possible. CONAM has an already experienced project management unit (PROCLIM's) that will be responsible for the technical implementation of the project, providing the technical assistance needed, as well as taking care of planning, monitoring and evaluation activities. CONAM will establish bilateral agreements with co executive and participant institutions, where CONAM's responsibilities and theirs clearly outlined. In Most of them have acquired technical competences and have the experience, through the PROCLIM program, of working interrelated and in close coordination. Where competences are still to be developed or strengthen, capacity building activities and technical assistance have being included. To ensure the quality of reports and documents developed, expert reviews are also considered. These facts minimize the risk of not having the reports finished on time and of them not being of a high quality.

103. Another general assumption of the Project is that the political, financial and social conditions will not experience a great variability, showing a relative stability and that government regulations will not directly affect the project development. The institutional stability and commitment with the project is considered crucial for the project development. Bilateral inter institutional agreements mentioned above are meant to minimize the impact of any institutional change experienced by the different co executors and participants. During PROCLIM, some major changes of institutions and regulations were experienced, but the implementation unit in CONAM (UEP PROCLIM) was able to cope with them and the delays behind them, and the results obtained were those originally expected. On the other hand, another underlying assumption is that outputs will give us the expected impacts assuming no major natural disaster or political variation takes place.

Country Ownership: Country Eligibility and Country Drivenness

104. The National Environmental Council (CONAM) is in charge of the National System for Environmental Management, which is the framework to:

- Harmonize sector policies with the National Environmental Policy
- Coordinate the management and decentralization of environmental capabilities in the different sectors.

105. This system, based on a participative and socially owned environmental management, is an excellent platform to deal with Climate Change.

106. One of the early activities of the NCCC, was to support the development and presentation of Peru's First National Communication (FNC) in 2001. The FNC focused on developing the National GHG inventory with base year 1994 and presenting information on national circumstances and environmental law in Peru. A preliminary assessment of the impacts of El Niño and glacier retreat was also reported, along with a brief analysis on mitigation options, as well as financial and technological needs and limitations.

107. Another task of the NCCC was to develop the National Strategy on Climate Change (Supreme Decree 086-2003-PCM) that serves as a framework for all the policies and activities performed in Peru regarding climate change. To ensure its long term breath and socio-political ownership, this strategy was based on Country Policies 10 and 19 (addressing Poverty Reduction and Sustainable Development) of the National Agreement. An important part of this strategy is being worked within the framework of the enabling activity named "Peruvian Program on Climate Change and Air Quality – PROCLIM"¹⁰ (supported by Dutch Cooperation, 2003 – 2005). The program, coordinated by CONAM, seeks to strengthen national capabilities for an effective management of human, institutional, and financial resources to face climate change and air quality issues in priority geographic areas and cities of Peru. Among the latest achievements of the program are:

- A National Emissions Inventory integrating GHG and Air Pollutants Emissions with base year 2000.
- A deforestation map with base year 2000.
- Climate change scenarios, downscaled from Global Circulation Models (GCM models)
- Vulnerability assessments and adaptation proposals for the basins of Piura and Mantaro.
- Public awareness campaign on climate change in the Piura and Mantaro river basins.
- Climate change scenarios and water resources availability models for the Santa River Basin.

108. Much of Peru's actions on climate change have been developed in the context of the FNC and the PROCLIM Program with the support of ongoing public awareness efforts.

109. The contents of the public awareness campaigns in two pilot areas have been fed by the ongoing results on local vulnerability and adaptation assessments. The first steps to draft the most effective public awareness campaign were based on the consideration of actual impacts and future ones based on regional climate change scenarios.

110. Available information was used to generate participative dissemination strategies translating initial technical and scientific vulnerability knowledge into feasible communication products. This information was complementary to the public awareness campaign comprising a participative campaign design, training of local leaders and authorities, as well as press and media releases.

111. Climate change can jeopardize the chances for the sustainable development of Peru, thus the nation must incorporate climate change issues into its development and poverty reduction processes. Activities so far have generated momentum among 70 institutions currently working on Climate Change that can be built upon by the SNC. However, much of the supporting information to persuade high decision making levels to achieve this goal is still to be generated on the short term. The Second National Communication is viewed as a key milestone in the route to that accomplishment.

Sustainability

112. The SNC is building upon what has been achieved with the FNC and the bilateral cooperation for the National Program on Climate Change and Air Quality – PROCLIM, applying the experiences already gained and lessons learned in both processes.

¹⁰ PROCLIM was conceptually designed by 13 public and private Peruvian institutions seeking the internalization of the issues of Climate Change and Air Quality in the management of their respective jurisdictions.

113. In order to ensure institutional sustainability, the SNC will be executed using the same institutional arrangement that the PROCLIM program, coordinated by the National Environmental Council, has been applying successfully for the last three years. This means that the SNC will maintain strategic partnerships and agreements with the co-executors of PROCLIM, taking advantage of and strengthening the technical and managerial capacities already built. The incorporation of now qualified personnel (consultants trained by PROCLIM) into some of these institutions, and the mechanisms and team culture implemented to coordinate and relate tasks have set the ground for a participative development of the SCN.

114. Moreover, to ensure the effective and compromised implementation of the Second National Communication, the co-executors and new collaborators have been part of the design of this project document; the co-executors have committed a matching contributions for the implementation and most of them have subscribed a letter of intent to assist in jointly implementing the project. Formal agreements will be signed when funding becomes available. Current and new actors have expressed their will to participate in further steps of the Climate Change Agenda, with some of them having incorporated certain activities in their operational and budgetary plans.

115. Social sustainability will be ensured by applying learning-by-doing processes and broad but focused participation mechanisms, making stakeholders understand from the beginning the importance of the NC, what is expected from them, the use of information for their own purposes, and the mechanisms that are to be implemented to ensure their active participation. This approach has been successful in raising public awareness on climate change in selected areas and sectors of Peru. Public awareness will be sustained by social networks with growing relationships to local governments, empowered to disseminate basic knowledge and measures as part of adaptation and mitigation processes. Focused training exercises, a web page and an effective information archiving system will be used to collect and disseminate whatever related information is available and improve knowledge on the problems and solutions.

116. Environmental sustainability is to be achieved though generating methodologies and information on climate change that influences decision making processes. Efforts will be focused on ongoing processes in the areas of Air Quality, Risk Management Planning, and the Biodiversity and Desertification Conventions, among others.

117. Financial sustainability of the National Communication process is aimed to be achieved in the longer term with the inclusion of high level ministry representatives in the co-execution of the SNC project, especially from the Ministry of Economy and Finance. They will be in charge of developing studies to demonstrate the benefits of incorporating climate change in the development, planning and building of instruments to allocate public budget taking into account climate change vulnerabilities and opportunities, and making investment climate-proof. The development of indicators and evaluation of the impact of the NC into national policies will be also performed by high level representatives of these ministries and the National Commission on Climate Change.

Replicability

118. The Peruvian SNC considers a holistic and decentralized approach to climate change issues, including adaptation and mitigation issues. Due to the diverse geographical, cultural, social and economic conditions that Peru presents, a "one fits all" approach is not a viable option for Peru.

119. The project proposes to cover a wide range of representative national conditions including as replicable assets, the methodological frameworks for V&A and mitigation assessments, inventory development, participatory strategies and experiences, and activities to mainstream climate change into regional and sector development processes. The efforts to develop a National GHG Inventory System, to

demonstrate the benefit of incorporating Climate Change into development planning and evaluating its impacts before making investments, and indicators to evaluate the impact of NC into national policies, are tools designed to be used nationwide on a continuous basis, and as an example for other environmental issues.

120. Previous enabling activities have helped to achieve the national capacity for downscaling climate scenarios from Global Circulation Models. These capacities will be replicated in the national level and in prioritized regions to make projections and available climate predictions for decision making.

121. All the information generated and collected with the SNC will be systematized, diffused and made publicly available, and become an input for national and regional policies.

PART III: Management Arrangements

SNC Organization Process

122. CONAM, as Peru's national environmental council, has conducted the design of the SNC. The project document is the result of a common effort from several institutions that have contributed their resources and experience to the document's creation and organization, and have committed their institutional participation and support along the entire process.

123. The activities and objectives proposed are within the National Strategy on Climate Change and the National Environmental Agenda action plan up to 2007. Likewise, the organization of the present project has taken as reference the Environmental Management System Law, considering the competencies and legal attributions of the joint executive institutions in regard to its execution.

124. It is important to point out the participation in all stages of the project's organization process, both in joint working groups as well as in institutional and specialized groups in which coordination, consultation and proposals have taken place and in most cases were accepted by general consent.

125. This proposal, agreed by general consent and known by all representatives has brought clearness, as well as quality to the process, and therefore agreement amongst all participants. Section IV Part IV has a list of all project participants as well as a listing of all workshops that have taken place during the organization process.

Co Executive Entities and Participants in SNC

126. SNC execution will take place under CONAM. Nevertheless, according to set up objectives it will be necessary for several institutions both public and private to participate directly or indirectly participate in the project's execution. Depending on their participation and resources allocation from SNC, the participating entities in the project execution will be classified in two groups:

- ***Co executive Entities:*** Those entities in charge of preparing specific products needed in order to accomplish objectives set up by SNC. For developing these products they will require joint financing both from the entity as well as from the cooperating source. The established budget, arising from GEF, will be executed through CONAM according to internal procedures established for that purpose and which agree with the outlines established by UNDP and GEF.
- ***Participating Entities:*** Those entities that participate, within their field of competence, directly in the project's execution. They will not receive any financial resource from SNC. Nevertheless they will participate as main actors in several activities the execution of which is needed to accomplish the project's goal.

127. In both cases, CONAM will materialize the entities' commitment by means of Inter-Institutional Cooperation Agreements for Joint Executive Entities or by means of Commitment Letters for participating entities that will develop a specific activity within the project, without any resource allocation to them. This will ensure all the organizations' participation independently of their participation level along the process. (Refer to Section IV Part I).

128. In case of Inter-Institutional Cooperation bilateral agreements between CONAM and each of the joint executive entities, the latter can also agree with other institutions to reinforce some aspects related to SNC subject matter, such as the case of information exchange. The same applies for agreements with joint

executive entities; the parties agree that CONAM will, on demand of the joint executive entity, administer and be in charge of all needed expenses required by such entity to meet the budget established in order to fulfill such activities and obtain expected outcomes.

129. These bilateral agreements are the base tool that will allow establishing the conditions for activities' execution which will be made by joint executive entities counting with resources from SNC. Those agreements will gather the parties' responsibilities, the guidelines to be followed in order to execute the resources, and the responsibilities both from CONAM and from the joint executive entities. In addition, the agreements will include the following elements:

- Information or evaluation requests, audits to be made by CONAM which can also be extended to joint executive entities
- The information generated by joint executive entities within the Agreement framework will be available for CONAM and all other joint executive entities
- Some considerations included in the Agreement that will be subscribed by CONAM with the Cooperative Source are extended to the joint executive entities.
 - The Cooperative Source would be able to investigate within the Project framework, and the joint executive institutions should grant all related documents.
 - The Cooperative Source reserves the right to use all products developed within the SNC
 - Printed publications as well as all other publication medias should state the corresponding Cooperative Source (GEF and UNDP)
- Commitment and disposition to approach and include considerations and methodologies in executing their activities
- Commitment and disposition to approach and include considerations and methodologies in the SNC's objectives and activities' execution.
- Budget and activities to take place, considering flexible mechanisms for budget execution
- Appointment of responsible officials and their work status
- Commitment to include project activities in operative plans in their corresponding institutions
- Commitment to include, within future operative plans, tasks identified as necessary in the information obtained
- Commitment to a balanced policy for the hiring of professionals
- List of products and activities to take place
- Commitment to provide information and reports
- Commitment not to subcontract the activities obliged due to contract, allowing the hiring of individual support consultants
- Commitment to present established products as well as the final report on activities made.
- Commitment to participate in periodical meetings for consultation, workshops, coordination meetings and all other activities related to the project execution.

130. The responsibility distribution for co executor and participating institutions in SNC is listed in Section IV Part IV. Likewise, the Organization Chart (refer to Section IV Part II) shows the whole project structure, including the proposed plan for executing the SNC.

SNC Coordination

131. CONAM will assume technical and funds' management responsibility, working in along the guidelines established by UNDP and GEF. Likewise, CONAM will be responsible for fulfilling the project's goals, its sustainability and the efficient use of resources.

132. CONAM, as the national environmental authority, is in charge of promoting sustainable development in close coordination with government and civil society. In that sense, it is authorized to enter agreements, contracts and other administrative and legal procedures in order to fulfill their goals and objectives. CONAM, as responsible entity for SNC execution, and considering the terms and commitments involved in the execution of such a complex project as this is proposes to create an Executive Unit which will directly report to the Climate Change Unit and CONAM's Executive Office.

133. The Executive Unit would be a specialized entity within CONAM responsible for project direction and management. It will provide technical and administrative assistance to joint executive entities participating in the process, thus ensuring proper and efficient project execution at the actions and activities level. Its object is to guarantee results and expected impacts in order to achieve planned objectives.

134. The project's organizational structure is detailed in the Project's Organizational Chart (See Section IV Part II). The main duties for the project Executive Unit are as follows:

- Direct, plan, administer and coordinate all types of activities and tasks related to SNC execution
- Provide technical support to joint executive entities when executing their corresponding activities
- Ensure and verify that the budgets are executed according to foreseen activities
- Facilitate inter and intra institutional coordination for effective project administration
- Monitor and evaluate Program advances in their Executive Unit, Joint Executive Entity and Participant level
- Coordinate the Agreement preparation and follow up their corresponding fulfillment

135. The Project Coordinator will directly report to the Climate Change Unit and to CONAM Executive Secretary. He/she will be responsible for directing the UEP in order to fulfill the project's objectives through the coordination and follow up of activities and tasks.

136. The Project Coordinator will be supported by an assistant who will mainly be in charge of providing operative and secretarial support during the project's execution.

137. Likewise, he/she will also be assisted by a management planner, who will be in charge of planning the project as well as fulfilling the procedures established by UNDP, CONAM and the joint executive entities. He/she will control expense execution and evaluate budget changes, and ensure Agreements and their respective follow up in order to fulfill project tasks.

138. In addition, the Project Coordinator will be assisted by two Thematic Units: Vulnerability and Adaptation and Inventory and Mitigation. (Refer to Section IV Part III). Each unit will have a Thematic Coordinator whose main tasks will be to technically support joint executive entities and participants, as well as coordinate and establish activities for the Project's development.

139. In order to accord proper acknowledgement to GEF for providing funding, a GEF logo should appear on all relevant GEF project publications, and, but not limited to, project hardware and vehicles purchased with GEF funds. Any citation on publications regarding project funding by GEF should also

accord proper acknowledgement to GEF. The UNDP logo should be more prominent and slightly separated from the GEF logo if possible, as UN visibility is important for security purposes.

PART IV: Monitoring and Evaluation Plan and Budget

140. Because of the institutional complexity of SNC, it is necessary to establish an effective evaluation and monitoring system, which will ensure the timely and quality fulfillment of the foreseen objectives. Therefore, in addition to the standard UNDP/GEF M&E practices for Full size Projects, an internal monitoring system will be put in place under CONAM's direction, as SNC coordinator entity. It will consider the monitoring model, evaluation and experiences successfully established and developed during the execution of the National Capabilities' Reinforcement Program to manage the Impact of Climate Change and Air Pollution - PROCLIM, executed by CONAM during the period 2003-2005, with a financing of 2 millions dollars obtained by means of a non-reimbursement contribution agreement from Dutch cooperation.

141. Activities both from CONAM as well as from joint executing entities have been prepared under standard formats which include activity timelines specifically detailing planned tasks, expected goals, duration, expenses, budgets, activities' timelines and expenses execution schedules. In addition, the Logical Framework turns into the main tool on which project evaluation and monitoring will be based.

142. In addition, it is important to point out that many activities are related among themselves and they are subject to results from other participants. This ensures the integration of planned objectives but requires special attention to planning.

143. In the SNC the monitoring and evaluation system will consider three different action levels which require different formats and methodologies:

- ***Total Project Level:*** Evaluation and monitoring of outcome's fulfillment based on outputs, as related to their contribution to achieve the project's objective.
- ***Outcome Level:*** Evaluation and monitoring of outputs and activities established in the project, related to their contribution in order to achieve the related outcome.
- ***Output Level:*** Evaluation and monitoring of activities, their related sub activities and tasks established in the project for its implementation.

144. Obtained results will have different levels. They start from partial outcome monitoring and output advances, activities and tasks that will allow us to have established products in the required time. For that purpose, activities, indicators and verifying sources for each outcome have been assigned in all different levels (as it is established in logical background).

145. As of established formats, UEP-CONAM will plan and daily monitor the project and internal project evaluations which will take place according to the following information:

For Planning:

Develop an Initial Induction Workshop with joint executors and all other project participants.

For Monitoring:

Documents that will be used as reference for comparing specific outcomes and outputs in a certain period of time:

Project Level	Outcome Level	Output Level
Program's Logical Framework	Outcome Logical Framework	Annual Operative Plan
Project documents	Outcome Results	Output Logical Framework
Joint results network ¹¹	Network ¹²	Activities Schedule
Project Budget	Outcomes Budget	Output Budget

150. Formats for periodical reports that all joint executive entities must provide UEP-CONAM with, in order to evaluate efficacy and effectiveness in their corresponding activities execution. The following standardized formats will be used:

- Monthly expenses report format
- Monthly progress report format
- Quarterly progress evolution format

151. It is important to point out that formats to be applied to joint executive entities will also be used by UEP thematic coordinators, in relation to their specific objectives, and by project management for monthly expenses reporting.

For evaluation:

1. Organization of semi-annual workshops in order to totally evaluate the project's specific progress towards its objectives.
2. Organization of meetings with joint executive entities and participants to assess the achievement of objectives and their real impact.
3. Organization of field trips in order to verify the fulfillment, progress to and impact of activities in the intervention areas.

152. The already described procedure summarizes the activities and procedures that will be used by Project's UEP in order to apply "Day to day monitoring of implementation progress". In the same way, Section IV Part VII includes a detailed monitoring and follow up flowchart for the SNC. See further information refer to Section IV Part VI *M&E Plan and Budget for FSP*.

¹¹ The results web is under development

¹² The results web of the objectives are under development

PART V: Legal Context

153. This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement between the Government of Peru and the United Nations Development Program, signed by the parties on May 24th 1993. The host country implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating agency described in that Agreement.
154. UNDP acts in this Project as Implementing Agency of the Global Environment Facility (GEF), and all rights and privileges pertaining to UNDP as per the terms of the SBAA shall be extended mutatis mutandis to GEF.
155. The UNDP Resident Representative in Peru is authorized to effect in writing the following types of revisions to this Project Document, provided that he/she has verified the agreement thereto by the UNDP-GEF Unit and is assured that the other signatories to the Project Document have no objection to the proposed changes:
 - a) Revision of, or addition to, any of the annexes to the Project Document;
 - b) Revisions which do not involve significant changes in the immediate objectives, outcomes, or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation.
 - c) Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and
 - d) Inclusion of additional annexes and attachments only as set out here in this Project Document

SECTION II: STRATEGIC RESULTS FRAMEWORK AND GEF INCREMENT

PART I: Incremental Cost Analysis

Not applied. Enabling Activity for National Communication

PART II: Logical Framework Analysis

Refer to Annex B of the Executive Summary and for further details see Section IV Part X

SECTION III: TOTAL BUDGET AND WORKPLAN

(For further details refer to Section IV Part XII)

Award ID:	00042776							
Project Title:	PIMS 3528 CC FSP: Second National Communication of Peru to the UNFCCC							
Project ID:	00049641							
Executing Agency:	CONAM							
GEF Outcome/ATLAS Activity	Responsible Party (Implementing Agency)	Source of Funds	ATLAS Budgetary Account Code	ERP/ATLAS Budget Description/Input	2006	2007	2008	TOTAL
Outcome 1: Adaptation Strategies for prioritized areas and sectors	CONAM	GEF	71200	International Consultants	8,200	15,000	0	23,200
	SENAMHI GR SAN MARTIN GR ANCASH		71300	Local Consultants	182,200	164,842	29,500	376,542
			71400	Contractual Services-Indiv	10,920	46,590	12,920	70,430
			71600	Travel	59,761	21,445	540	81,746
			72100	Contractual Services-Companies	0	2,400	0	2,400
			72400	Comm. & Audio Visual Equipment	1,750	3,060	0	4,810
			72500	Supplies	7,360	7,650	0	15,010
			72800	InfoTech Equipment	92,360	0	0	92,360
			74200	Audiovisual & Print Prod Costs	5,951	10,201	27,350	43,502
Sub-Total					368,502	271,188	70,310	710,000
Outcome 2: Development of a National GHG Inventory Management System	CONAM	GEF	71300	Local Consultants	61,200	4,000	0	65,200
	INRENA		71400	Contractual Services-Indiv	10,310	1,100	0	11,410
			71600	Travel	7,360	0	0	7,360
			72500	Supplies	8,550	880	0	9,430
			72800	InfoTech Equipment	1,800	0	0	1,800
			74200	Audiovisual & Print Prod Costs	1,800	3,000	0	4,800
Sub-Total					91,020	8,980	0	100,000
Outcome 3: Strategy to mitigate GHG emissions in the Energy, Industry, Transport and LULUCF sectors.	CONAM	GEF	71300	Local Consultants	51,100	105,350	16,000	172,450
	INRENA		71400	Contractual Services-Indiv.	2,000	30,420	4,000	36,420
			71600	Travel	55,616	23,220	0	78,836
			72100	Contractual Services-Companies	21,000	0	0	21,000
			72400	Comm. & Audio Visual Equipment	3,000	0	0	3,000
			72500	Supplies	6,694	4,500	0	11,194
			72800	InfoTech Equipment	26,300	6,300	0	32,600
			74200	Audiovisual & Print Prod Costs	6,000	6,000	8,000	20,000
Sub-Total					171,710	175,790	28,000	375,500
Outcome 4:								

Description of Steps taken to integrate climate change and development	CONAM	GEF	71300	Local Consultants	25,400	18,600	14,000	58,000
			71400	Contractual Services	2,400	2,400	10,800	15,600
			71600	Travel	3,660	15,580	840	20,080
			72400	Comm. & Audio Visual Equipment	2,000	0	0	2,000
			72500	Supplies	0	0	1,000	1,000
			72800	InfoTech Equipment	3,320	0	0	3,320
			Sub-Total					36,780
Outcome 5: Prioritized Analysis of Constraints, Gaps and Needs of a National Observation System and Climate Change	CONAM	GEF	71300	Local Consultants	28,700	22,200	0	50,900
			71400	Contractual Services-Indiv.	7,625	300	0	7,925
			71600	Travel	27,180	590	0	27,770
			72400	Comm. & Audio Visual Equipment	1,300	600	0	1,900
			72500	Supplies	1,035	0	0	1,035
			72800	InfoTech Equipment	780	6,000	0	6,780
			74200	Audiovisual & Print Prod Costs	190	0	0	190
Sub-Total					66,810	29,690	0	96,500
Outcome 6 : Report - Second National Communication	CONAM	GEF	71300	Local Consultants	0	4,500	31,300	35,800
			71400	Contractual Services Indiv.	0	0	2,000	2,000
			72400	Comm. & Audio Visual Equipment	0	0	300	300
			72500	Supplies	0	0	10,200	10,200
			74500	Miscellaneous Expenses	0	0	1,700	1,700
			Sub-Total					0
Technical Assistance	CONAM	GEF	71200	International Consultants	5,000	5,000	0	10,000
			71300	Local Consultants	0	0	28,400	28,400
			71600	Travel	1,750	1,750	0	3,500
			72500	Supplies	2,040	2,040	1,020	5,100
			74000	Miscellaneous Expenses	1,200	1,200	600	3,000
Sub-Total					9,990	9,990	30,020	40,000
Project Admin.	CONAM	GEF	71300	Local Consultants	85,200	85,200	14,200	184,600
			71600	Travel	1,600	1,600	800	4,000
			72500	Supplies	2,880	2,880	1,440	7,200
			72800	InfoTech Equipment	10,200	0	0	10,200
			74000	Miscellaneous Expenses	4,800	4,800	2,400	12,000
Sub-Total					104,680	94,480	18,840	218,000
Monitoring & Evaluation	CONAM	GEF	71200	International Consultants	0	20,000	20,000	40,000
			71300	Local Consultants	13,500	13,500	4,500	31,500
			71400	Contractual Services-Indiv.	3,000	3,000	3,000	9,000
			71600	Travel	2,250	6,750	4,500	13,500
			74100	Professional Services (Audit)	0	2,000	4,000	6,000
Sub-Total					18,750	45,250	36,000	100,000
TOTAL					868,242	676,448	255,310	1,800,000

SECTION IV: ADDITIONAL INFORMATION

This section includes the following parts:

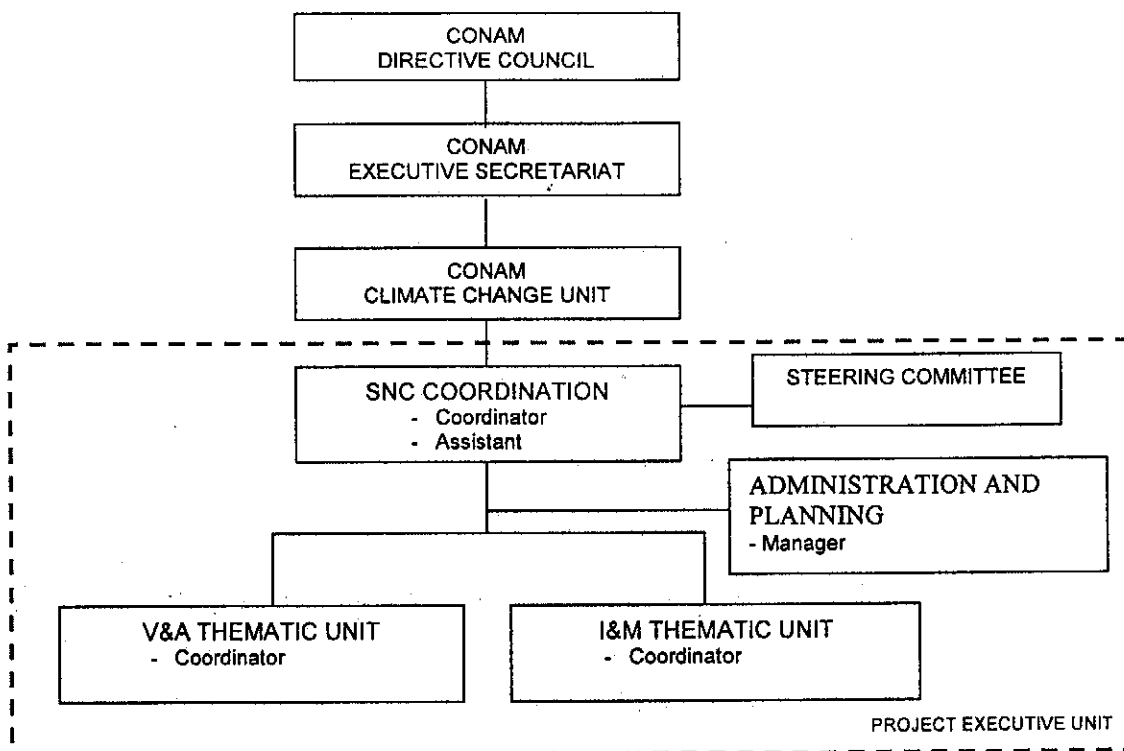
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|------------------|---|
| Part I | Endorsement Letters (See endorsement letters attached) |
| Part II | Project Organization Chart |
| Part III | Terms of References for key project staff |
| Part IV | Stakeholders Involvement Plan (includes the Stakeholders Matrix) |
| Part V | Barrier Analysis |
| Part VI | M&E Plan & Budget for FSP |
| Part VII | Monitoring Follow up Flow chart |
| Part VIII | Project Institutional Background |
| Part IX | Map of Prioritized Areas for V&A Assessment |
| Part X | Logical Framework |
| Part XI | Detailed Outcomes |
| Part XII | Detailed Budget |

Part I Endorsement Letters

(See endorsement letters attached)

PART II: Project Organization Chart

TABLE N° 1: PROJECT ORGANIZATION CHART



PART III - Terms of Reference for Key Project Staff

TERMS OF REFERENCE
Second National Communication of Climate Change Project

I. General Project Coordinator

1) Functional Competences

- a. Management of knowledge and learning
 - Good knowledge of issues related to the environment and development of Peru.
 - Good knowledge of national capabilities for the application of the National Strategy for Climate Change.
 - Familiarity with the international CMNUCC negotiations.
- b. Effectiveness for development and operation
 - Ability for strategic planning, change processes, management by results and reports.
 - Ability to lead the preparation of environmental projects, and supervise their implementation, monitoring and evaluation.
- c. Management and Leadership
 - Builds strong relationships with partners, focuses on impact and results and responds positively to feedback.
 - Excellent written and oral communication skills.
 - Proven coordination, organization, construction, leadership, teamwork and networking skills.
 - Proven experience in managing projects financed by international cooperation.
 - Strong abilities to report progress to donors, and document learned lessons.
 - Proven experience in the establishment of strategic alliances and generation of synergies with other projects and/or activities.
 - Proven experience in the organization and facilitation of events (i.e. workshops).

2) Qualifications and Experience

a. Education:

Professional with specialized studies in environmental affairs and/or development (Masters Degree desirable) and/or equivalent experience.

b. Experience:

- Relevant experience in environmental management of at least 5 years, from which 3 must be in coordination and/or project management positions.
- No less than 3 years experience in matters related to Climate Change.
- Vast experience in the development, implantation and management of projects (with direct experience in project management, preferably on international cooperation projects of over one million dollars).
- Experience in the process of developing regulations associated with environmental and development issues.

- Proven experience in leading multidisciplinary teams and in working jointly with other public and private institutions.
- Previous work experience with the Global Environment Fund (GEF) will be considered a plus.
- Facilitation and coordination abilities, entrepreneurial spirit and proven teamwork abilities.

c. Language Requirements

Fluent in Spanish and technical English both read and written (desirable).

3) Responsibilities:

- a. Plan, organize, manage and supervise the execution of the project as well as its performance.
- b. Represent the CONAM in meetings and discussions related to the implementation of the project.
- c. Prepare and propose the project's general plan and the corresponding annual plans, ensuring a logic consistency with the project's timeline and including quantitative and measurable indicators with their respective means of verification in agreement with the CONAM and GEF/PNUD requirements.
- d. Periodically report to the CONAM and the PNUD the advances made on obtaining products, results and accomplishments made on the project's objectives in agreement with the formats provided by the CONAM and the PNUD/GEF respectively.
- e. Prepare reports of advances made on the project in accordance with the PNUD/GEF requirements.
- f. Systemize lessons learned and the best practices applied in the execution of the project.
- g. Perform follow ups on the United Nations Climate Change Conventions negotiation processes.
- h. Coordinate technical activities and the general execution of the project.
- i. Organize, coordinate and supervise the technical and operational activities of the Project Implementation Unit (PIU).
- j. Provide assistance on Climate change issues to public and private institutions which are part of the project's implementation.
- k. Prepare detailed reference terms for consultants and institutions that will implement the activities of the project.
- l. Negotiate the corresponding contracts and supervise the correct implementation of the activities.
- m. Report to the Executive Secretary of the CONAM the advances and results of the activities, and recommend improvements in the areas under your responsibility.

II. Vulnerability and Adaptation Coordinator

1) Functional Competences

- a. Management of knowledge and learning
 - Good knowledge of issues related to the environment and development of Peru.
 - Command of issues related to the management of natural disasters, Climate change, vulnerability of population and sectors, adaptations measures.

- Familiar with national capabilities or lack of capabilities for the application of the National Strategy for Climate Change, in particular on issues related to Vulnerability and Adaptation.
 - Familiar with the CMNUCC and with its international negotiations desirable.
 - Familiar with the methodologies for the evaluation of vulnerability and adaptation to Climate change (IPCC, APF, UNDP, etc.) desirable.
- b. Effectiveness for development and operation
- Ability to plan and manage by results.
 - Ability to supervise the implementation, monitoring and evaluation of activities under your responsibility implemented by consultants and institutions.
- c. Management and Leadership
- Builds solid relationships with partners, focuses on impact and results and responds positively to feedback.
 - Good oral and written communication skills.
 - Proven teamwork capabilities.
 - Solid skills in analysis and systemizing information, experiences and lessons learned in aspects of vulnerability and adaptation.
 - Work under pressure and meeting of deadlines.

2) Qualifications and Experience

- a. Education:
Professional with studies specializing in environmental affairs and/or development (Master's Degree desirable)
- b. Experience:
- Proven experience in coordination of environmental and/or development management activities, preferably, on international cooperation projects.
 - No less than 3 years of experience in activities related to vulnerability evaluation and adaptation to Climate change, risk management, territorial ordinance and ecological economic zoning.
 - Experience in processes of developing policies associated with environmental issues and their integration into policies/plans of development in policies by sector.
 - Proven experience in the coordination of multidisciplinary and work teams with other public and private institutions.
 - Proper experience in working with government structures at regional and central level, and work with NGOs and/or private sector.
- c. Language requirements:
- Fluent in Spanish and technical English both read and written (desirable).

3) Responsibilities:

- a. Report to the General Coordinator.
- b. Coordinate and provide technical support to the implementing and/or participating project entities in aspects referring to:
- Adopt a solid scientific approach to identify the short and long term effects of the Climate Change in Peru.

- Support the identification and evaluation-selection processes of strategies and adaptation measures to reduce the vulnerability of the country and take advantage of the opportunities that the Climate Change might offer.
- c. Represent the CONAM in meetings and discussions related to the implementation of Vulnerability and Adaptation activities of the project.
- d. Support the General Coordination in the making of the project's general plan and the annual operative plans corresponding to the activities related to vulnerability and adaptation of the project.
- e. Support the General Coordination in the preparation of detailed reference terms for the specialized consultants in the different subjects associated with vulnerability and adaptation and institutions that will implement the activities of the project related to vulnerability and adaptation.
- f. Perform follow ups of consultants and institutions implementing subjects of adaptation and vulnerability, ensuring that they comply with the delivery of quality products as is required in the Terms of Reference and/or project document and subprojects, as applicable.
- g. Perform follow ups and monitor the activities and corresponding results to reach the goals related to your field.
- h. Report to the National Project Directory and to the UEP General Coordination, the advances and results of the activities, and recommend improvements in aspects under your responsibility.
- i. Support the preparation of the SCN document and the technical and advance reports of the project, when necessary.

III. Vulnerability and Adaptation Specialist

1) Functional Competences:

- a. Handling of knowledge and learning
 - Ability to learn fast, proactive spirit.
 - Proven ability in analytical and editorial work.
- b. Effectiveness in development and operation
 - Ability to manage by results.
- c. Management and Leadership
 - Good oral and written communication skills.
 - Proven capacity to work as a team.

2) Qualifications and Experience:

- a. Education:
 - Bachelors Degree in Environmental Engineering or related field with work experience and/or specialized studies in environmental issues.
- b. Experience:
 - Proven experience in environmental management activities, preferably, in international cooperation projects.

- Experience in the execution of activities and/or projects of climate change, preferably in activities related with integrated evaluations of vulnerability and adaptation and/or risk management.
 - Familiarity with computers, text processing and SIG.
- c. Language requirements:
- Fluent in Spanish and advanced English (desirable)

3) Responsibilities:

- a. Support the Vulnerability and Adaptation Coordinator in monitoring and evaluating activities, as well as the achievement of goals related to the foreseen results of vulnerability and adaptation in accordance with, if necessary, the other project components.
- b. Develop specific technical tasks that support the vulnerability and adaptation coordinator, under his/her supervision and guidelines, among which initially you can find:
- Review and systematization of the methodologies used in the vulnerability and adaptation evaluations in Peru, systematization and comparison of different methodologies used at international level, and review of V & A evaluations performed previously. Product: Report of revision on previous evaluations and comparison with international methodologies and methodological frame scheme for the realization of the V&A evaluations in watersheds, sectors and Adaptation Strategy.
 - Support the coordination of Climate characterization development processes and the generation of Climate scenarios. Product: Report of Climate information requirements for the Vulnerability and Adaptation evaluations and reports of advances in processes.
 - Support the Coordination of development processes for the integrated local evaluations of the Mayo and Santa Watersheds. Product: socio economic and environmental information required for the development of the systemized V&A evaluations and process advance reports (2 per year).
 - Develop vulnerability and adaptation evaluation document for the Santa and Mayo Watersheds. Product: Mayo and Santa Evaluations Report.
 - Contribute to the identification and development of V&A evaluation indicators, participating institutions and number of events and activities developed. Product: Design of V&A evaluation indicators, institutions and realized events report.
 - Build basic training module and experiences in Peru about Vulnerability and adaptation processes for the Climate change. Product: PowerPoint presentation.
 - Review adaptation strategies developed in other parts of the world and develop recommendation for the preparation of the adaptation strategy for watersheds and prioritized sectors. Product: Document that contains guideline recommendations of what needs to be included in the strategy in Peru's specific case.
 - Develop reports of workshops and training sessions of the component. Product: Workshop reports.
 - Systemize the different V&A proposals developed within the projects guidelines, as well comments received to that matter. Product: Matrix of adaptation proposals developed, and report of comments received.

- Keep a log of the institutions and individual participants by institution and their level of participation. Product: Database of Institutions and individual participants in the vulnerability and adaptation activities.
 - Systemize all the results, products and documents prepared within the SNC guidelines referring to the V&A component. Product: Coded list of products, documents and bibliography of the V&A component.
- c. Translate the information that is generated to a simple language, summarized and graphic (preferably, containing management of geographical information, for the development of maps). Product: Various materials for brochures, presentations, executive summaries, press releases, information bulletins.

IV. Inventory and Mitigation Coordinator

1) Functional Competences:

- a. Management of knowledge and training
- Good knowledge of issues related to the environmental and development in Peru.
 - Good knowledge of national capabilities - including lack of capabilities for the application of the National Strategy for Climate Change, in particular on issues related to inventory and mitigation.
 - Familiar with the CMNUCC and its international negotiations desirable.
 - Knowledge of methodologies for the development of inventories of emissions and desirable mitigation evaluation options (IPCC, OMS, LEAP, etc.)
- b. Development and operational effectiveness
- Planning and management by results abilities.
 - Ability to supervise the implementation, monitoring and evaluation of activities under your responsibility implemented by consultants and institutions.
- c. Management and Leadership
- Builds solid relationships with partners, focused on impact and results, responds positively to feedback.
 - Good oral and written communication skills.
 - Proven capabilities to work as a team.
 - Solid analytical and systematization of information, experiences and lessons learned skills in matters of inventory and mitigation.
 - Work well under pressure and meet deadlines.

2) Qualifications and Experience:

- a. Education:
- Professional with studies specializing in environmental issues and/or development (Masters Degree desirable) and/or equivalent experience.
- b. Experience:
- Proven experience in coordination of activities of environmental management, preferably, in projects of international cooperation.

- No less than 3 years of experience in issues related to air pollution, evaluation of emanating gas sources, incentives and measures to reduce or control the emissions of GEI and/or air pollutants.
 - Experience in the process of developing regulations and programs associated with environmental issues related to pollution control and the reduction of emissions by diverse sources.
 - Proven experience in the coordination of multidisciplinary and work teams with other public and private institutions.
 - Proper work experience with government structures at regional and central levels, and work with NGOs and/or private sector.
- c. Language requirements:
- Fluent in Spanish, English (written and read) abilities at least at a technical level (desirable)

3) Responsibilities:

- a. Report to the General Coordinator.
- b. Coordinate and provide entities implementing and/or participating in the project the technical support necessary in aspects referring to:
 - Realization/evaluation of inventory of emissions of GEI gases.
 - Support processes of identification and evaluation of strategies and GEI mitigation measures, mainly in the energy, transportation, and forest sectors.
- c. Represent the CONAM in meetings and discussions related to the implementation of inventory and GEI mitigation activities of the project.
- d. Support the General Coordination in the making of the project's general plan and the annual operation plans corresponding to the activities concerning inventory and mitigation.
- e. Support the General Coordination in the preparation of detailed terms of reference for consultants and institutions that will implement the activities of the project related to inventory and mitigation.
- f. Perform follow ups, monitor and evaluate consultants and institutions implementing subjects of inventory and mitigation, ensuring that they comply with the delivery of quality products as required in the Terms of Reference and/or project document and subprojects, as applicable.
- g. Report to the project's National Directory and to the General Coordination of the UEP, the advances and results of activities, and recommend improvements in areas under your responsibility.
- h. Support the preparation of the SCN document and the technical and advance reports, as necessary.

V. Inventory and Mitigation Specialist

1) Functional Competences

- a. Management of knowledge and learning
 - Ability to learn fast, proactive spirit.
 - Proven ability for analytical and editorial work.

- b. Development and Operational Effectiveness
 - Ability to manage by results.
 - c. Management
 - Good oral and written communication skills.
 - Proven teamwork capabilities.
- 2) Qualifications and Experience:
- a. Education:
 - Bachelors Degree in Environmental Engineering or similar, with work experience and/or studies specializing in environmental issues.
 - b. Experience:
 - Proven experience in environmental management activities, preferably on projects of international cooperation.
 - Experience in the execution of Climate change activities and/or projects, preferably in activities related to inventories of emission and air pollution.
 - Familiar with Pollutant dispersion models and inventory of emissions methodology.
 - c. Language requirements:
 - Fluent in Spanish, advanced English (desirable)
- 3) Responsibilities:
- a. Support monitoring and evaluation activities, as well as the accomplishment of objectives related to inventories and mitigation in agreement, if necessary, with other project components.
 - b. Be in charge of specific technical tasks that support the inventory and mitigation coordinator, under his/hers direction and guidelines, among which initially you can find:
 - Review of the IPCC's manual of Good Practices and development of the guide for inventory evaluation. Product: Guidelines for the Review of Inventory of Emissions.
 - Review the Inventory of Emissions based on the year 2000, review of the 1994 inventory, and analyzes its agreement with the IPCC Guides for the preparation of Inventories and Good Practices Manual. Product: Report of Inventory Review and Improvement proposal.
 - Develop the proposing document for the National Inventory of Integrated Emissions Scheme which includes an executive summary, the inventory chapters according to the IPCC categories, projections and scenarios of emissions and possible mitigation options prioritized. Product: Scheme of National Inventory of Integrated Emissions Document.
 - Develop specific inventory chapters from the year 2000: energy, transportation, industrial processes and waist sectors. Products: Chapters corresponding to the Inventory of Emissions developed for review.

- Prepare a guide that allows the development of emission scenarios and projections and periodical follow ups and evaluations. Product: Guide for the development of scenarios and projections of national GEI emissions
 - Review the previously developed documentation for the National Inventory System in the following sectors: Energy, Transportation, Industrial Processes and Waste, analyze advances, gaps and action proposals. Product: Report of needs and steps to follow.
 - Develop proposal for Control procedures and Quality assurance in results obtained in inventories in the energy, transportation, industrial processes and waste sectors. Product: Proposal of Control Procedures and Inventory Quality Assurance in the aforementioned sectors.
 - Develop workshop and component training session reports. Product: Workshop reports.
 - Develop a proposal for information gathering procedures relevant to the energetic sector. Product: Energy sector data gathering procedures guide.
 - Systemize the different mitigation proposals developed within the projects guidelines, as well as comments received on that matter. Product: Database of mitigation proposals developed, and a report of comments received.
 - Systemize the experience and I&M component development within the SCN guidelines. Product: Report of results, obstacles and opportunities presented during the execution of the I&M component activities.
 - Systemize all results, products and documents prepared within the SNC guidelines referring to the I&M component. Report: Coded list of I&M component products, documents and bibliography.
- c. Translate the generated information into a simple language, concise and graphic. Product: Various materials for brochures, presentations, executive summaries, press releases, information bulletins.

VI. Administrator

1) Competences and Experience

- Qualified professional with 5 years of experience in administration of similar activities or projects.
- Proven experience in administrative positions (i.e. account reports, quote preparation, preparation of financial reports, drafting contracts and similar tasks).
- Basic accounting knowledge.
- Full knowledge of planning systems and instruments, follow up and budget evaluation of institutional management.
- Experience in computerized administrative/accounting systems.
- Establish internal administrative procedures to properly control and monitor the project's expenses at the UEP and implementing entities level.
- Support the planning of internal UEP activities and the development of the General Plan of Operations, and the subprojects.
- At least 4 years of proven experience in Governmental Institutions, preferably in an institution that works with environmental issues.
- Proven experience, of at least 3 years, in project administration, preferably of international cooperation.
- Proven experience in institutional coordination, preferably with government entities.

- Knowledge in programming and budget preparation at an institutional and multi-institutional level.
- Knowledge in the acquisition of goods and the hiring of services, according to estate guidelines and/or international cooperation sources.
- Language requirements: Fluent Spanish and intermediate English.

2) Main responsibilities:

- Permanent communication with the National Director and the PNUD.
- Perform follow ups on agreements made with implementing and/or participating entities, usage of budget and counterpart contribution and support the General Coordinator in: Performing the necessary changes, prepare and present proposals for new agreements or letters of intent with additional institutions that the project identifies and incorporates and perform follow up to its review at the CONAM.
- Responsible for following the administrative procedures of the UEP in agreement with the current regulations and the operational procedures of the PNUD.
- The operational management of financial resources and materials of the entire projects, while coordinating and organizing the preparation and execution of the Operational Budget in coordination with the PNUD, to reach results, and the efficiency of product, goods and services previously established.
- Lead the administration and accounting operations of the project.
- Prepare the monthly cash flow.
- Check the monthly expense report sent by the PNUD.
- Prepare the fund distribution chart by results and activities.
- Control funds given to institutions for the execution of project activities.
- Supervise, verify, and approve financial reports sent by institutions.
- Present petty cash reports.
- Supervise and control funds given to personnel.
- Review and approve the documentation supporting the presentation of accounts in compliance with the rules and regulations established by the cooperating entity in coordination with the Adjunct Director or the Regional Coordinator.
- Schedule coordination meetings with the PNUD for the timely and efficient management and disbursement of funds.
- Ask for quotations of goods and services to be acquired for the project.
- Prepare purchase orders.
- Acquisition of materials and equipment when amounts do not exceed US \$ 2,499.00. If the amount is higher, coordinate with the PNUD.
- Coordinate trips scheduled in the month to purchase of tickets and the corresponding expense allowance.
- Support the organization, coordination and logistic execution of workshops and activities foreseen on the Operative Plan.
- Coordinate with the National Director the renewal, resolution and hiring of personnel and/or project consultants and prepare the file to be sent to the PNUD.
- Coordinate with the PNUD the delivery of the respective contracts for the corresponding signatures.
- Prepare certificated payment letter for consultants and/or institutions which last payment is subject to results.
- Prepare financial renditions.
- Inventory and register the goods acquired because of the project.

- Keep an adequate control of banking information.
- Maintain permanent contact with the PNUD assistant responsible for administrative support of the project.
- Familiarize yourself with the Manual for Projects of the PNUD.
- Inform the National Director and General Coordinator periodically on the execution and operational budget.
- Require and supervise expenses and account balances for CONAM in agreement with the budget established for the implementing entities.
- Monitor the execution of the implementing and participating institutions counterparts, as applicable, orient and give assistance to administrative technical personnel for their submission.
- Train the administrative technical personnel in the requirements of the Programming and Project Manual of the PNUD, the Technical Administrative Procedures Guide and the follow up of the inter-institutional agreements.
- Support the consolidation of the reports presented to the PNUD and to the CONAM, in budget issues.

VII. Project Assistant

1) Functional Competences:

- Computer knowledge, preferably using windows.
- Preferably familiar with environmental issues.
- Ability to handle the coordination of various issues with different institutions.
- Teamwork capabilities and able to work under pressure.
- Excellent oral and written communication skills.
- Executive and proactive person.

2) Qualifications and Experience:

a. Education:

- Executive Secretary, preferably bilingual.

b. Experience:

- Proven experience in secretarial assistant positions of at least 5 years.
- Work experience in private or governmental institutions, preferably in one dedicated to the environment.
- Work experience on projects, preferably of international cooperation.
- Experience in event organization.

c. Language requirements:

- Fluent in Spanish, good knowledge of English (desirable)

3) Responsibilities:

- a. Give administrative and secretarial support to the Project's Executing Unit.
- b. Prepare the UEP's agenda avoiding overlapping events.
- c. Prepare the list of guest that will receive an invitation letter for workshops and work meetings.

- d. Prepare and coordinate the distribution of invitations for events organized within the projects guidelines as well as their respective confirmations.
- e. Support the logistic coordination and the administrative procedures of workshops and of every other work meeting (supply of proper services, etc.)
- f. During workshops, support the event with assistant registries, preparation and distribution of material and all other actions required.
- g. Administration of UEP files and documentation in agreement with the Document Administration System of the CONAM.
- h. Reception and processing of phone calls.
- i. Coding of books, publications, CDs and the rest of the material for the project.
- j. Prepare supply orders for office material and control them.

PART IV: Stakeholder Involvement Plan

The Project of the Second National Communication has been developed with broad participation. In its design, all potential stakeholders identified as needed for its implementation were invited and took part of the development of this proposal. This approach was used with the PROCLIM program and was one of the key issues for its success during its implementation. At the moment, letters of intent have been received by CONAM from most of the stakeholders that will take part of the execution of the project (Section IV Part V).

The stakeholders that will take part of the implementation of the SNC are divided into categories:

- **Co-executors:** institutions that are in charge of the coordination a specific outcome or output of the project and responsible for reaching their related goals. They co-finance the SNC.
- **Participants:** institutions that will actively participate in project development according to their competencies and interests, but are not in charge of delivering any specific outcome or output

While developing the SNC any other institution or stakeholder that finds an interest in the project or may be affected or benefited by it, and desires to participate, will be encouraged to do so. Stakeholder participation ensures that the project will remain open, transparent and relevant to the country. It provides an avenue for feedback regarding concerns and it allows interested parties to learn about all aspects of the project. The goal involving stakeholders is to ensure interested stakeholders are afforded the opportunity to participate in the success of this project and to provide the stakeholders with the information they need to make decisions and provide input during project development and implementation. Stakeholder involvement has played an essential role in every project regarding climate change developed by CONAM and this one is not an exception.

The project design draws from previous developed projects addressing Climate Change, namely the First National Communication with UNDP technical cooperation, and the PROCLIM program. In this last one, different national institutions (participating as co-executors) and CONAM reached the goal of taking the first steps to strengthen national capabilities for an effective performance of the human, institutional, and financial resources to face Climate Change and manage Air Quality in prioritized geographic areas and cities of Peru.

The development of the National Communication is a multidisciplinary effort, which should involve institutions from all regions of the country. Since its preparation should be the result of a continuing process, the Second National Communication will be built upon the lessons learned in the First National Communication and the previously developed PROCLIM program. Some institutions that worked in PROCLIM have already allocated certain human and financial resources for the development of climate change related activities. As more institutions get involved in this SNC, it is expected more capacity building (including staff trained). With the experience in the previous program it is expected institutional strengthening not only of governmental institutions, but of all stakeholders involved in the preparation of the SNC.

Therefore, in the SNC the institutions and specialists that have been working in the FNC, PROCLIM, the SNC project proposal design and new ones will be involved. Given the size and complexity of the project, the National Environmental Council - CONAM, will establish inter-institutional agreements with co-executors to empower national institutions and guarantee the compliance by project proponents with the principle of participatory planning, necessary for a long-term Climate Change Strategy. They will be responsible for the technical implementation of the project and coordination of its activities. CONAM will act, as successfully done in PROCLIM, as the main executor, coordinating the whole project, monitoring and planning its implementation and providing the technical assistance needed.

The constant flux of information among stakeholders is envisaged as a necessary tool and considered as the most effective and transparent approach to involve a wide range of stakeholders and monitor the progress of project implementation. Planning and evaluation meetings involving relevant stakeholders will be held every six months, as well as frequent meetings, visits and communications. Publication of information in a Climate Change Web Site will strengthen the capacity to decentralize the preparation of the National Communication, enabling the total involvement of all the relevant institutions, regardless of their location, and establishing a formal channel to bring together and disseminate information.

Process of developing the proposal for the SNC:

The SNC project proposal was developed through the regular assessments done as part of the PROCLIM project, a number of workshops and bilateral meetings. This was undertaken to ensure that the SNC would build upon past experiences (FNC, PROCLIM), be focused on priorities of different sectors and regions, and identify the necessary activities to accomplish the previously mentioned outcomes. The workshops guided the development of this proposal, ensured stakeholder involvement and identified their responsibilities and roles within the project's implementation. The first one was held in August, 2004. In this design, more than 100 divisions of 70 institutions from all sectors of society and 250 persons have participated. The progress and plans for the development of these projects was presented in the National Commission on Climate Change. A workshop list in chronological order is presented below.

Workshop 1: Implementation of National Strategy on Climate Change. Representatives from the National Commission on Climate Change and the PROCLIM Program. The workshop prepared an assessment of the gaps and priorities for implementing the Strategy, and developed the basic prioritization for components and activities to be incorporated in the SNC.

Workshops 2 and 3: Third and Fourth PROCLIM Planning and Evaluation Workshops. The main objective was to develop a draft proposal for continuing the PROCLIM program identifying gaps and further needs in the country to deal with Climate Change issues. PROCLIM's co-executors were involved during these workshops. The workshops identified some drafts of the outcomes of the second phase of the PROCLIM program and established a tentative program to develop the proposal. The outcomes demonstrated the level of involvement and commitment of the participating institutions through their continuing work to address climate change.

Workshop 4: Design of the Project for the Second National Communication. The main objectives of the workshop were: (1) the assessment of the progress made on the different components of the SNC; (2) the identification of the main problems and needs to be addressed by the SNC per component; (3) to develop activities that should be included in the project as a Draft for the Logical Framework (4) identification of other stakeholders that should be involved as well as beneficiaries, and (5) to coordinate dates for meetings for further development after the workshop and steps to be taken to continue the project's design. Representatives from 40 institutions participated in the workshop. This workshop started as a plenary and then four breakout groups under specific objectives were formed according to stakeholders' interests - (1) Sector and Regional V&A, (2) glaciers and water availability, (3) GHG mitigation assessments, and (4) GHG Inventory System. Each group developed a draft logical framework for different outcomes of the project document, and developed its own schedule, needs and procedure to develop the SNC proposal. Some identified, given the big number of stakeholders needed to be involved in the design of the SNC and the location for implementation (in the regions), that a number of workshops would be needed (i.e. LULUCF GHG system and LULUCF mitigation, Regional V&As). Others established the need of having a consultant to integrate the proposal based on regular meetings and bilateral meetings with them.

Workshop 5: Preparation of the Climate Change Project Vulnerability and Adaptation in the Mayo River Basin. This workshop was planned in coordination between CONAM-PROCLIM and the PEAM (Alto Mayo Special Project), a stakeholder that works in the Mayo River Basin and was identified as a potential co-executor for project implementation. The workshop was held on site (the Amazonas Department) with representatives from 12 institutions. The main objectives were to give and share information related to climate change and the Economic Macro and Meso Zoning process of San Martin Region and the Upper Mayo Watershed, and to prepare a project proposal for the Vulnerability Assessment to Climate Change and adaptation proposals in the framework of the Economic Zoning and Land Use Planning. During this workshop a group was organized to coordinate the Mayo River Basin proposal in greater detail in preparation for its implementation.

Workshop 6: Preparation of the Climate Change Project Vulnerability and Adaptation in the Santa River Basin. This workshop was held in Huaraz (Andean mountain basin area). The main objectives of this workshop were to develop time-framed activities and identify possible stakeholders in charge of each activity, and establish identification and prioritization criteria for choosing areas for project implementation. During this workshop, a group was formed to coordinate the proposal for the Santa River Basin in greater detail in preparation for its implementation.

Workshop 7: Vulnerability to Climate Change in the Santa River Basin and its effects in La Libertad department. This workshop was held in Trujillo, La Libertad (coastal basin area), with 53 representatives. The main objectives were to give and share information related to climate change and its effects in La Libertad Department; to identify the specific topics to be addressed by the project, the time needed for the activities, and the stakeholders in charge of the development of each activity and those who should be included as participants in project implementation.

Workshop 8: Development of a GHG Monitoring System of the LULUCF sector (held in Iquitos, Loreto, the biggest region of the Amazon in Peru). In this workshop a draft proposal to establish a GHG monitoring system developed by PROCLIM was presented, in order to get comments and opinions as well as possibilities for institutional involvement and analyze the proposal existing gaps.

Workshop 9: Identification of the existing problems in the LULUCF sector that influence GHG emissions through present deforestation in the Peruvian Amazon. The two main outcomes of this workshop were the clear identification of the need of a National Monitoring System for LULUCF activities in the Peruvian Amazon and the need to have relevant information about land use change processes in order to identify mitigation options in the LULUCF sector. The workshop outlined some factors that influence GHG emissions in the LULUCF sector and a number of proposals for developing mitigation options.

Workshop 10: Analysis of needs related to establishing of a LULUCF monitoring system as a periodical provider of information for the GHG inventory of the LULUCF sector. Fussy logic was used to identify the steps to be taken for developing a monitoring system. It also helped to identify satellite information and papers available in different institutions related to land use change.

Workshop 11: Presentation and analysis of the activities for the second Phase for the PROCLIM program in the LULUCF sector in the SNC framework. The objectives of this workshop were to present the activities to be developed through the SNC, collect opinions and comments about the project proposal related to the LULUCF sector with 16 relevant stakeholders. The different institutions' involvement and responsibilities within the project implementation were outlined.

Workshop 12: Consolidation and validation of the SNC proposal. This workshop had the following objectives: (1) To present the proposal of the SNC to the stakeholders, after the series of workshops and

meetings held and adjust it where needed; (2) To develop a detailed and interrelated schedule of results and activities, involving co-executors and main participants; (3) To discuss the process and requirements for the co-execution agreements.

All these workshops (1 to 12) were complemented with periodical meetings and visits, as needed. The components referred to the sector V&As, glaciers and water availability, mitigation in the energy sector and gaps and needs for Climate Information System and Research were developed through more focused meetings with the institutions in charge of specialized consultants, under the coordination of the PROCLIM - CONAM Unit. All stakeholders were informed throughout the process.

A Stakeholders Matrix is provided to show their roles in the SNC implementation process

Stakeholders Matrix

Name of institutions / stakeholders	Specific Department	Kind of Participation	Role in the Project	Reasons for their inclusion in the Project
PUBLIC INSTITUTIONS				
National Environmental Council-CONAM	National Environmental Council-CONAM	Project Coordinator Institution	Coordinate the action of the other stakeholders involved in the project through the establishment of interinstitutional agreements.	CONAM is UNFCCC and CBD focal point and Head of the NCCC. Has Institutional Capacities in Inventories and Mitigation, Vulnerability and Adaptation and experience in developing National Communication and programs addressing Climate change issues.
Energy and Mining Ministry-MINEM	General Directorate of Mining Environmental Issues	Participant	Participates in the proposal of a National GHG Inventory System for the Mining sub sector w/ bottom up approach (Outcome 2)	As the National Authority of the Mining and Energy Sector, this specific directorate is in charge of environmental management and is capable of developing GHG emissions inventories. Participated in the PROCLIM program developing the GHG emissions inventory for the Mining sector based in year 2000 and has given inputs for this project.
Energy and Mining Ministry-MINEM	General Directorate of Mining Environmental Issues	Participant	Participates in the proposal of a National GHG Inventory System for the Energy sub sector (Outcome 2)	As the National Authority of the Mining and Energy Sector, this specific directorate is in charge of the environmental management of the energy sub sector. Participated indirectly in the PROCLIM program providing information needed for the development of the GHG inventory bases in year 2000 and has given inputs for this project.
Energy and Mining Ministry-MINEM	General Directorate of Planning and Budget	Participant	Participates in the integrated systematization of the National Energy Balance and proposal of a National GHG Inventory System for the Energy sector w/ top down approach (Outcome 2). Participates in the formulation of mitigation options for the Energy and Mining sectors (Outcome 3)	As the National Authority of the Mining and Energy Sector, it develops annual National Energy Balances, a fundamental tool to design the National Energy Policy. This specific directorate participated in PROCLIM providing information for the top-down GHG Inventory based in year 2000.
Energy and Mining Ministry-MINEM	General Directorate of Electricity	Participant	Coordinates the Vulnerability and Adaptation Assessment for the Energy sector and coordinates with other directorates to accomplish their work within the project (Outcome 1)	Proposes Electricity sector policy. Prepares and evaluates the Referential Electricity Plan, Electricity Developments Plan, and the Energy Development Plan. Promotes investments and sustainable development to upgrade electricity technology. Designs technical and regulatory framework proposals for the electricity industry.
Production Ministry - PRODUCE	National Directorate of Environment Fisheries Sector-DJNAMA	Participant	Participates in the proposal of a GHG Inventory System of the Fisheries sector w/bottom up approach (Outcome 2)	PRODUCE is the National Authority in Production Economic Sector. This specific directorate is in charge of the environmental management of the Fisheries Sub-sector. It can effectively develop GHG emissions inventories. Participated in PROCLIM by developing the GHG emissions inventory for the Fisheries sector based on year 2000 and has given inputs for this project.

Name of institutions / stakeholders		Specific Department	Kind of Participation	Role in the Project	Reasons for their inclusion in the Project
Production Ministry – PRODUCE	National Directorate of Environment Industrial Sector- DIMA	Participant	Participates in the development of a GHG inventory of the Industrial Sector w/bottom up approach (Outcome 2)	PRODUCE is the National Authority in Production Economic Sector. This specific directorate is in charge of the environmental management of the Industry Sector. It is in capacity of developing GHG emissions inventories. Participated in PROCLIM developing the GHG emissions inventory of the industry sector based on year 2000 and in this project proposal giving inputs for its formulation.	
Production Ministry – PRODUCE	National Directorate of Industry-DNI	Participant	Participates in the development of mitigation options for the Industry sector (Outcome 3)	PRODUCE is the National Authority in the Production Economic Sector. This specific directorate participated in PROCLIM supporting and giving inputs for the development of the GHG inventory of the Manufacturing sector based in year 2000.	
Ministry of Transport and Communications – MTC	General Directorate of Socio-Environmental Issues	Participant	Participates in the development of a GHG inventory of the Transport sector w/bottom up approach (Outcome 2)	MTC is the National Authority of the Transport sector. It promotes and provides safe and sustainable adequate maritime, air and land infrastructure. It also promotes the sustainable development of and access to communication services. This specific directorate is in charge of the environmental management of the transport sector and is capable of developing GHG emissions inventories. It participated in PROCLIM in the development of the GHG emission inventory for the Transport sector based on year 2000 and has given inputs for this project.	
Ministry of Transport and Communications – MTC	General Directorate of Land Circulation	Participant	Participates in the development of mitigation options for the Transport sector (Outcome 3)	MTC is the National Authority of the Transport sector. It promotes and provides safe and sustainable adequate maritime, air and land infrastructure. It also promotes the sustainable development of and access to communication services. This specific directorate is in charge of Transport sector management. It participated in PROCLIM providing inputs for the GHG emissions inventory of the Transport sector based on year 2000.	
Ministry of Transport and Communications – MTC	General Directorate of Trains and Roads; Office of Land Emergencies.	Participant	Coordinates the Vulnerability and Adaptation Strategy for the Transport sector (Outcome 1)	In charge of giving the legal framework for infrastructure development in the Transport sector. It formulates, proposes and executes policy, strategy and development plans for the Transport sector.	
Ministry of Transport and Communications – MTC	Provias National	Participant	Coordinates with other related offices in the ministry to develop the Vulnerability and Adaptation strategy for the Transport sector (Outcome 1)	MTC has a wide-ranging impact on the economic and social development of Peru through its two key sub sectors: transport and communications. Of these, transport is particularly important to the decentralization process. The modernization and decentralization of the transport sub sector in MTC has divided the management of highway infrastructure into Provias Nacional charged with the national highway network; Provias Departamental charged with the departmental or secondary highway network.	

Name of institutions / stakeholders	Specific Department	Kind of Participation	Role in the Project	Reasons for their inclusion in the Project
Ministry of Transport and Communications – MTC	Directorate for Socio Environmental Evaluation -DESA	Participant	Provides information and inputs regarding the Vulnerability and Adaptation Strategy (Outcome 1)	DESA is in charge of the evaluation and approval of socio environmental studies in the Transport sector and following up on compliance with management plans.
Ministry of Health –Minsa	Environmental Health General Directorate - DIGESA	Participant	Participates in the proposal of a GHG Inventory System (Outcome 2) and provides inputs for the GHG emissions projections (Outcome 3)	DIGESA is a specialized bureau under the Health Ministry in charge of defining policies and regulations, and protecting environmental quality in order to improve living and health standards.
Ministry of Agriculture – MINAG	National Program of Watershed Management and Soil Conservation - PRONAMACHS	Participant	Participates in the Mitigation Assessment for LULUCF Sector (Outcome 3). Participates and provides information for the development of the Vulnerability and Adaptation Assessment (Outcome 1)	PRONAMACHS is a public institution charged with proposing and coordinating with various public and private institutions the formulation and implementation of strategic policy related to natural resource management.
Ministry of Agriculture – MINAG	General office of Agricultural Planning - OGPA	Participant	Coordinates the Vulnerability and Adaptation Assessment in the Agriculture sector (Outcome 1)	In charge of the formulation and evaluation of national policy related to natural resources and agriculture sector, it evaluates the influence of macroeconomic policies on the Agriculture sector.
Ministry of Agriculture – MINAG	General Directorate of Agricultural Information -DGIA	Participant	Provides information for the Vulnerability and Adaptation Assessment in the Agriculture sector and provides inputs for the implementation (Outcome 1)	In charge of the compilation of agricultural information, elaboration of data bases related to agricultural activities in Peru. It organizes diffusion activities and annual publications for sector development.
Ministry of Agriculture – MINAG	Sub sector project of irrigation -PSI	Participant	Gathers, organizes and provides information for the V&A assessment. Develops V&A assessment for the Water sector (Outcome 1)	In charge of promoting more efficient water management for agriculture, developing diffusion documents about water for agriculture and strengthening capacities among users.
Ministry of Agriculture – MINAG	National Council for South American Camelids (CONACS)	Participant	Participates and provides information related to their area of influence about the pastures and livestock management of South American Camelids for Vulnerability and Adaptation Assessment (Outcome 1)	Promotes, norms, and supervises the development of activities related to south American camelids management and pastures associated, coordinating with several relevant institutions of the public and private sector.
National Institute of Natural Resources – INRENA	Forest and Wildlife Intendancy	Participant	Co-executes the project with focus on Mitigation Assessment, Land Use, Land Use Change and Forestry Sector (Outcome 3)	IFFS is in charge of policy and regulatory proposals for the sustainable use of forest and wildlife resources, through constant socialization with various sector actors.
National Institute of Natural Resources – INRENA	Hydrological Resources Directorate	Participant	Participates in the Vulnerability and Adaptation Assessment for the water sector (Outcome 1)	Develops hydrological resources inventory for surface and ground water. Supervises, promotes and evaluates research and projects related to water use. Supervises and gathers information about water resources and hydrological public infrastructure.
Ministry of Economy and Finance -MEF	Directorate of the Public Budget	Participant	Develops the study to demonstrate the benefits of incorporating climate variability and climate change scenarios in the current economic models and the distribution national budget (Outcome 1). Benefits from sensitization and capacity building activities	Designs, proposes, executes and evaluates Peru's economic and financial policy. Promotes national economic growth.

Name of institutions / stakeholders	Specific Department	Kind of Participation	Role in the Project	Reasons for their inclusion in the Project
Central Bank of Peru – BCRP	Economic Studies Directorate	Participant	within the project. Participates in the activities for integrating climate change into the current economic models, gives and generates information; benefits from sensitization and capacity building activities within the project (Outcome 1).	BCRP is in charge of regulating the currency and credits in the national financial system, and managing foreign currency reserves placed in its care.
Presidency of the Council of Ministers - PCM	Senior Team of the Strategic Planning Center	Participant	Participates in the activities for integrating climate change into the current economic models, Give and generate information; benefits from sensitization and capacity building activities within the project (Outcome 1).	PCM coordinates Executive Branch intersectorial and interinstitutional activities and prioritizes them in line with government policy.
Center for strategic Planning – CEPLAN	CEPLAN	Participant	Participates in the definition of criteria and identification of main actors involved in the planning of long term investments. For the incorporation climate change into the current economic models and long term planning (Outcome 1)	Is an institution subscribed to the Presidency of the Ministerial Cabinet to impulse the actions of the State on the base of a strategic planning that it orients the resource allocation and actions needed to reach the national objectives of development, growth and suitable integration of the national economy.
National Commission of Development and Live without Drugs –DEVIDA	Division of Environmental Management	Participant	Participates in the development of the design of a LULUCF inventory (Outcome 2) Participates in identifying drivers and root causes of LUC and analyzing mitigation options for the LULUCF sector (Outcome 3)	DEVIDA designs and consults drug enforcement policy, promotes and coordinates programs and projects to control drug production and. Since the Amazon Region is a critical drug growing area involving DEVIDA in the project is extremely important.
National Service for meteorology and hydrology - SENAMHI	General Directorate of Meteorology	Participant	Provides information for the emissions projection in the Peruvian Amazon (Outcome 3). Coordinates the diagnosis of the current status of the climate observation network. Develops the proposal of the Climate Observation System and climate research and data availability (Outcome 5)	Peru's weather, hydrological, agro-meteorological and environmental science and technology agency, it participates in the global atmospheric watch and renders specialized services for Peru's sustainable development, security and progress.
National Office for Services of Sanitation – SUNASS	National Superintendent for Water and Sanitation Utilities - SUNASS	Participant	Provides available information related to the water sector for the Vulnerability and Adaptation Assessment and provides inputs for outcome development (Outcome 1)	SUNASS is the water and sanitation regulator and is responsible for service quality, tariff and coordination, and regulation and supervision of investment plans.
The Investment Supervisor Organism in the Energy Sector – OSINERG	Investment Supervisor Organism for Energy Sector -OSINERG	Participant	Participates providing information and inputs for a Vulnerability and Adaptation Assessment for the Energy sector (Outcome 1) Participates giving inputs for analyzing the activities in the Energy sector to develop mitigation options in the Energy sector (Outcome 3)	Electricity and hydrocarbons sub sectors legal and technical regulator, it also acts as watchdog environmental conservation and protection agency for these industries.

Name of institutions / stakeholders		Specific Department	Kind of Participation	Role in the Project	Reasons for their inclusion in the Project
Water and Sanitation Services Company of Lima - SEDAPAL	Environmental Management Team	Participant	Participates in the Vulnerability and Adaptation assessment related to the water for human consumption (Outcome 1)	A state-owned private company under the Ministry of Housing, Construction and Sanitation, SEDAPAL is Lima's water utility and executes the government's policy regarding the operation, maintenance, control and development of basic water and sanitation in Lima.	
ACADEMIA & RESEARCH INSTITUTES					
La Molina Agrarian University - UNALM	Faculty of Forest Science -FCF	Participant	Participates in the development of the design of an Agriculture and LULUCF inventory, coordinates some relevant activities (Outcome 2) Participates in the emissions projections for the LULUCF sector (Outcome 3). Participates in identifying and analyzing mitigation options and developing scenarios (Outcome 3)	Forestry Department gathering the faculty, graduate student body, researchers and students engaged in studying, researching and disseminating knowledge regarding forestry issues.	
La Molina Agrarian University - UNALM	Conservation Data Base Center -CDC	Participant	Participates in the development of the GHG inventory system in the Agriculture and LULUCF sectors (Outcome 2) Participates in the identification of roots and drivers of Land Use change and in the emissions projections of the LULUCF sector (Outcome 3)	CDC is a Management Information Unit concerned with biological and ecological diversity in Peru. It gathers important information about Peru's Natural Protected Areas analyzes their condition and proposes management measures. Its data base is permanently updated through information analysis and processing, and is open to the interested public.	
Ucayali National University -UNU	Faculty of Forest Science	Participant	Participates in the development of the design of the LULUCF inventory (Outcome 2). Participates in Identifying and analyzing mitigation options in the LULUCF sector (Outcome 3)	Forestry university department in the Peruvian Amazon, it is devoted to the study, research and diffusion of forestry-related topics.	
Research Institute of the Peruvian Amazon-IIAP	FOCAL FOREST	Participant	Participates in the design of a GHG emissions inventory system of the LULUCF sector (Outcome 2). Participates in identifying and analyzing the main drivers and roots for Land Use change, in the identification of options and in the development of scenarios for the GHG emissions projections (Outcome 3)	IIAP, a public independent organization scoping the whole Peruvian Amazon, conducts research on the conservation and sustainable use of natural resources in the Amazon region. This specific project aims at strengthening its capacity for developing sustainable forest management in the Amazon.	
The Agricultural Research and Extension Service -INIEA	Agricultural Research and Extension Service - INIEA	Participant	Provides information about technologies that are applied in the Agriculture sector and participates in the Vulnerability and Adaptation Assessment of the Agriculture sector (Outcome 1)	Responsible for researching, promotion and technology transfer in the jungle (east), Andes (highlands) and coastal areas. It encourages using new technologies in agricultural and agro industrial processes in Peru.	
Peruvian Central National University- UNCP	Research and Air Management Group (GEAIRE)	Participant	Participates in the analysis of the LUCF sector and identification of Mitigation Options in the Land Use Change and Forestry Sector (Outcome 3)	A research think tank working on the effects of deforestation and forest slash and burn practices on Amazon forest climate.	

Name of institutions / stakeholders		Specific Department	Kind of Participation	Role in the Project	Reasons for their inclusion in the Project
Investigation for Development Institute - ININDETEC	Investigation for Development Institute - ININDETEC	Participant	Participates in identifying and analyzing and giving inputs for mitigation options in the LULUCF sector (Outcome 3)	Conducts research in CO ₂ emissions and capture in different ecosystems.	
INVESTMENT PROMOTION INSTITUTIONS					
Forest Promotion and Development Fund- FONDEBOSQUE	Forest Promotion and Development Fund- FONDEBOSQUE	Participant	Participates in identifying and analyzing LUC and giving inputs for the development of scenarios, and giving inputs for the Mitigation Assessment on LULUCF sector (Outcome 3)	FONDEBOSQUE is engaged in a broad range of forestry activities. It fosters the environmental and economic valuation of forest resources, and develops forest sector competitiveness in Peru through the valorization of forest goods and services. It promotes public and private forest investments, including financial mechanisms. It contributes to strengthening capacities among forest users and beneficiaries.	
Private investment promotion agency- PROINVERSION	Private Investment Promotion Agency- PROINVERSION	Participant	Participates in providing information about investments within the country to develop the Vulnerability and Adaptation Assessments (Outcome 1) and for the scenarios for GHG emissions projections (Outcome 2)	PROINVERSION encourages private investment in order to boost Peru's competitiveness and sustained development and thus raise people's quality of living and living standards. It also provides strategic support for doing business in Peru.	
INTERNATIONAL ORGANIZATIONS BASED IN PERU					
Conservation International Peru - CI	Conservation International Peru -CI	Participant	Participates in the participative development of the inventory system in the LULUCF sector (Outcome 2) Participates in identifying and analyzing roots and drivers for Land Use change, providing information on their project's area of influence and giving inputs for mitigation options (Outcome 3).	CI aims to conserve the Earth's living natural heritage and global biodiversity. In Peru CI aims at strengthening management capacities within National Protected Areas and promotes the participation of civil society in conservation. It contributes to the understanding and diffusion of Peruvians biodiversity and encourages including ecological criteria in development policies. CI creates joint ventures with different social and institutional actors to develop their activities based on technical and scientific criteria.	
United Nations Organization - UNO	United Nations Office on Drugs and Crime - UNODC	Participant	Participates in the development of the design of a LULUCF inventory (Outcome 2) Participates in identifying and analyzing roots and drivers for Land Use change, providing information on their project's area of influence and giving inputs for mitigation options (Outcome 3)	UNODC supports the government of Peru in its illicit drug enforcement efforts within a MDG and human rights approach. It also supports the government of Peru in governance and social stability issues and in combating threats against the basic conditions needed to achieve Peruvian development goals. Its initiatives include all programs and activities related to environmental issues, conservation of natural resources and protection of indigenous communities.	

Name of institutions / stakeholders	Specific Department	Kind of Participation	Role in the Project	Reasons for their inclusion in the Project
World Wildlife Fund PERU- WWF Peru	Forest program	Participant	Participates in the development of the design of a LULUCF inventory (Outcome 2). And in the identification of mitigation options in the LULUCF sector (Outcome 3)	WWF-Peru is working in the creation and management of forest Natural Protected Areas and to introduce natural restoration in high value habitats. An important part of WWF work is to increase awareness among government, business, users and consumers of the problems caused by illegal logging and assisting in improving better transport law enforcement in Peru.
World Wildlife Fund PERU- WWF Peru	CEDEFOR- Program	Participant	Participates in identifying and analyzing roots and drivers for Land Use change, providing information on their project's area of influence and giving inputs for mitigation options (Outcome 3)	Manage and achieve forest certification of one million hectares by year 2006, and reduce deforestation by promoting the sustainable use of forest resources.
NGOs				
Andean Institute of Glaciology and Environment (INAGGA)	Andean Institute of Glaciology and Environment (INAGGA)	Participant	Participates in and coordinates the development of the study to determine the relation between climate change and glacier retreat (Outcome 1)	An NGO conducting research in glacier retreat and water.
Forest Society and development -BSD	Forest Society and Development -BSD	Participant	Participates in the development of a GHG inventory system in the LULUCF sector.(Outcome2) Participates in identifying and analyzing roots and drivers for Land Use change, providing information on their project's area of influence and giving inputs for mitigation options (Outcome 3)	A Peruvian NGO specifically devoted to the Peruvian forest sector, it chairs the Peruvian forest sector dialog and coordination round table and is an important player in Peru's forestry sector.
Peruvian Society of Environmental Law- SPDA	Peruvian Society of Environmental Law- SPDA	Participant	Participates in identifying and analyzing deforestation causes, providing information on the forest legal framework and national policy, and giving inputs for mitigation options (Outcome 3)	SPDA analyzes Peru's environmental regulatory framework and identifies and makes proposals for sustainable development laws and policy.
National Forestry Chamber	National Forestry Chamber	Participant	Participates in identifying and analyzing deforestation causes, providing information related to Projected Scenarios for Peru and giving inputs for mitigation options (Outcome 3)	An association actively participating in forums dealing with forestry issues in Peru, it participated in preparing the existing Forest Act and the National Forestry Strategy. Its members are involved in the policy making process in the forest sector and they work on specific projects related to forest management and research.
Fundación Peruana para la Conservación de la Naturaleza- PRONATURALEZA	PRONATURALEZA	Participant	Participates in the development of the inventory system focusing in the LULUCF sector (Outcome 2) Participates in identifying and analyzing LUC (Outcome 3)	ProNaturaleza aims to conserve Peruvian natural heritage, especially its biodiversity. It promotes and executes actions related to conservation, natural resources management, and awareness rising.

Name of institutions / stakeholders	Specific Department	Kind of Participation	Role in the Project	Reasons for their inclusion in the Project
Institute for promotion of water management – IPROGA	Institute for Better Water Management - IPROGA	Participant	Participate providing information and inputs for the Vulnerability and Adaptation Assessment (Outcome 1)	Promotes and proposes participatory public policy and initiatives for better water use; facilitates management tools for more rational use of natural resources, contributes to articulate and tap various institutional and professional experiences and capacities available in Peru.
PRIVATE SECTOR				
Committee of Economic Operations of the National Interconnected System (COES-SINAC)	Committee of Economic Operations of the National Interconnected System (COES-SINAC)	Participant	Develops the Integrated Vulnerability and Adaptation Assessment in the Electricity sector (Outcome 1)	A technical organization gathering the electricity utilities, transmission systems and generation plants in the National Interconnected System. It ensures the quality and continuity of electricity supplies and encourages optimum use of energy resources.

PART V: Barrier Analysis

Threats	Root Causes	Barriers	Analysis	Shall be done within the Framework of the SNC	Output
On the road to development all Peruvians do not go at the same pace. Strong differences in education, socioeconomic level, gender and geographical location jeopardize the synchronized progress of the whole society. In a society where the principle of "first come, first served" applies, the socioeconomic development gap along Peru can be enhanced through the differentiated exposure to climate change, leaving the poor behind. Different socioeconomic groups and geographical areas of Peru have different exposure to Climate Change. This may prevent the timely achievement of two of the Millennium Development Goals: "Eradicate extreme poverty and hunger" and "Ensure environmental sustainability".	Adaptation capacities along Peru are conditioned to the socioeconomic level, economical activity and location.	Diversity of climate regimes, weak "hands on" capacities of national and regional government. No single approach to assess vulnerability is valid along Peru. An integrated intervention in a given area is prevented by an intermittent presence of the State.	The high diversity of climate regimes, geographical and socioeconomic conditions found along Peru demand a National Adaptation Strategy and a sound sampling of sectoral issues. On a first phase, this can be achieved by prioritizing areas (Santa and Mayo River basins) and sectoral exposures to climate change.	Adaptation Strategy for prioritized areas and sectors (SNC Outcome 1)	Climate Change Scenarios at national level and two river basin level Integrated V&A assessments in prioritized river basins and sectors, that provide a representative sample of climate change impacts and responses according to Peru's diversity Determination of the relationship between climate change, glaciers retreat, and impacts on water availability in Peru Proposal for the incorporation of climate variability and climate change variables into macroeconomic models, public budget allocation process and public investment system. Process to develop the Adaptation Strategy
	Multiple and unfinished state reforms resulted in divorced ministries with poor intersectoral links	Scarce coordination across sectors. Lack of synchronization in terms of intervention areas and modalities. Development criteria have not been incorporated into sectoral policies if any.	Within the framework of the SNC an opportunity exists to use climate change as a Trojan horse to get into sectoral work plans and devise an agenda to integrate climate change and development.	Description of Steps taken to integrate climate change and Development (SNC Outcome 4)	Develop dissemination and capacity building activities for relevant stakeholders and decision makers to evaluate, prioritize and support generated mitigation and adaptation strategy proposals Evaluation and development of indicators to assess the impact of the National Communication process in national policy, sector planning, and in the development agenda, such as poverty reduction policies and the Millennium Development Goals.
The ongoing development of Peru and the upcoming logging activities to be boosted by the Inter Oceanic Peru Brazil highways menace the efforts to	Weak or no presence of the government in most of the	Technical and organizational barriers comprehending non standardized GIS for	In view of the intricacies and complexities faced by the 2000 GHG inventory development, we need to fill the gap to make	Development of a National GHG Inventory Management System	Perform an analysis on information, legal, capacity and technological constraints and needs of the inventory process considering the FNC and PROCLIM experiences.

Threats		Root Causes		Barriers		Analysis		Output	
Shall be done within the Framework of the SNC									
<p>Mitigate much of Peru's emissions. More than 60% of Peruvian GHG emissions come from LULUCF and Agriculture activities, this share will rise sharply if there is no GHG Inventory system in place to foresee or monitor the impact, in terms of emissions, of policies and programs implemented along the Peruvian Amazon (the second largest after Brazil).</p>	<p>Amazonian Forests. Social pressure for land access and poverty in the Andean region promotes the migration to rainforest areas tearing apart ecosystems, enhancing GHG emissions and eliminating carbon sinks.</p>	<p>LULUCF monitoring and a restricted information flow across institutions working on the subject making difficult to quantify LULUCF GHG emissions increasing the uncertainty of the national GHG Inventory.</p>	<p>possible the periodical reporting of comparable and verifiable GHG inventories. Since the LULUCF side has the biggest emissions share but at the same time is the less matured, we will focus our activities on the LULUCF section of an inventory system while capitalizing the progress to date on the energetic side.</p>	<p>(SNC Outcome 2)</p>	<p>Participative design of an inventory management system</p>				
<p>In light of the recent availability of natural gas resources, Peru has focused most of its recent efforts to materialize the Camisea Natural Gas project. While it is of common interest to count on a reliable energy supply, most political and government settings are not aware of the need to diversify Peruvian energy options including those representing a climate friendly alternative such as hydro, thermal and biomass. In this context, the threat to Peru is to base energy supply and usage decisions solely on short term criteria without considering the long term implications. This is exacerbated by the lack of long term policies and planning capacities within the industry, transport, forestry and in less degree the energy sector.</p>	<p>Multiple and unfinished state reforms resulted in divorced ministries with poor intersectoral planning capacities. Although the energy sector has some degree of referential planning it does not reach a detailed desegregation per sector which may be useful for guiding promotion policies for GHG mitigation in the short, medium and long term.</p>	<p>CONAM is prevented from engaging the energy, industry, transport and forestry sectors into a cross sectoral GHG mitigation agenda since it has no base mitigation options to start the discussion with.</p>	<p>There is a clear opportunity to devise and assess a set of long term energy supply and demand options for Peru integrating GHG emissions considerations. We point to engage this task on the current priority of competitiveness increase followed by Peru. Since most emissions in the short and medium term come from LULUCF activities they require special attention, for which we define a specific outcome.</p>	<p>Strategy proposal to mitigate GHG emissions in the Energy, Industry, Transport and LULUCF sectors (SNC Outcome 3)</p>	<p>Assessment of options to mitigate GHG emissions in the Energy, Industry, transport and LULUCF sectors</p>				
<p>The only agenda for most Peruvian sectors across Peru is of a short term nature. This poses the menace of allocating resources to issues or targets</p>	<p>Although Peru has a National Strategy on Climate Change and that much of</p>	<p>The lack of climate information and time series is one of the biggest barriers to effectively</p>	<p>In order to count on reliable climate system information, Peru needs to devise a climate information system. This</p>	<p>Prioritized analysis of constraints, gaps and related financial technical and</p>	<p>Identification and prioritization of constraints, gaps and needs (technical, methodological, institutional and financial) of the climate information system and climate change research</p>				

Threats	Root Causes	Barriers	Analysis	Shall be done within the Framework of the SNC	Output
that in principle could be useful for the day to day needs of Peru but do not necessarily reflect the real needs of Peru in terms of Climate Change.	the needs are outlined there, much work is pending to define precise needs and their respective priority.	implement climate modeling along Peru. This is an imperative prerequisite in all our attempts to assess actual and future vulnerability.	system will be of fundamental importance to bring sustainability to the vulnerability assessments and adaptation efforts of Peru in the long term.	capacity needs (SNC Outcome 5)	Proposal of a multi - phase national climate system focusing in the previously identified needs, gaps and constraints
Much of the knowledge generated regarding the Peruvian response to Climate Change can be easily overlooked in the future. This know how is on risk from being excluded from the policy making decision process not only in Peru but in other countries where some of the Peruvian practices can shed light on how to proceed regarding Climate Change.	Weak awareness on decision making spheres regarding the Peruvian exposure to Climate Change and hence not enough allocation of resources and man hours to climate change issues makes it difficult to bring the issues across relevant stakeholders.	Scarcity of resources to publish and disseminate much of the know how acquired on Climate Change and the Peruvian response to it.	The SNC breadth and depth will constitute the white book of Peru regarding Climate Change. It aims to assist Peruvian leaders, in the government and private sectors, on their decision making process considering climate change as one of the cross cutting issues to take into account.	Preparation, revision, approval and dissemination of the Second National Communication (SNC Outcome 6)	Peruvian Second National Communication prepared, approved, published in English and Spanish, presented to the National Commission on Climate Change and to the UNFCCC, and disseminated.

Part VI - M&E Plan and Budget

156. Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures and will be provided by the project team and the UNDP Country Office (UNDP-CO) with support from UNDP/GEF.
157. The following sections outline the main components of the Monitoring and Evaluation Plan and indicative cost estimates related to M&E activities. The project's Monitoring and Evaluation Plan will be presented and finalized at the Project's Inception Report following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities.

1. MONITORING AND REPORTING

1.1. Project Inception Phase

158. A Project Inception Workshop will be conducted with the full project team, relevant government counterparts, co-financing partners, the UNDP-CO and representation from the UNDP-GEF Regional Coordinating Unit, as well as UNDP-GEF (HQ) as appropriate.
159. A fundamental objective of this Inception Workshop will be to assist the project team to understand and take ownership of the project's goals and objectives, as well as finalize preparation of the project's first annual work plan on the basis of the project's log frame matrix. This will include reviewing the log frame (indicators, means of verification, assumptions), imparting additional detail as needed, and on the basis of this exercise finalize the Annual Work Plan (AWP) with precise and measurable performance indicators, and in a manner consistent with the expected outcomes for the project.
160. Additionally, the purpose and objective of the Inception Workshop (IW) will be to: (i) introduce project staff with the UNDP-GEF expanded team which will support the project during its implementation, namely the CO and responsible Regional Coordinating Unit staff; (ii) detail the roles, support services and complementary responsibilities of UNDP-CO and RCU staff vis à vis the project team; (iii) provide a detailed overview of UNDP-GEF reporting and monitoring and evaluation (M&E) requirements, with particular emphasis on the Annual Project Implementation Reviews (PIRs) and related documentation, the Annual Project Report (APR), Tripartite Review Meetings, as well as mid-term and final evaluations. Equally, the IW will provide an opportunity to inform the project team on UNDP project related budgetary planning, budget reviews, and mandatory budget rephasing.
161. The IW will also provide an opportunity for all parties to understand their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff and decision-making structures will be discussed again, as needed in order to clarify for all, each party's responsibilities during the project's implementation phase.

1.2. Monitoring responsibilities and events

162. A detailed schedule of project reviews meetings will be developed by the project management, in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include: (i) tentative time frames for Tripartite

Reviews, Steering Committee Meetings, (or relevant advisory and/or coordination mechanisms) and (ii) project related Monitoring and Evaluation activities.

163. Day-to-day monitoring of implementation progress will be the responsibility of the Project Coordinator, Director or CTA (depending on the established project structure) based on the project's Annual Work Plan and its indicators. The Project Team will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion.
164. The Project Coordinator and the Project GEF Technical Advisor will fine-tune the progress and performance/impact indicators of the project in consultation with the full project team at the Inception Workshop with support from UNDP-CO and assisted by the UNDP-GEF Regional Coordinating Unit. Specific targets for the first year implementation progress indicators together with their means of verification will be developed at this Workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the Annual Work Plan. The local implementing agencies will also take part in the Inception Workshop in which a common vision of overall project goals will be established. Targets and indicators for subsequent years would be defined annually as part of the internal evaluation and planning processes undertaken by the project team.
165. Measurement of impact indicators related to global benefits will occur according to the schedules defined in the Inception Workshop and tentatively outlined in the indicative Impact Measurement Template at the end of this Annex. They will be measured through subcontracts or retainers with relevant institutions (e.g. vegetation cover via analysis of satellite imagery, or populations of key species through inventories) or through specific studies that are to form part of the project's activities (e.g. measurement carbon benefits from improved efficiency of ovens or through surveys for capacity building efforts) or periodic sampling such as with sedimentation.
166. Periodic monitoring of implementation progress will be undertaken by the UNDP-CO through quarterly meetings with the project proponent, or more frequently if necessary. This will allow parties to take stock of and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.
167. UNDP Country Offices, and UNDP-GEF RCUs as appropriate, will conduct yearly visits to projects that have field sites, or more often based on an agreed upon schedule to be detailed in the project's Inception Report / Annual Work Plan to assess first hand project progress. Any other member of the Steering Committee can also accompany, as decided by the SC. A Field Visit Report will be prepared by the CO and circulated no less than one month after the visit to the project team, all SC members, and UNDP-GEF.
168. Annual Monitoring will occur through the Tripartite Review (TPR). This is the highest policy-level meeting of the parties directly involved in a project's implementation. The project will be subject to Tripartite Review (TPR) at least once every year. The first such meeting will be held within the first twelve months of the start of full implementation. The project proponent will prepare an Annual Project Report (APR) and submit it to UNDP-CO and the UNDP-GEF regional office at least two weeks prior to the TPR for review and comments.
169. The APR will be used as one of the basic documents for discussions in the TPR meeting. The project proponent will present the APR to the TPR, highlighting policy issues and recommendations for the decision of the TPR participants. The project proponent also informs the participants of any

agreement reached by stakeholders during the APR preparation on how to resolve operational issues. Separate reviews of each project component may also be conducted if necessary.

Terminal Tripartite Review (TTR)

170. The Terminal Tripartite Review is held in the last month of project operations. The project proponent is responsible for preparing the Terminal Report and submitting it to UNDP-CO and LAC-GEF's Regional Coordinating Unit. It shall be prepared in draft at least two months in advance of the TTR in order to allow review, and will serve as the basis for discussions in the TTR. The Terminal Tripartite Review considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its stated objectives and contributed to the broader environmental objective. It decides whether any actions are still necessary, particularly in relation to sustainability of project results, and acts as a vehicle through which lessons learned can be captured to feed into other projects under implementation or formulation.
171. The TPR has the authority to suspend disbursement if project performance benchmarks are not met. Benchmarks will be developed at the Inception Workshop, based on delivery rates, and qualitative assessments of achievements of outputs.

1.3. Project Monitoring Reporting

172. The Project Coordinator in conjunction with the UNDP-GEF extended team will be responsible for the preparation and submission of the following reports that form part of the monitoring process. Items (a) through (f) are mandatory and strictly related to monitoring, while (g) through (h) have a broader function and their project specific frequency and nature will be gradually defined throughout implementation.

a. Inception Report (IR)

173. A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed First Year/ Annual Work Plan divided in quarterly timeframes detailing the activities and progress indicators that will guide implementation during the first year of the project. This Work Plan would include the dates of specific field visits, support missions from the UNDP-CO or the Regional Coordinating Unit (RCU) or consultants, as well as time-frames for meetings of the project's decision making structures. 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 timeframe.
174. 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 changed external conditions that may effect project implementation.
175. 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 Country Office and UNDP-GEF's Regional Coordinating Unit will review the document.

b. Annual Project Report (APR)

176. The APR is a UNDP requirement and part of UNDP's Country Office central oversight, monitoring and project management. It is a self-assessment report by project management to the CO and provides input to the country office reporting process and the ROAR, as well as forming a key input to the Tripartite Project Review. An APR will be prepared on an annual basis prior to the Tripartite Project Review, to reflect progress achieved in meeting the project's Annual Work Plan and assess performance of the project in contributing to intended outcomes through outputs and partnership work.
177. The format of the APR is flexible but should include the following:
- An analysis of project performance over the reporting period, including outputs produced and, where possible, information on the status of the outcome
 - The constraints experienced in the progress towards results and the reasons for these
 - The three (at most) major constraints to achievement of results
 - AWP, CAE and other expenditure reports (ERP generated)
 - Lessons learned
 - Clear recommendations for future orientation in addressing key problems that result in lack of progress

c. Project Implementation Review (PIR)

178. The PIR is an annual monitoring process mandated by the GEF. It has become an essential management and monitoring tool for project managers and offers the main vehicle for extracting lessons from ongoing projects. Once the project has been under implementation for a year, a Project Implementation Report must be completed by the CO together with the project. The PIR can be prepared at any time during the year (July-June) and ideally prior to the TPR. The PIR should then be discussed in the TPR so that the result would be a PIR that has been agreed upon by the project, the executing agency, UNDP CO and the concerned RC.
179. The individual PIRs are collected, reviewed and analyzed by the RCs prior to sending them to the focal area clusters at the UNDP/GEF headquarters. The focal area clusters supported by the UNDP/GEF M&E Unit analyze the PIRs by focal area, theme and region for common issues/results and lessons. The TAs and PTAs play a key role in this consolidating analysis.
180. The focal area PIRs are then discussed in the GEF Interagency Focal Area Task Forces in or around November each year and consolidated reports by focal area are collated by the GEF Independent M&E Unit based on the Task Force findings.
181. The GEF M&E Unit provides the scope and content of the PIR. In light of the similarities of both APR and PIR, UNDP/GEF has prepared a harmonized format for reference.

d. Quarterly Progress Reports

182. Short reports outlining main updates in project progress will be provided quarterly to the local UNDP Country Office and the UNDP-GEF regional office by the project team. See format attached.

e. Periodic Thematic Reports

183. As and when called for by UNDP, UNDP-GEF or the Implementing Partner, the project team will prepare Specific Thematic Reports, focusing on specific issues or areas of activity. The request for

a Thematic Report will be provided to the project team in written form by UNDP and will clearly state the issue or activities for which a report is needed. These reports can be used as a form of lessons-learned exercise, specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered. UNDP is requested to minimize its requests for Thematic Reports, and when such are necessary, it will allow the project team reasonable timeframes for their preparation.

f. Project Terminal Report

184. During the last three months of the project the project team will prepare the Project Terminal Report. This comprehensive report will summarize all activities, achievements and outputs of the Project, lessons learned, objectives met, or not achieved structures and systems implemented, etc. and will be the definitive statement of the Project's activities during its lifetime. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the Project's activities.

g. Technical Reports (project specific - optional)

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 project team 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 APRs. Technical Reports may also be prepared by external consultants and should be comprehensive, specialized analyses of clearly defined areas of research within the framework of the project and its sites. These technical reports will represent, as appropriate, the project's substantive contribution to specific areas, and will be used in efforts to disseminate relevant information and best practices at local, national and international levels.

h. Project Publications (project specific- optional)

186. Project Publications will form a key method of crystallizing and disseminating the results and achievements of the Project. These publications may be scientific or informational texts on the activities and achievements of the Project, in the form of journal articles, multimedia publications, etc. These publications can be based on Technical Reports, depending upon the relevance, scientific worth, etc. of these Reports, or may be summaries or compilations of a series of Technical Reports and other research. The project team will determine if any of the Technical Reports merit formal publication, and will also (in consultation with UNDP, the government and other relevant stakeholder groups) plan and produce these publications in a consistent and recognizable format. Project resources will need to be identified and allocated for these activities as appropriate and in a manner commensurate with the project's budget.

2. Independent Evaluation

187. The project will be subjected to at least two independent external evaluations as follows:-

a. Mid-term Evaluation

188. An independent Mid-Term Evaluation will be undertaken at the end of the second year of implementation. The Mid-Term Evaluation will determine progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the

effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

b. Final Evaluation

189. An independent Final Evaluation will take place three months prior to the terminal tripartite review meeting, and will focus on the same issues as the mid-term evaluation. The final evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

c. Audit Clause

190. The Government will provide the Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in the Programming and Finance manuals. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government.

3. Learning and Knowledge Sharing

191. Results from the project will be disseminated within and beyond the project intervention zone through a number of existing information sharing networks and forums. In addition:

- The project will participate, as relevant and appropriate, in UNDP/GEF sponsored networks, organized for Senior Personnel working on projects that share common characteristics. UNDP/GEF shall establish a number of networks, such as Integrated Ecosystem Management, eco-tourism, co-management, etc, that will largely function on the basis of an electronic platform.
- The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned.

192. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Identify and analyzing lessons learned is an on-going process, and the need to communicate such lessons as one of the project's central contributions is a requirement to be delivered not less frequently than once every 12 months. UNDP/GEF shall provide a format for and assist the project team in categorizing, documenting and reporting on lessons learned. A percentage of project resources will be allocated to these activities.

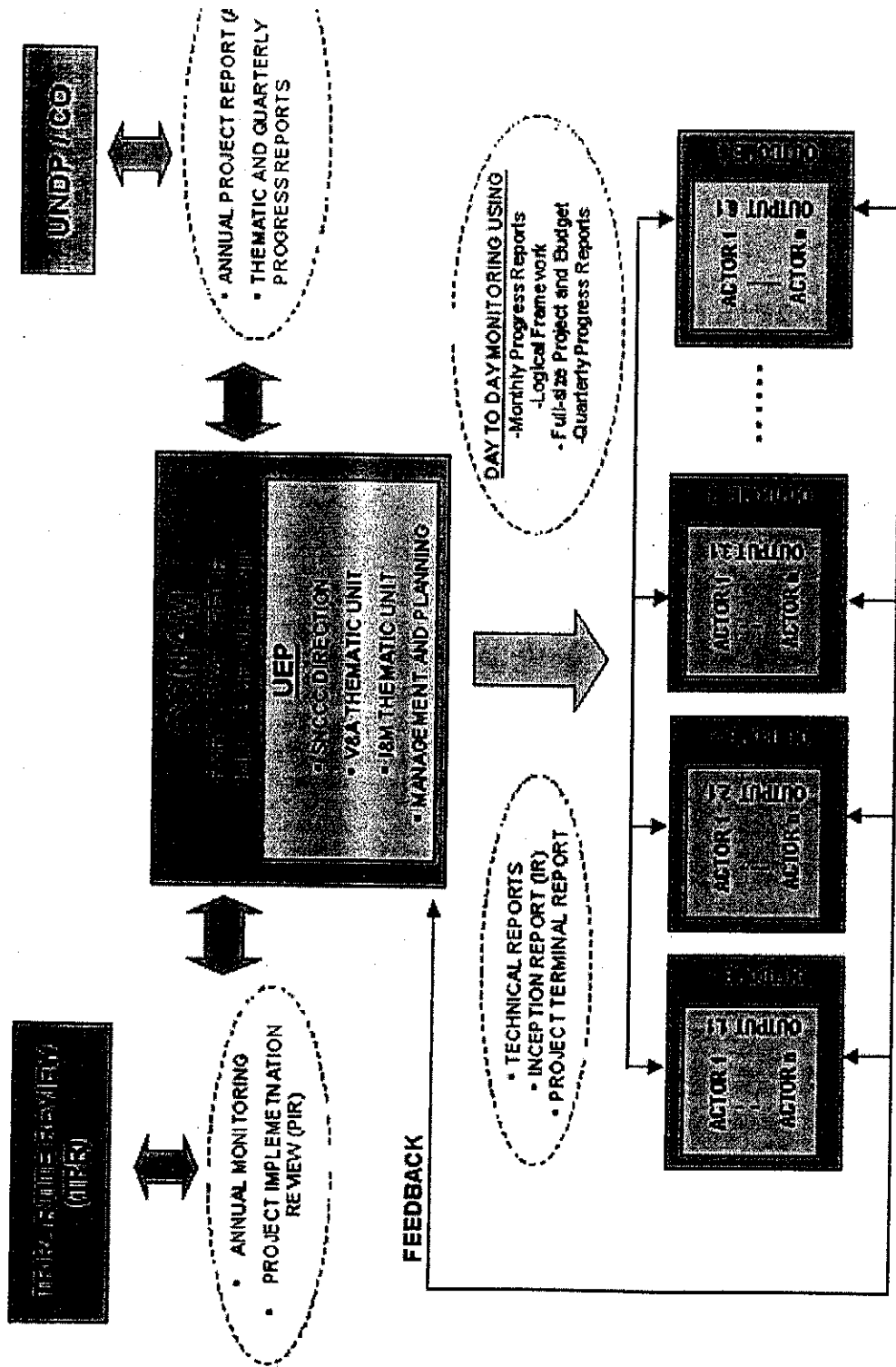
TABLE H-1: INDICATIVE MONITORING AND EVALUATION WORK PLAN AND CORRESPONDING BUDGET

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding Project Team staff time</i>	Time frame
Inception Workshop	<ul style="list-style-type: none"> ▪ Project Coordinator ▪ UNDP CO ▪ UNDP GEF 	None	Within first two months of project start up
Inception Report	<ul style="list-style-type: none"> ▪ Project Team ▪ UNDP CO 	None	Immediately following IW
Measurement of Means of Verification for Project Purpose Indicators	<ul style="list-style-type: none"> ▪ Project Coordinator will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members 	To be finalized in Inception Phase and Workshop. Indicative cost US\$ 15,000.00	Start, middle and end of project
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	<ul style="list-style-type: none"> ▪ Oversight by Project GEF Technical Advisor and Project Coordinator ▪ Measurements by regional field officers and local IAs 	To be determined as part of the Annual Work Plan's preparation. Indicative cost US\$ 10,000.00	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	<ul style="list-style-type: none"> ▪ Project Team ▪ UNDP-CO ▪ UNDP-GEF 	None	Annually
TPR and TPR report	<ul style="list-style-type: none"> ▪ Government Counterparts ▪ UNDP CO ▪ Project Team ▪ UNDP-GEF Regional Coordinating Unit 	None	Every year, upon receipt of APR
Steering Committee Meetings	<ul style="list-style-type: none"> ▪ Project Coordinator ▪ UNDP CO 	None	Following Project IW and subsequently at least once a year
Periodic status reports	<ul style="list-style-type: none"> ▪ Project Team 	US\$ 2,000.00	To be determined by Project Team and UNDP CO
Technical reports	<ul style="list-style-type: none"> ▪ Project Team ▪ Hired consultants as needed 	US\$ 5,000.00	To be determined by Project Team and UNDP-CO
Mid-term External Evaluation	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP- CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. evaluation team) 	US\$ 6,000.00	At the mid-point of project implementation
Final External Evaluation	<ul style="list-style-type: none"> ▪ Project Team ▪ UNDP-CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. Evaluation Team) 	US\$ 6,000.00	At the end of project implementation
Terminal Report	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP-CO ▪ External Consultant 	None	At least one month before the end of the project
Lessons learned	<ul style="list-style-type: none"> ▪ Project Team ▪ UNDP-GEF Regional Coordinating Unit (suggested formats for documenting best practices, etc) 	US\$ 7,500.00 (average 3,000 per year)	Yearly (2.5 year)
Audit	<ul style="list-style-type: none"> ▪ UNDP-CO ▪ Project Team 	US\$ 2,500.00 (average \$1,000 per year)	Yearly (2.5 year)
Visits to field sites	<ul style="list-style-type: none"> ▪ UNDP Country Office 	US\$ 6,000.00	Yearly (2.5 year)

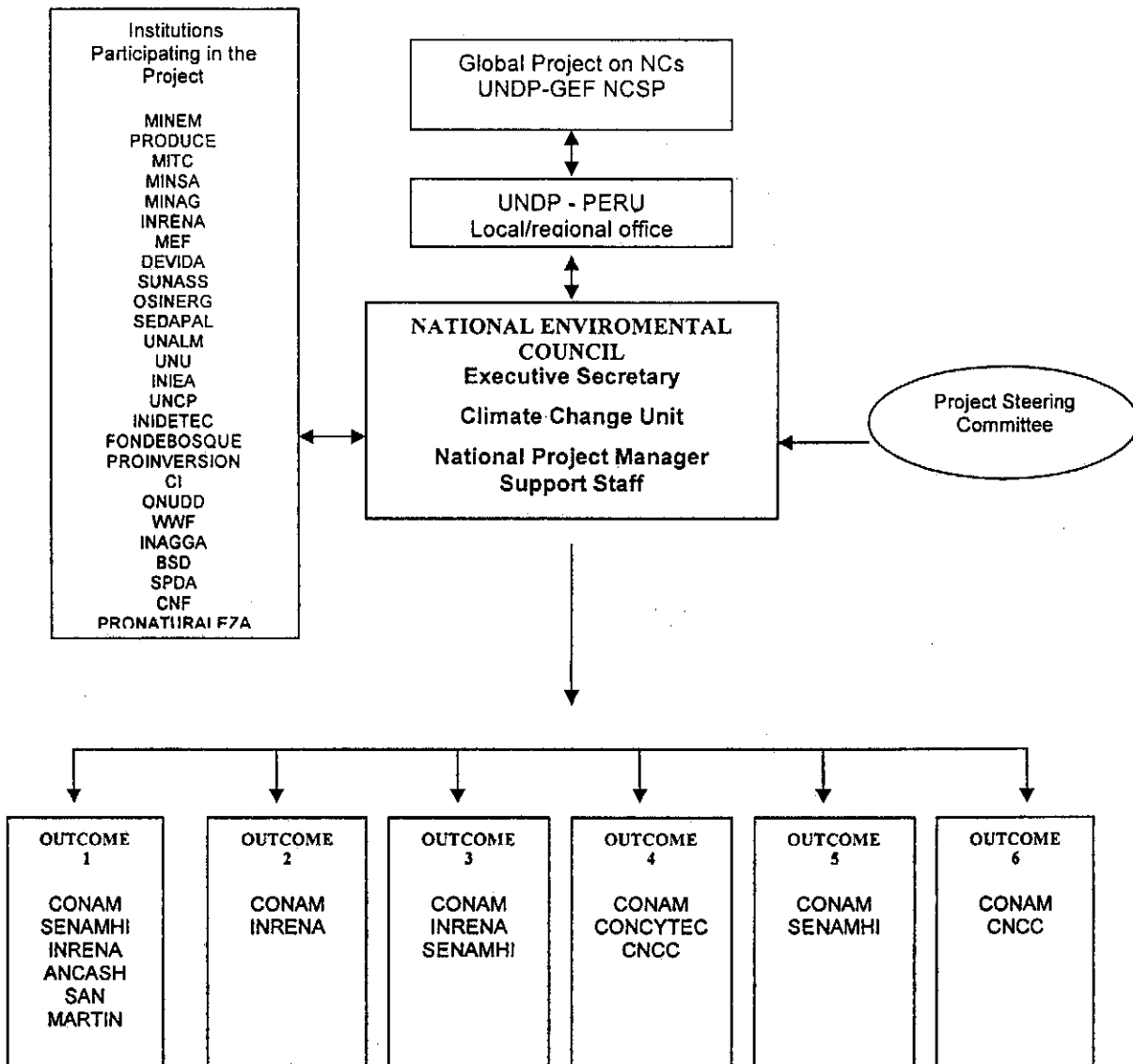
Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding Project Team staff time</i>	Time frame
(UNDP staff travel costs to be charged to IA fees)	<ul style="list-style-type: none"> ▪ UNDP-GEF Regional Coordinating Unit (as appropriate) ▪ Government representatives 	(average one visit per year)	
TOTAL INDICATIVE COST <i>Excluding Project Team staff time and UNDP staff and travel expenses</i>		US\$ 60,000.00	

Refer to Section IV Part VII, Monitoring Follow up Flow Chart

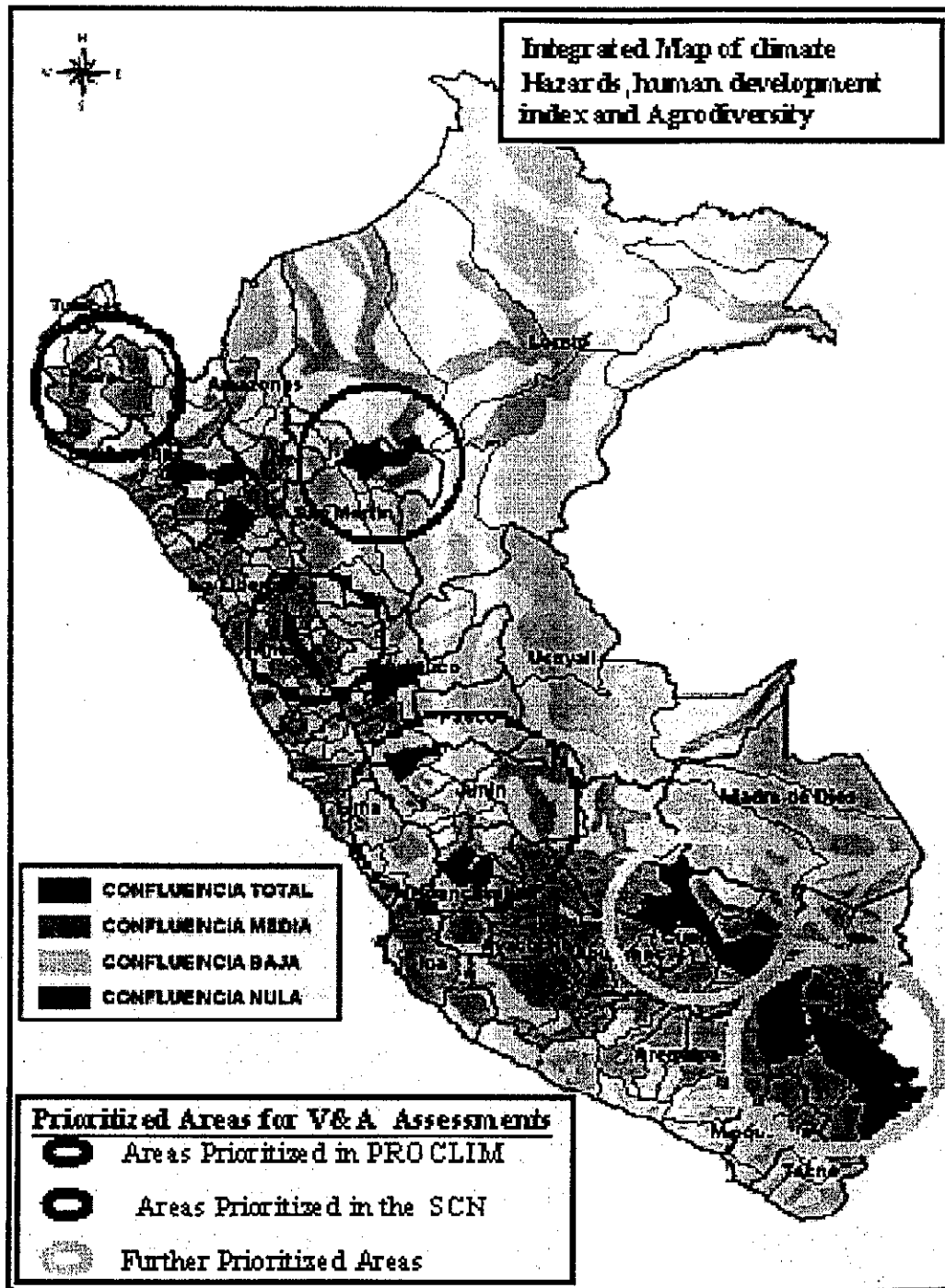
Part VII: Flow Chart of the Monitoring and Evaluation System



Part VIII: Project Institutional Background



Part IX: Map of Prioritized Areas for V&A Assessment



Part X: Logical Framework

Logical Framework: PERU'S SECOND NATIONAL COMMUNICATION

	Goal/result	Indicator	Verifying means	Assumption
<p>Final Goal To enable Peru to prepare and submit its Second National Communication to the UNFCCC, in accordance with guidelines in the decision 17/CP.8 and with articles 4 and 12 of the Convention</p>				Stable institutional arrangements and political support for project implementation are in place.
<p>1. OUTCOME</p>				
<p>Adaptation Strategy for prioritized areas and sectors</p> <ul style="list-style-type: none"> An Adaptation Strategy has been endorsed by two regional governments and four ministries. At least thirty professionals from the prioritized areas and sectors are capable of developing vulnerability and adaptation assessments and strategies. At least forty institutions (governmental, research institutions and NGOs) have participated in the development of the Adaptation Strategy. 	<ul style="list-style-type: none"> Adaptation Strategy document Number of institutions that endorse the Adaptation Strategy Number of professionals capable of developing adaptation assessments and strategies Number of institutions that participate in the development of the proposal 	<ul style="list-style-type: none"> Document printed and published on the web Endorsement Documents List of authors of the adaptation strategy List of institutions that participate in the development of the adaptation strategy 	<ul style="list-style-type: none"> Co-financing commitments are maintained. 	
<p>2. Output Climate Change Scenarios at national level and two river basin level</p> <ul style="list-style-type: none"> National climate change scenarios with a spatial resolution of 60x60km and climate change scenarios for two river basins (Santa and Mayo) with a spatial resolution of 20x20km (period 2010-2050), have been presented to high level decision makers and specialized institutions. 	<ul style="list-style-type: none"> Documents containing the Climate Change Scenarios Number of presentations and documents given to high level decision makers and specialized institutions. 	<ul style="list-style-type: none"> Documents printed and published on the web List of people that receive documents and/or attend presentations 		
<p>3. Output Integrated V&A assessments in prioritized river basins and sectors, that provide a representative sample of climate change impacts and responses according to Peru's diversity</p> <ul style="list-style-type: none"> Integrated V&A assessments for 2 prioritized river basins (Santa and Mayo) and 4 prioritized sectors (agriculture, energy, transportation and water) have been developed in a participative way, and presented to high level decision makers of the respective sectors and river basins 	<ul style="list-style-type: none"> Documents of the Integrated V&A assessments Number of institutions and specialists that participate in the V&A assessments Number of training workshops and participants Number of meetings, presentations and documents given to high level decision makers and specialized institutions. 	<ul style="list-style-type: none"> Documents printed and published on the web List of authors and participants of V&A assessments Workshops reports published on the web, including materials used and list of participants List of people that receive documents and/or attend presentations/meetings 		

	Goal/result	Indicator	Verifying means	Assumption
<p>Output</p> <p>Determination of the relationship between climate change, glaciers retreat, and impacts on water availability in Peru</p>	<ul style="list-style-type: none"> • A national study on the relationship between climate change, glacier retreat and its impact on water availability, has been developed 	<ul style="list-style-type: none"> • Study document 	<ul style="list-style-type: none"> • Document printed and published on the web 	
<p>Output</p> <p>Proposal for the incorporation of climate variability and climate change variables into macroeconomic models, public budget allocation process and public investment system.</p>	<ul style="list-style-type: none"> • A proposal for the incorporation of climate variability and climate change variables into macroeconomic models, public budget allocation process and public investment system has been endorsed by the Ministry of Economy and Finance. • A cost benefit study to demonstrate the advantages of incorporating climate variability and climate change variables into macroeconomic models, public budget allocation process and public investment system has been developed. 	<ul style="list-style-type: none"> • Document of the proposal • Cost benefit study document • Institution that endorses the proposal • Number of training seminars, institutions and specialists that attend. 	<ul style="list-style-type: none"> • Documents printed and published on the web • Endorsement Document • Training material • List of participants that attend training seminars. 	
<p>Output</p> <p>Process to develop the Adaptation Strategy</p>	<ul style="list-style-type: none"> • At least forty stakeholders have contributed to the process of developing the Adaptation Strategy. 	<ul style="list-style-type: none"> • Number of Adaptation training sessions and seminars developed, and institutions and specialists that attend. • Number of workshops to identify, validate and prioritize adaptation measures and participants. • Comments received to the draft of the adaptation strategy 	<ul style="list-style-type: none"> • Workshops, training sessions and seminars reports published on the web, including materials used and list of participants • Document synthesizing comments received. • Final draft of the Adaptation Strategy incorporating comments. 	

2 OUTCOME	Goal/result	Indicator	Verifying means	Assumption
Development of a National GHG Inventory Management System	<ul style="list-style-type: none"> The National GHG Inventory Management System proposal has been validated by 4 ministries and 4 other governmental institutions. At least thirty professionals are capable of developing GHG inventories. At least thirteen institutions (governmental, research institutions and NGOs) have participated in the development of the National GHG Inventory Management System proposal The 2000 National GHG Inventory has been validated 	<ul style="list-style-type: none"> National Inventory Management System proposal Number of professionals capable of developing GHG inventories Number of institutions that participated in the development of the proposal Document containing the 2000 National GHG Inventory 	<ul style="list-style-type: none"> Document printed and published on the web Document synthesizing comments received from institutions that validate proposal. List of authors of proposal List of institutions and participants of the proposal Document printed and published on the web. 	
2.1 Output Perform an analysis on information, legal, capacity and technological constraints and needs of the inventory process considering the FNC and PROCLIM experiences.	<ul style="list-style-type: none"> A Diagnosis that includes legal issues, institutional and individual capacity and technological constraints and needs to develop a sustainable National GHG Inventory Management System, has been developed and presented to stakeholders. 	<ul style="list-style-type: none"> Diagnosis document Number of meetings, presentations and documents given to stakeholders. 	<ul style="list-style-type: none"> Document published on web List of stakeholders that receive documents and/or attend presentations/meetings 	
2.2 Output Participative design of an inventory management system	<ul style="list-style-type: none"> A National GHG Inventory Management System has been designed with the participation of at least thirteen institutions and presented to high level decision makers. 	<ul style="list-style-type: none"> Number of training workshops developed, and institutions and specialists that attended. Number of meetings, presentations and documents given to high level decision makers Number of institutions that are part of the national information exchange network Procedures developed for improving the quality of the inventory (QA QC, EF and AD documentation and update, peer reviews, etc.) 	<ul style="list-style-type: none"> Workshop reports published on the web, including materials used and list of participants List of high level decision makers that receive documents and/or attend presentations/meetings Network implemented on web Documents containing procedures printed and published on the web. 	

3 OUTCOME	Goal/result	Indicator	Verifying means	Assumption
<p>Strategy proposal to mitigate GHG emissions in the Energy, Industry, Transport and LULUCF sectors</p>	<ul style="list-style-type: none"> The mitigation strategy proposal has been validated by at least four ministries, four governmental institutions and seven stakeholders and presented to high level decision makers. At least thirty professionals from the prioritized sectors are capable of performing mitigation assessments and develop sectoral mitigation strategies. At least twenty institutions (governmental, research institutions and NGOs) have participated in the development of the mitigation strategy proposal. 	<ul style="list-style-type: none"> Mitigation Strategy proposal document Number of institutions that validate the strategy proposal Number of meetings, presentations and documents given to high level decision makers Number of professionals capable of performing mitigation assessments and develop sectoral mitigation strategies. Number of institutions that participated in the development of the proposal 	<ul style="list-style-type: none"> Document printed and published on the web Document synthesizing comments received from institutions that validate proposal. List of authors of the proposal List of institutions that participate in the development of the proposal List of high level decision makers that receive documents and/or attend presentations/meetings 	
<p>Output Assessment of options to mitigate GHG emissions in the Energy, Industry, Transport and LULUCF sectors</p>	<ul style="list-style-type: none"> An assessment of options to mitigate GHG emissions has developed in a participative way, including a diagnosis of the root causes and main drivers of emissions from the prioritized sectors, national scenarios to 2015 and 2050 and the corresponding emissions projections. 	<ul style="list-style-type: none"> Assessment document Technical reports (diagnosis, scenarios and projections) Number of training workshops, institutions and specialists that attend. 	<ul style="list-style-type: none"> Document and reports printed and published on web Workshops reports published on the web, including materials used and list of participants List of authors of the assessment and technical reports. List of institutions that participate in the assessment 	
<p>Output Process to develop a Mitigation Strategy Proposal for the Energy, Industry, Transport and LULUCF sectors</p>	<ul style="list-style-type: none"> At least 16 institutions have contributed in the development of the Mitigation Strategy Proposal for the Energy, Industry, Transport and LULUCF sectors. 	<ul style="list-style-type: none"> Number of training sessions and seminars developed, and institutions and specialists that attend. Number of workshops to identify, validate and prioritize mitigation options and the mitigation strategy Comments received to the draft of the proposal strategy 	<ul style="list-style-type: none"> Workshops, training sessions and seminars reports published on the web, including materials used and list of participants Document synthesizing comments received. Final draft of the Mitigation Strategy Proposal incorporating comments. 	
<p>Output Steps to be taken to mainstream the mitigation strategy proposal into national and sectoral policies.</p>	<ul style="list-style-type: none"> High level decision makers of at least 4 institutions are familiar with the Mitigation strategy Proposal and its co benefits. 	<ul style="list-style-type: none"> Number of meetings, presentations and documents given to high level decision makers 	<ul style="list-style-type: none"> List of high level decision makers that receive documents and/or attend presentations/meetings 	

4-OUTCOME	Goal/result	Indicator	Verifying means	Assumption
Description of Steps taken to integrate climate change and Development	<ul style="list-style-type: none"> A report synthesizing actions taken to integrate CC and development and level of participation of the SNC to ensure the sustainability of the process, presented to national development institutions. 	<ul style="list-style-type: none"> Document containing the report Number of presentations and participants 	<ul style="list-style-type: none"> Documents printed and published on the web List of participants that attend presentations 	
4.1 Output Develop dissemination and capacity building activities for relevant stakeholders and decision makers to evaluate, prioritize and support generated mitigation and adaptation strategy proposals.	<ul style="list-style-type: none"> At least fifty people and forty institutions of each prioritized river basin and sectors have received and provided information related to climate change, and participated in the process of implementation of the SNC project. Relevant stakeholders and policy makers have increased their level of awareness of climate change issues. 	<ul style="list-style-type: none"> Number of people that participate and inputs/person received through the interactive web based support platform involved Number of capacity building and raising awareness activities Level of awareness of relevant stakeholders and policy makers 	<ul style="list-style-type: none"> Web platform counter Reports of raising awareness and capacity building activities, including list of participants and materials used. Results of survey on level of awareness 	
4.2 Output Evaluation and development of indicators to assess the impact of the National Communication process in national policy, sectoral planning, and in the development agenda, such as poverty reduction policies and the Millennium Development Goals.	<ul style="list-style-type: none"> A methodology, including a set of indicators to measure the impacts of the national communication process and assess the relationship between climate change communication activities and selected sustainable development objectives. An evaluation of the results achieved during the implementation of the SNC. 	<ul style="list-style-type: none"> A document containing the results achieved during the process of development the SNC. A document including the methodological approach and the set of criteria and indicators. Number of workshops and training sessions, institutions and specialists that participated in the development of indicators and were trained to make a follow up of the indicators. 	<ul style="list-style-type: none"> Reports printed and published on the web Workshop reports published on the web, including materials used and list of participants 	

S O U R C E	Goal/result	Indicator	Verifying means	Assumption
<p>5 O U T C O M E</p> <p>Prioritized analysis of constraints, gaps and needs of a National Observation System and Climate Change research</p>	<ul style="list-style-type: none"> A report of constraints, gaps and related financial technical and capacity needs, has been developed. 	<ul style="list-style-type: none"> Report document 	<ul style="list-style-type: none"> Report documents printed and published on the web 	
<p>5 O U T C O M E</p> <p>Identification and prioritization of constraints, gaps and needs (technical, methodological, institutional and financial) of the climate information system and climate change research</p>	<ul style="list-style-type: none"> A diagnosis of the National Climate Observation Network and of research needs related to climate variability and climate change has been developed and presented to high level decision makers. 	<ul style="list-style-type: none"> Diagnosis document Number of workshops developed, institutions and specialists that attend. Number of meetings, presentations and documents given to high level decision makers 	<ul style="list-style-type: none"> Documents printed and published on the web Workshop reports published on the web, including materials used and list of participants List of high level decision makers that receive documents and/or attend presentations 	
<p>5 O U T C O M E</p> <p>Proposal of a multi - phase national climate system focusing in the previously identified constraints, gaps and needs</p>	<ul style="list-style-type: none"> A proposal of the National Climate Observation System - NCOS has been presented to high level decision makers. 	<ul style="list-style-type: none"> Final draft of the NCOS proposal document. Number of institutional comments to the proposal document Number of meetings, presentations and documents given to high level decision makers 	<ul style="list-style-type: none"> Final draft of the proposal incorporating comments, printed and published on web List of high level decision makers that receive documents and/or attend presentations 	
<p>6 O U T C O M E</p> <p>Preparation, revision, approval and dissemination of the Second National Communication</p>	<ul style="list-style-type: none"> Second National Communication has been prepared, approved, published and disseminated 	<ul style="list-style-type: none"> One Peruvian second National Communication elaborated 	<ul style="list-style-type: none"> Second National Communication document published and sent to the UNFCCC 	

Part XI: Detailed Outcomes

193. The main objective in this project is the preparation of Peru's Second National Communication to the UNFCCC. Preparing the contents of each outcome of this proposal involved different institutions that worked in coordination and held various workshops and meetings to develop a consolidated proposal for each outcome and in some cases provided detailed inputs. This section of the document presents the detailed outcomes to give further information about the outputs and related activities to be developed within the project.

- Outcome 1: Adaptation Strategy for prioritized areas and sectors
- Outcome 2: Development of a National GHG Inventory System
- Outcome 3: Strategy to mitigate GHG emissions in the Energy, Industry, Transport and LULUCF sectors.
- Outcome 4: Description of steps to integrate Climate Change and Development
- Outcome 5: Prioritized analysis of constraints, gaps and needs of a National Observation System and Climate Change Research.