United Nations Environment Programme

Enabling activities for the preparation of the initial communication related to the United Nations Framework Convention on Climate Change: Nepal

UNEP-GEF subproject GF/2200-97-50

Final evaluation report

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Acronyms

ALGAS	Asia Least-Cost Greenhouse Gas Abatement Strategy
DHM	Department of Hydrology and Meteorology
GEF	Global Environment Facility
GHG	greenhouse gas
IIT	Indian Institute of Technology
INC	initial national communication
IPCC	Intergovernmental Panel on Climate Change
MLJPA	Ministry of Law, Justice and Parliamentary Affairs
MOF	Ministry of Finance
MOPE	Ministry of Population and Environment
MOST	Ministry of Science and Technology
MOU	memorandum of understanding
NCCC	National Climate Change Committee
NGO	non-governmental organization
NST	national study team
SC	Steering Committee
TU	Tribhuvan University
TU-CDHM	Central Department of Hydrology and Meteorology, Tribhuvan University
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USCSP	United States Country Study Programme

Executive summary

1. Nepal signed the United Nations Framework Convention on Climate Change on 12 June 1992; it was ratified on 2 May 1994 and entered into force on 31 July 1994. In order to meet its obligations and commitments to the Framework Convention on Climate Change, Nepal implemented a project entitled "Nepal: Enabling Activities for the Preparation of the Initial National Communication Related to UNFCCC (GF/2200-97-50)" with the generous assistance of the United Nations Environment Programme-Global Environment Facility (UNEP-GEF). Out of the total budget of $310,000, Nepal received $276,770 and the remaining amount was retained in the United Nations Environment Programme (UNEP) for administrative and evaluation costs. The project had nine activities with specified outputs. One of the major outputs was to prepare and submit the initial national communication to the Framework Convention secretariat and the Conference of the Parties.

2. The Government of Nepal and UNEP made an agreement to implement this project in August 1999. As the national focal point for the Framework Convention, the Ministry of Population and Environment was designated as the collaborating agency, and the Department of Hydrology and Meteorology served as its executing agency. The project used the services of the Central Department of Hydrology and Meteorology of Tribhuvan University to conduct studies and prepare the initial national communication report.

3. The evaluator reviewed the published documents, national communication report, publications of the project, held discussions with the officials concerned, analysed the results of questionnaires and has prepared this report. As per the terms of reference, the following 11 aspects were considered for evaluation of the project activities:

(a) Attainment of objectives and planned results;

(b) Achievement of outputs and activities;

(c) Cost-effectiveness;

(d) Impact;

(e) Sustainability;

(f) Stakeholder participation;

(g) Country ownership;

(h) Implementation approach;

(i) Financial planning;

(j) Replicability; and

(k) Monitoring and evaluation.

A. Project evaluation

1. Accomplishments of the project activities

4. The main objective of the project was to enable Nepal to fulfil its commitments and obligations to prepare and report its initial national communication. Initially, the project was designed for a period of two years from March 1998 to February 2000. The project was unable, however, to start at the stipulated time and the period had to be extended. On 5 December 2003 the duration of the project was finally fixed as August 1999–June 2004. The final project expenditure accounts were prepared by the Department of Hydrology and Meteorology covering the period of project commencement from October 2000 to 31 December 2004 and almost all allocated budget has been spent. The main objective had been fulfilled by June 2004.

5. The project had nine activities and 26 outputs. Completion or delay in one activity has had repercussions on other activities. All activities were implemented and outputs were attained except in a few cases where the objectives were partially attained in spite of the involvement of the Steering Committee, the National Climate Change Committee and the national study team in guiding the project, providing technical inputs, and preparing the report respectively (see annex I to the present report).

6. The project faced difficulty in harmonizing the project activities sufficiently in advance with current climate change related activities in the country. Reasons may be cited as inadequate data, lack of information and understanding on climate change phenomenon, and also lack of efforts to make technical information user-friendly. However the project considerably influenced the policy-making body to address climate change activities in the Tenth Development Plan of Nepal (2002-2007), and the Sustainable Development Agenda for Nepal, in 2003. The project contributed significantly to an increase in the level of understanding on climate change and its potential impacts, developing skills of NST members in climate change modelling and improving the scientific and technical capacity of the Department of Hydrology staff and Tribhuvan University academics. On the basis of rating each and every sub-activity independently, the result varies, however, the overall rating for the accomplishment is calculated to be "very good".

2. Project management

7. The evaluator has considered a number of elements ranging from day-to-day operations, institutional arrangements and staffing to monitoring and evaluation as important ingredients of project management. It includes the formation of a 10 member Steering Committee, to guide the project on policy matters and national coordination; an 18 member National Climate Change Committee, to review project outputs and provide technical inputs; and a 17 member national study team in four areas (five member GHG inventory; and four member each for, vulnerability/impact assessment and adaptation; mitigation options; and national communication) to prepare the reports. The UNEP task manager efficiently provided inputs for the successful completion of the project. Although the project was delayed, the evaluator considers that the institutional structure for project implementation was "good", as it represented the best selection of the bodies available, through the involvement of the Framework Convention on Climate Change focal point, technical department and academic institution. Also of significance were the institutional efforts of the Director General of the Department of Hydrology and Meteorology, as the unpaid project coordinator, who was supported by an assistant project coordinator and support staff.

8. With regard to financial management, the project has spent almost all the budget for this project. On the basis of the final financial statement provided by the Department of Hydrology in January 2005, the expenditures are within the allocated amount, although the project was delayed for a considerable period. The main objective is attained within the initial estimated budget and hence the financial management is ranked as "very good".

9. In terms of time management, the project was not completed within the stipulated time frame. All substantive activities were planned to start immediately but the consulting services were used after one year of the project launching. The major reasons for delay of the completion of the project activities include: conceiving the project as a learning exercise; and difficulties in estimating GHGs and extrapolating or projecting GHG emissions in different scenarios. In addition, the selection of climate change models and conflict between the Ministry of Population and Environment and the Department of Hydrology and Meteorology on the Framework on Climate Change focal point were reasons for delay. The project was further delayed due to inadequate coordination amongst partners and frequent change of the Steering Committee chairman and the Chief of Environment Division of the Ministry of Population and, to a certain extent, the change of Director-General of the Department of Hydrology in April 2003. The project received very little technical supervision and inadequate monitoring from the Steering Committee and National Climate Change Committee.

10. The project also encountered a number of problems:

(a) Delay in the decision on procurement of services from Tribhuvan University and frequent change of Steering Committee chair;

(b) Lack of technical competency in the Ministry;

(c) Lack of emission data and preoccupied workload of the team leader of the GHG inventory group;

(d) Lack of scientists and academicians in the national study team sufficiently au fait with the Framework Convention on Climate Change requirements, Intergovernmental Panel on Climate Change guidelines and national needs;

(e) Difficulty in selecting appropriate climate change models and lack of necessary data to fit into them.

11. Although the problems persisted till the end of the project, they were solved through regular consultation amongst partners, taking the services of academic institution in preparing the initial national communication report, providing training on GHG estimation and projection and selection of appropriate models, and creating awareness at different levels.

12. Given that the existing foundation for project activities was inadequate, and that a considerable amount of more data had to be generated and processed, the allocated cost for project activities could be considered moderate.

3. Impact and sustainability

13. The project has achieved a significant impact in a number of areas. The first impact was the fulfilment of the commitment and obligation for the preparation of the initial national communication report which had already been approved by the government on 1 July 2004 and submitted to the Framework Convention on Climate Change Secretariat. The project was instrumental in building capacity, synthesizing existing climatic information and developing databases. The project has included Framework Convention-related needs in important policy documents such as the Tenth Development Plan (2002–2007) of Nepal, the Sustainable Development Agenda for Nepal and the National Action Programme on Land Degradation and Desertification. The public awareness raised through project activities prompted the interest group to form a Climate Change Network, to raise concerns about the impacts of climate change, deglaciation, Glacier Lake Outburst Flood issues, and also to launch the website.

14. With regard to sustainability, the project outputs are likely to be sustainable due to: strengthened institutional capacity, and database; the inclusion of climate concerns in major policy documents; enhanced understanding of key professionals including decision-makers about climate change; and also increased confidence level of the involved personnel. Taking note of the government initiatives on policy matters related to climate change, the rating for sustainability is “good”.

4. Participation

15. About 50 persons were directly involved in preparing and reviewing the initial national communication report. The project organized five workshops and sponsored national study team members in training, distributed public awareness materials, and broadcasted general information on climate change. About 410 participants attended the workshops which comes to an average of 82 participants per workshop. The workshops were organized only in Kathmandu, and was attended by representatives of government institutions, international and local non-governmental organizations, academic institutions, donor agencies, and media. The opinions and concerns of other institutions working outside Kathmandu Valley were not sought. In view of the nature of participation, the evaluator considers that the representation of civil society was quite limited. The positive part of the workshop was the involvement of journalists. Although the project could not secure adequate participation of GHG emitters and GHG reducers, and also did not prepare outreach programmes, the rating of participation is “good”.

5. Relevance

16. The project was of high significance at the national level not only in its compliance with the obligations and commitments to the Framework Convention on Climate Change but also it provided the bases for the expansion of climate change related activities. The Government has owned and endorsed it.

6. Rating of project implementation

17. Based on the terms of reference as mentioned in paragraph 3, 11 criteria were used for the rating of the project outputs. The overall rating is “very good”. Using the Global Environment Facility rating system, it is “satisfactory”.

7. Lessons learned

18. The project provides several lessons for future climate change initiatives in Nepal. They are:

(a) Need for enhanced understanding on issues, and continuation in key positions such as within the Steering Committee;

(b) Need for frequent monitoring and evaluation of the project activities;

(c) Involvement of knowledge-based and skilled manpower, at least, from the Framework Convention focal point;

(d) Continuation of the combination of the Framework Convention focal point, technical department, and academic institution in implementing similar projects;

(e) Establishment of institutional linkage on equal footing particularly on scientific, technical and technological matters;

(f) Strengthened technical capacity of the Department of Hydrology and Meteorology and Tribhuvan University-Central Department of Hydrology and Meteorology;

(g) Enhanced learning of the National Climate Change Committee and national study team members and the development of competency and confidence on climate change matters;

(h) Weakened project outcome due to limited participation of the private sector, non-governmental organizations and community groups;

(i) Indispensability of strong coordination among relevant institutions;

(j) Need for taking the inputs of competent institutions like UNEP and reviewers on the draft reports for quality improvement.

8. Conclusion and recommendations

19. The project has attained its main goal of preparing the initial national communications report. The activity-related goals were met partially in certain cases. The project has contributed to the enhancement of public awareness, provided inputs for policy intervention, developed a database for greenhouse gases (GHGs), and involved in-country professionals in preparing the report. Involvement of the Ministry of Population and Environment, the expertise of the Department of Hydrology and an academic institution represents a good combination for team work. The project has enhanced the scientific and technical capacity of the local personnel so that it can sustain its outputs. Since the project is of what might be termed the "learning type", it has enhanced the capacity at the Department of Hydrology and Tribhuvan University to continue data generation and updating in line with Framework Convention requirements. In a nutshell, the overall rating is "very good".

20. On the basis of overall performance of the project, problems encountered and lessons learned, and also to institutionalize and internalize climate change aspects in Nepal, the evaluator recommends that UNEP:

(a) Develop and implement the next phase;

(b) Support the institutional strengthening of Nepalese government agencies;

(c) Prepare a national action programme;

(d) Conduct a project on the deglaciation process (monitoring and development of an early warning system and glacier lake outburst flood risk reduction) in the Hindu Kush-Himalayan region;

(e) Recruit a permanent technical coordinator based in Nepal.

21. The evaluator also recommends that the Ministry of Population:

(a) Publish the initial national communication report in the Nepali language;

(b) Establish a system for effective coordination;

(c) Build capacity to address climate change issues as a national focal point.

I. Introduction

22. Bordering India to the east, west and south and China to the north, the Kingdom of Nepal is a land-locked country with a total area of 147,181 km^2. The altitude ranges from less than 100 meters in the South to over 8, 800 meters in the North. The average distance from east to west is 885 km, with a non-uniform north-south width of about 190 km. The country is divided into five development regions and 75 districts. Administratively, the districts are further divided into 3,912 village development committees, 58 municipalities, including one metropolitan and three sub-metropolitan cities. The country has been divided into three broad ecological regions: first, mountains; second, hills; and, third, *terai* (low land), covering areas of 35 per cent, 42 per cent and 23 per cent respectively. Of the total area, cultivated and non-cultivated land occupies about 29 per cent and forests 39.6 per cent. The remaining land is of grassland and other categories.

23. Owing to its unique topographic nature, Nepal has a wide variety of climates, ranging from subtropical in the south to alpine in the northern mountains. The average maximum precipitation is 1,530 mm. There is significant variation in precipitation distribution ranging from less than 200 mm to 5,200 mm. On average, the mean temperature is less than 3^0 Celsius in the mountain, and exceeds 30^0 Celsius in the terai.

24. Nepal is predominantly a rural society with about 85 per cent of the total population of 24 million living in the rural areas. The population growth rate is estimated at 2.24 per cent per annum. The population density ranges from 34 to 330 persons per square kilometre. About 38 per cent of the total population is estimated to be below the poverty line. Life expectancy is at an average of 55 years. The country has a low level of social development, high infant mortality rate, low level of adult literacy rate, and per capita daily calorie intake of 1,957.

25. Nepal is facing two broad categories of environmental problems. The rural areas face the problems of soil erosion, landslide, flood, scarcity and unsafe drinking water, and low calorie intake, which are broadly associated with forest depletion and agricultural production. The urban areas experience environmental pollution of varying magnitudes. The economy is subsistence and agriculture-based.

A. Climate change activities in Nepal

26. Nepal experiences a variety of climates, from the low land (terai) to the uplands (mountains – alpine region). The climatic and altitudinal variations have great implications on natural resources in terms of their distribution, production and consumption. There are clear indications of the effects of

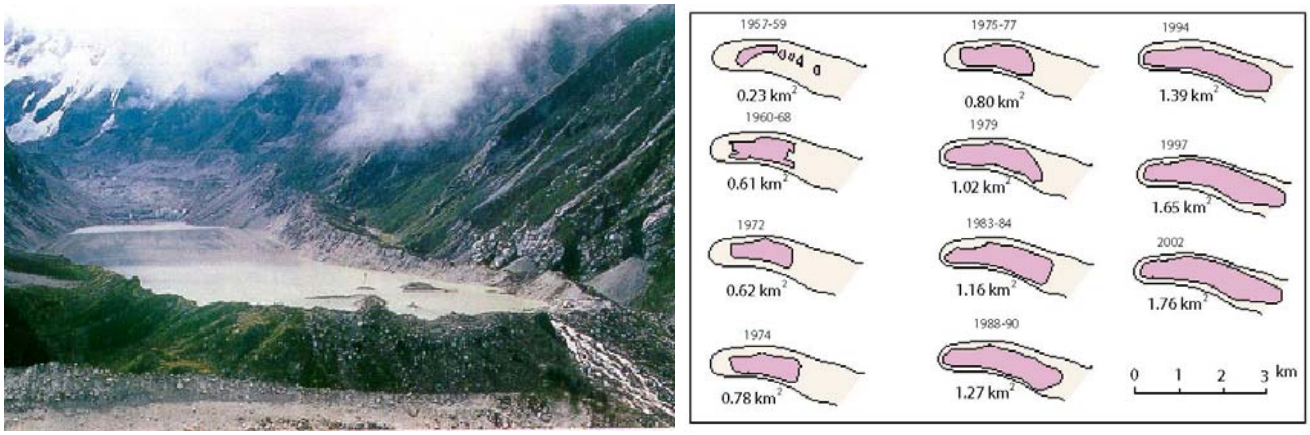

Figure 1.1: Tsho Rolpa Glacier Lake (left) and its progressive increase in size (right).

climate change in Nepal, particularly in the mountains and the Kathmandu valley. Enhanced rate of snow and glacier melt is causing a critical increase in the size of glacier lakes in the Nepal Himalayas. Investigations carried out so far provide clear evidence that the Himalayan glaciers are shrinking rapidly. A 2000 study conducted by the International Centre for Integrated Mountain Development (ICIMOD) and UNEP showed that in Nepal there are 3,252 glaciers covering an area of 5,323 square kilometres of the country's total area of 147,181 square kilometres**.** It lists 26 dangerous lakes which are

critical and may burst any time causing a glacier lake outburst flood disaster. The Water and Energy Commission identified five vulnerable lakes, including Tsho-Rolpa, the largest glacial lake in Nepal situated at an altitude of 4,580 metres above sea level (see figure 1.1 left). The lake had a surface area of 0.23 square kilometres in 1957-59 that increased to 1.76 square kilometres in 2002 (see figure 1.1 right). A similar expansion in the sizes of glacier lakes has been clearly noticed in other vulnerable lakes too. Glacier retreat of as much as 10 metres per year, in the Rikha Shamba glacier for example, has been observed in the Dhaulagiri area.

27. A study of the temperature of Nepal shows an increasing trend, whereas the precipitation does not indicate any trend except oscillation. The Kathmandu Valley has experienced accelerated temperature rise over the last decade, which may be attributed to vehicular emissions and their inadequate circulation attributable to the bowl-shaped valley, and the construction of concrete buildings on a massive scale combined with heavy migration from the hills and mountains mainly due to terrorist movement (Figure 1.2) An increase in temperature has also been noticed in the Himalayas (figure 1.3 and 1.4; table 1.1).

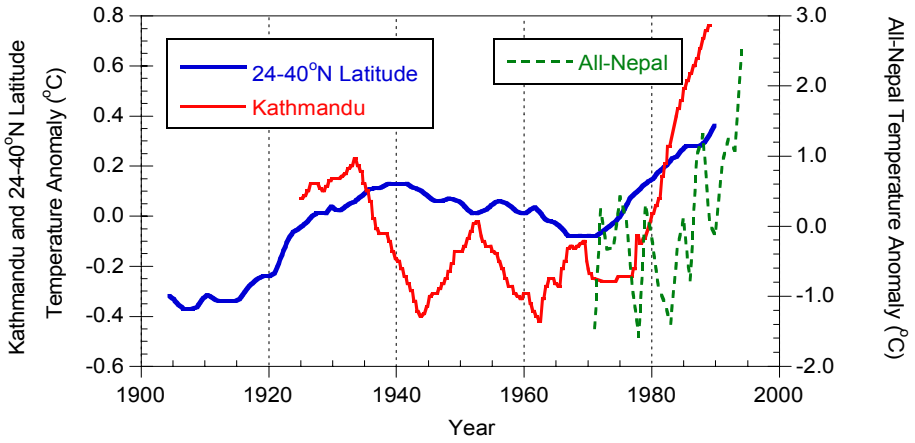

Figure 1.2: Kathmandu, Nepal and global (24-40degree N Latitude) temperature data (after Dr. Arun B. Shrestha)

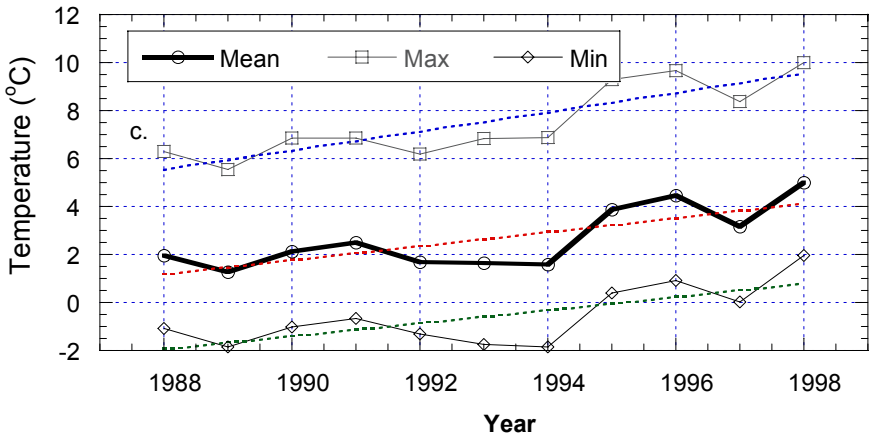

Figure 1.3: Temperature trends in Langtang (3928 m a.s.l.) (after Dr. Arun B. Shrestha)

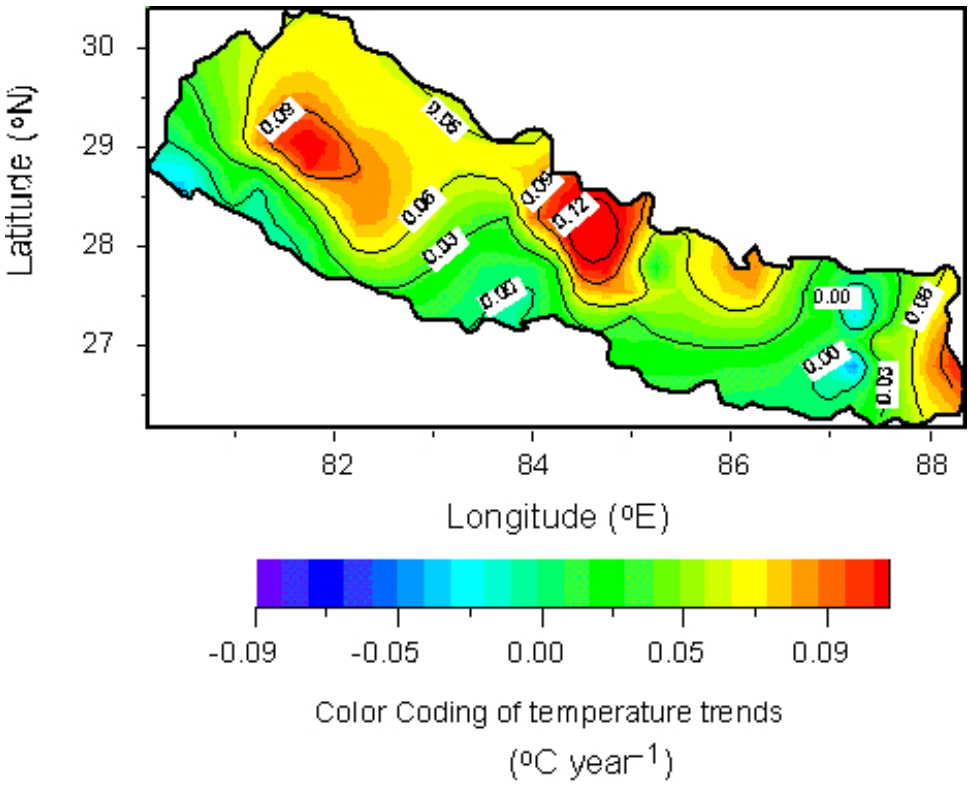

Figure 1.4 Spatial distribution of maximum temperature trends in Nepal for the period 1977–1994. Widespread areas of significant warming are present especially in the northern high altitude regions of Nepal-

Table1.1. Regional Mean Temperature Trends for the period 1977-94 (°C per year)

Regions	Seasonal				Annual
	Winter Dec-Feb	Pre-monsoon Mar-May	Monsoon Jun-Sep	Post-monsoon Oct-Nov	Jan-Dec
Trans-Himalaya	0.124 §	0.005	0.109 ¥	0.099 †	0.090 ¥
Himalaya	0.090 ¥	0.050	0.062 ¥	0.075 §	0.057 ¥
Middle Mountains	0.059 †	0.050	0.055 ¥	0.094 ¥	0.075 ¥
Siwalik	0.015	0.010	0.021	0.077 §	0.041 §
Terai	0.006	-0.004	0.014	0.069 §	0.041 §
All-Nepal	0.061 §	0.032	0.051 §	0.081 ¥	0.059 ¥

† p≥0.05

§ p≥0.01

¥ p≥0.001

28. Taking the year 1992 – the year the United Nations Framework Convention on Climate Change was adopted – as a benchmark for comparison on national initiatives on climate change related policies and programmes, Nepal's focus was on institutionalizing hydrological and meteorological data collection, particularly for water resources development and forecasting systems before 1992. Nepal participated in the negotiating processes of this Convention, and signed it on 12 June 1992 during the United Nations Conference on Environment and Development in Rio de Janeiro. In accordance with the provisions of the Nepal Treaty Act (1990), the House of Representatives ratified the Convention on 2 May 1994, and it entered into force in Nepal on 31 July 1994. As a Party to the Convention, Nepal took initiatives to identify the effects of climate change and areas that require immediate attention and assistance.

29. In October 1994, Nepal was included in the United States Country Studies Programme and a study was carried out to inventory GHGs for the energy sector based on 1990. It also emphasized the exploration of GHG mitigation options. The project, implemented by the Department of Hydrology and Meteorology of the Ministry of Science and Technology, also undertook a climate change vulnerability

and adaptation assessment of the agriculture sector and the Koshi River basin. In addition, Nepal prepared a country profile to implement the Convention at the national level. In 2000, a national workshop, "UNFCCC and Institutional Design of the Cooperative Implementation Mechanism of the Kyoto Protocol", was organized to share information, experiences and practices about the emerging climate change issues with the assistance of the Asian Development Bank.

30. In August 1999, a project entitled "Nepal: Enabling Activities for the Preparation of the Initial National Communication Related to UNFCCC (GF/2200-97-50)" was developed and signed between the Government of Nepal and UNEP. UNEP-GEF provided funding for its implementation. The outcome is in the form of a report, "Initial National Communication to the Conference of the Parties of the United Framework Convention on Climate Change, July, 2004".

31. Recently, Nepal has been developing a project entitled "National capacity needs self-assessment for global environmental management", with the support of UNDP. It is expected that UNDP-GEF will provide assistance of about $200,000 in the near future to assess national capacity in implementing multilateral agreements. This project has been designed to identify priorities and needs, through a country-driven consultative process, for capacity-building particularly on three Rio conventions – the conventions on biological diversity, climate change and desertification. At the end of the project, an action plan and resource mobilization strategy will be prepared for capacity development in Nepal to implement these conventions effectively. The Nepalese Government is also in the process of preparing a national adaptation programme of action and is negotiating with UNDP and UNEP for assistance.

B. Brief overview of the project

32. A two-year project, entitled: "Nepal: Enabling Activities for the Preparation of the Initial National Communication Related to UNFCCC", was developed. The Government of Nepal and UNEP entered into an agreement in August 1999 to implement the project, and also to initiate national communication activities in accordance with the article 12.5 of the Framework Convention[1] and to enable the country to fulfil its commitments and obligations under articles 4.1 and 12.1 of the Convention[2.] The project was planned to commence in August 1999 and be completed by July 2001.

33. As the national focal point for the Framework Convention on Climate Change, the Ministry of Population and Environment was designated as the collaborating agency, and the Department of Hydrology and Meteorology served as the executing agency for the project. This project has nine activities with specified outputs. The sub-activities are elaborated taking note of the activities as included in the project document (see annex I to the present report).

34. In addition to these activities and outputs, the project document highlights the institutional framework, project management and coordination. It also identified, among other things, issues and risks including monitoring and evaluation requirements. UNEP-GEF provided $310,000.00 to implement the project and the Government's commitment was to provide $70,000 as the counterpart fund.

C. Submission of the initial national communication to the United Nations Framework Convention on Climate Change

35. The initial national communication report was approved by the Prime Minister and the then Minister for Population and Environment on 1 July 2004. The Minister for Population and Environment released this initial national communication report at a launching event held on 19 August 2004 at the Ministry of Population and Environment, also attended by the UNEP Task Manager. The Ministry of Population and Environment has submitted it to the Framework Convention secretariat, and it was distributed during the seventh meeting of the Conference of Parties to the Framework Convention, held in Argentina in December 2004.

[1] Article 12.5 of the UNFCCC: "Parties that are least developed countries may make their initial communication at their discretion".

[2] Article 4.1 includes commitments of the Parties, and article 12.1 obliges the Parties to conduct a national inventory of anthropogenic emissions by sources and removals by sinks of all GHGs, a general description of steps taken or envisaged by Party, and any other information the Parties consider relevant to the achievement of the objectives of the Convention.

D. Background of the evaluation

36. As stipulated in the project document, the UNEP task manager undertook a desk evaluation and completed the UNEP self-evaluation fact sheet. This external evaluation has been carried out in response to the request by the Chief of the Evaluation and Oversight Unit of UNEP. UNEP prepared the terms of reference for the evaluation, including evaluation criteria. Although nine activities have been included in the project document, the following six activities were included in the terms of reference:

(a) Updating the GHG inventory for 1994, based on 1990 data;

(b) Identifying and assessing mitigation options;

(c) Developing a comprehensive vulnerability assessment of various sectors;

(d) Identifying stage I adaptation options;

(e) Building capacity to integrate change concerns into planning;

(f) Providing public awareness and other information.

37. The evaluation was started in November 2004 and was completed in January 2005.

E. Objectives of the evaluation

38. As indicated in the terms of reference, the main objective of this evaluation is to analyse the quality and usefulness of the project outputs, namely, the report on the initial national communication to the Conference of the Parties to the United Nations Framework Convention on Climate Change. The terms of reference include information on 14 areas of concern which are in line with the project terms of reference (see annex II below).

F. Evaluation methodology

39. The evaluator has reviewed the project document, the initial national communication report to the Conference of the Parties to the Framework Convention on Climate Change and other documents as furnished by the project. Meetings with the concerned relevant government officials and representatives of the partner organizations were also conducted to seek their views on the performance and achievement of the project. The evaluator developed the questionnaire in line with the terms of reference and received a completed questionnaire from the officials and experts involved in the preparation of the initial national communications report. The evaluator also had extensive discussions with Steering Committee members; National Climate Change Committee members; academics from Tribhuvan University, especially the team leaders of the national study team; the project coordinator and the assistant project coordinator.

40. Consultation and interaction meetings were conducted with the Secretary of the Ministry of Population and the Secretary of the Ministry of Science and Technology, as well as other officials of these two ministries, including members of academic institutions and the project team. Furthermore, the evaluator has also had consultations with some participants who attended the workshop organized by the project. Based on the information collected from literature reviews, questionnaires, and meetings, the success of the project activities was rated on a scale from 1 to 5; 1 being the highest and 5 being the lowest (see the following paragraph).

G. Review criteria

41. The review criteria, as suggested in the terms of reference (annex II), have been used to evaluate the quality and usefulness of the initial national communications report and other activities carried out during the implementation of this project. The following 11 aspects have been considered for the evaluation of the project activities:

(a) Attainment of objectives and planned results;

(b) Achievement of outputs and activities;

(c) Cost-effectiveness;

(d) Impact;

(e) Sustainability;

(f) Stakeholder participation;

(g) Country ownership;

(h) Implementation approach;

(i) Financial planning;

(j) Replicability;

(k) Monitoring and evaluation.

42. Each aspect outlined above were rated using the following rating system as included in the terms of reference:

1	=	Excellent	(90–100 per cent achievement)
2	=	Very good	(75–89 per cent achievement)
3	=	Good	(60–74 per cent achievement)
4	=	Satisfactory	(50–59 per cent achievement)
5	=	Unsatisfactory	(49 per cent or below achievement)

43. Later, the ratings were converted to the GEF rating system of: highly satisfactory (80–100 per cent), satisfactory (65–79 per cent), marginally satisfactory (50–64 per cent), unsatisfactory (49 per cent and below) and N/A (not available).

II. Project evaluation

A. Relevance and appropriateness of the project

44. Lacking information on such important issues as GHG emission, vulnerability to climate change and adaptation and also being a party to the Framework Convention, Nepal considered this project most relevant for the conduct of a GHG inventory, development of climate change abatement and sink enhancement programmes, and also the elaboration of policy frameworks for adaptation and response measures. This project has been considered one of the prerequisites for mainstreaming climate change concerns in national policies and programmes. It not only helped the country to meet the national obligations, submit the initial national communication to the Framework Convention secretariat and share it with the Parties but also provided an opportunity to respond to the need to prioritize climate change activities in the county. The policy responses would help in integrating climate change concerns into national planning and development and contribute to promoting activities for the reduction of GHG emissions and minimization of GHG impacts on natural resources and human health.

B. Accomplishments of the project

1. Attainment of the project objectives

45. The first objective of the project was to enable Nepal to fulfil its commitments and obligations under articles 4.1 and 12.1 of the United Nations Framework Convention on Climate Change, especially the preparation and reporting of its initial national communication as set out in article 12.1 (a), (b) and (c), based on the guidelines and format for non-Annex I Parties recommended by the Conference of the Parties at its second meeting. Its second objective was to fill in the gaps and build on the past and current activities related to climate change as included in the project document.

46. Although the project was in preparation for two years and finally signed on 22 July 1999 by the Government and on 10 August 1999 by UNEP, it only started in October 2000. The first objective had been fulfilled by June 2004. The project initiation workshop on climate change was held on 4 January 2001. The project has introduced a road map to fill in the gaps of GHG emissions and has also provided a basis for future actions to address climate change issues in Nepal. The present section provides a description of the implementation status of each activity and attainment of outputs.

2. Completion of activities and attainment of outputs

47. The project had nine activities and 26 outputs. The nine activities were further subdivided into 37 sub-activities (see annex I below). These activities and sub-activities are all interlinked. Completion of one activity has had a positive effect on the others and a delay in the accomplishment of one activity has tremendously affected the other activities. The outputs were achieved after completion of the various activities and sub-activities. Accordingly, the present report analyses the accomplishment of the activities in accordance with the criteria set out the project document.

(a) Activity 1: Establishment of the Steering Committee and the National Climate Change Committee

48. .A 10-member Steering Committee was formed under the chairmanship of the Secretary of the Ministry of Population and Environment in August 1999 immediately after signing the project document by the Government and UNEP in the same month. The Director-General of the Department of Hydrology and Meteorology served as the secretary of the Steering Committee and the project coordinator. The decision about the formation of the Steering Committee was made by the Minister for Population and Environment. The Department of Hydrology appointed an assistant project coordinator in December 2000, who had a long working experience with the Government and extensive knowledge in the field of meteorology and climate change. The project was housed in the premises of the Department of Hydrology so that the project coordinator, the secretary of the Steering Committee and the Chair of the National Climate Change Committee, could regularly monitor project operations. The project's day-to-day operation was handled by the assistant project coordinator, who was assisted by the finance officer of the department of hydrology and full-time technical assistants and administrative staff.

49. The Steering Committee met seven times during the project period and has been involved right from project initiation to approval of the initial national communication report. Although the Committee made a decision to meet every three months, meetings were actually held at intervals of between two and twelve months. The Ministry of Finance was represented on the Steering Committee but it only

attended one meeting during the project period. About 70 per cent of the members have attended almost all the meetings. Only a few members, however, have regularly attended all meetings. A review of decisions indicates that the Steering Committee was well informed about the operation and progress of the project activities.

50. An 18-member National Climate Change Committee was established in October 1999 by the Department of Hydrology and was chaired by the Director-General of the Department as per the project document. Its first meeting was held in October 1999 and it met four times during the project period. During the initial stage of the meeting, it met three times within six months, and the last meeting was delayed by almost two and a half years. It also made a decision to meet every three months, but this decision was not complied with. Although the project document required that all team leaders of the national study team be included in the National Climate Change Committee, the leader of the vulnerability and impact assessment and adaptation team was not seen (see the composition of the National Climate Change Committee in appendix II to the initial national communication report).

51. A 17-member national study team was formed and divided into four working areas: GHG inventory; vulnerability and impact assessment and adaptation; mitigation options; and national communications. Although the project document outlined the formation of a study team on the national action plan and national communications, the initial national communication report only mentions the formation of the national study team on national communications. The team was involved in preparing documents in the specified working areas and contributing to the preparation of the initial national communication report, and the national action plan was not prepared.

52. The evaluator used the questionnaire to collect and verify information. Information from the Ministry of Population showed that the Steering Committee, the National Climate Change Committee and the national study team were widely represented within governmental and non-governmental sectors. In order to nominate members, the Government adopted such criteria as the ability to identify the impacts of climate change; to identify economically effective and feasible actions; to identify the time framework and the estimated cost for initial national communications; and to develop workable initial national communications. The first communications report mentions, however, that the Steering Committee was represented mostly by government institutions, the National Climate Change Committee was rather broad and accommodated the non-governmental organizations sector, and national study team members were mostly professionals, academics and researchers. Reviewing the composition of the Steering Committee, the application of the criteria seems to have been generally overlooked.

53. All elements (sub-activities) under activity 1 were completed successfully. The output of activity 1 was the establishment of the Steering Committee, the National Climate Change Committee and the national study team and, with their establishment, the output of this activity was fully attained.

(b) Activity 2: GHG inventory

54. In line with the recommendation of the National Climate Change Committee and the decision of the Steering Committee, a single package was developed for the conduct of the study. The Director-General of the Department of Hydrology, on behalf of the project, entered into an agreement with the Central Department of Hydrology and Meteorology of Tribhuvan University on 23 August 2001. It complies with the Government's financial rules. This agreement was reached to secure the services of the University's Central Department of Hydrology and Meteorology on all activities excluding activity 1. The five-member study team was involved in conducting the GHG inventory using the revised 1996 Intergovernmental Panel on Climate Change (IPCC) guidelines for the national GHG inventories. This inventory was the second official inventory of GHG emissions in Nepal as the first was conducted in 1997 under the United States Country Strategy Programme. The inventory was conducted for emissions of CO_2, CH_4 and N_2O and removal of CO_2 for the base year 1994/95 in energy sources (fuel consumption and fugitive emissions from fuels), industrial processes, agriculture, land-use and land-use change and wastes as other sources in sectors as included in the project document. Analysis of GHG emissions for cement production was also conducted under the industrial process.

55. Although the Steering Committee made the decision to include brick and rubber factories, the study did not focus on it. The University's Central Department of Hydrology submitted the final draft report on the GHG inventory, which was discussed at the last meeting of the National Climate Change Committee, held in June 2003. The meeting endorsed the report with the suggestion to include relevant comments raised by the committee members. Yet this report was neither submitted nor discussed in the Steering Committee meeting. Information on the GHG inventory has been included in the initial national communication report.

56. The sub-activities, such as setting up of a data collection and management system, coordination with the Asia Least Cost Greenhouse Gas Abatement Strategy, and the convening of review workshops, were not carried out as intended in the project document. Nepal was not included in the Gas Abatement Strategy and hence a direct coordination was not established. The project did, however, benefit from the regional initiatives, particularly those on using information and techniques.

57. Out of the eight outputs of this activity, two (refinement and updating of the GHG inventory, and strengthening of the inventory study team) were fully attained. There are no clear indications of the attainment of other outputs (see annex I below). For example, there are no additional reports prepared to include the shortcomings and gaps in the IPCC guidelines, recommendations on research and revisions to the IPCC GHG inventory methodology, on country-specific emission factors or coefficients or on workshop activities. Overall, implementation of this activity (activity 2) is considered incomplete and the outputs were only partially attained.

(c) Activity 3: Programmes to address climate change and its adverse impacts including abatement and sink enhancement

58. As mentioned under activity 2 above, this activity was also included in the single package for the conduct of the study and the Tribhuvan University Central Department of Hydrology identified mitigation options. A separate chapter on GHG emission projections and mitigation options has been included in the initial national communication report. A four-member study team worked on mitigation options and made projections for the energy sector (residential, industrial and transport sectors), on land use, land use change and forestry with possible carbon storage and release in this sector, the agriculture and livestock sector and the solid wastes sector and provided mitigation options for each sector. The report does not clearly indicate whether gaps in the project sponsored by the United States Country Study Programme were filled.

59. The report was submitted to the National Climate Change Committee, which endorsed it at its June 2003 meeting. The project document has clearly listed four outputs for activity 3, which are:

(a) Identification and assessment of mitigation options in all relevant sectors;

(b) Recommendations for reducing amount and intensity of emissions from various sources, and a plan for the enhancement of sinks;

(c) Preparation of the first national mitigation strategy for the national communication;

(d) Workshop report.

60. The mitigation options were developed but mitigation strategies were not elaborated in an easily understandable manner. Furthermore, the workshop report was not produced and no record was found of the organization of the workshop. The mitigation options were identified for each sector and have been included in the initial national communication report. Hence, the outputs are only partially achieved.

(d) Activity 4: Policy options for monitoring systems and response strategies for impacts

61. Activity 4 focuses on developing policy options for monitoring systems and response strategies. The activities also formed part of the single package for the preparation of the initial national communication report, which was carried out by Tribhuvan University. The activities were designed, among other things, to assess the impact of increased temperature and seasonal variability in precipitation on elevation shifts of ecosystems; assess the vulnerability and impacts of climate change in the health sector; extend the work of the United States Country Study Programme-funded assessment of the vulnerability and impacts on forests, soil conservation, and biodiversity; extend the work done on the river basin and undertake modelling using the data for grassland and livestock sector. A four-member vulnerability and impact assessment and adaptation study team was formed to prepare the report.

62. The initial national communication report includes a chapter on vulnerability and adaptation and has analysed different models for assessing vulnerability and impacts by using climate change models such as the global circulation model and the regional climate model, solar radiation change and precipitation change. The possible impacts of climate change on agriculture, water resources, biodiversity, and aspects of health have been described, along with adaptation options.

63. Although the project document focused on the identification and development of policy options for adequate monitoring systems and response strategies, the impacts of climate change on various

sectors have also been assessed. Response strategies on vulnerability and impacts have not been clearly spelled out, while policy frameworks on adaptation strategies have been described at length for different sectors. These adaptation strategies have focused on agriculture and livestock, water resources, biodiversity, and health sectors which are in line with the country's policies and needs. The draft final report on vulnerability and adaptation options was also discussed and endorsed at the National Climate Change Committee's June 2003 meeting.

64. In addition, the project document envisaged the organization of a workshop to discuss, with key stakeholders and policy-makers, a review of adaptation options, strategies and policy frameworks. The workshop report was not seen during the evaluation exercise. The project sponsored participants, however, to attend training workshops on vulnerability and adaptation and on the regional climate model, held in Mumbai in April 2002. Furthermore, the long-term behaviour of the water basin and climate change was not studied. Similarly, policy options for adequate monitoring systems and response strategies were not developed. The report does not indicate whether there was any monitoring and evaluation of the project activities.

65. Under activity 4, the baseline data were developed using climate change models such as the global circulation model and the regional climate model; solar radiation change and precipitation change vulnerability and impact assessments were carried out for different sectors. The project has also enhanced the capacity to apply models for assessing climate change impacts and has helped strengthened expertise in this area. Most of the outputs as set out in the project document have been attained therefore, and they provide a basis for future action to in assess vulnerability and impact and to integrate adaptation strategies in national policies and programmes.

(e) Activity 5: Policy frameworks for implementing adaptation measures and response measures

66. This activity sought to identify, analyse and assess a range of potential adaptation options and to address the impacts of climate change on the economy and natural ecosystems through the development of the national strategy. The major outputs were: identification and assessment of adaptation (stage 1) options; policy frameworks for implementing adaptation measures and response strategies; and a workshop report.

67. As set out in the single package for the preparation of the initial national communication report, the Tribhuvan University Central Department of Hydrology carried out this activity as well. It contributed to enhancing understanding and the capacity of the vulnerability and impact assessment and adaptation group. The communication report outlined adaptation options and included adaptation strategies as a policy framework. The evaluator did not find the workshop report, however. The outputs of the project activity were, therefore, only partially attained.

(f) Activity 6: Building capacity to integrate climate change concerns into planning

68. This activity has focused on including climate change concerns in formal and non-formal education. It also planned to launch training for national development planners and for policy and decision-makers in the main objectives of incorporating climate change concerns into the policies, plans and programmes or the incorporation of climate change issues in the decision-making process. To accomplish this activity, the project gave support to participants to attend a training workshop organized by the Indian Institute of Technology (IIT) in Mumbai in April 2002. The training workshop on the regional climate module was organized by the Indian Institute of Technology in New Delhi, and short-term training on climate change national communication was organized by the Korean Meteorological Association in Seoul in June and July 2003. These training sessions were attended by Department of Hydrology officials and national study team members involved in the project. No other training sessions were organized in Nepal, thus limiting the opportunity for planners, policy-makers and decision-makers, in particular, to enhance their understanding on climate change issues and problems, and enable them to integrate in the development planning and decision-making process.

69. The initial national communication report includes a chapter on education, training and public participation. Under education, it shows where climate change aspects have been lightly covered in the secondary level of environmental education. The report contains annexes recommending text to be incorporated in the existing educational materials for grades 9 and 10. The communication report also surveys past efforts relating to climate change, to be set against the achievements of the project in influencing planning, policy and decision-making process.

70. The project helped generate awareness on climate change issues. It encouraged the consideration of climate change issues in the Sustainable Development Agenda for Nepal, and the country's tenth development plan (2002–2007). Hence, the output on enhancing capacity of the national

development planners and policy-makers to integrate climate change concerns into national planning may be considered to have been partially attained.

(g) Activity 7: Programmes related to such areas as sustainable development, research and public awareness

71. The project document focuses on the identification and development of programmes in climate change activities related to sustainable development, research and systematic observation, education, public awareness and training, among others. Activity 6 also covers education and training to some extent.

72. During the project period, the project launched public awareness activities with the main objectives of creating public awareness and enhancing the level of understanding on climate change and its impacts on natural resource management and aspects of social and economic development. Under the project, an information brochure was prepared and published and weekly news bulletins issued. Information was also provided regularly to print and electronic media, particularly to Kantipur TV and Radio, Spacetime TV and Sagarmatha Radio (see annex III below). In addition, the project organized a project initiation workshop on climate change in January 2001, and a national workshop on the initial national communication under the Framework Convention on Climate Change in October 2003 (see annex IV). These two workshops were basically related to start-up and completion of the project activities.

73. Support was also given to the Society of Environmental Journalists in December 2001 and 2003 in organizing an interactive programme on climate change and impacts on the economic sector, including floods and the project, and to the World Meteorological Day Organizing Committee in discussing climate change issues in Nepal in March 2002. The project sponsored the publication of a special issue on climate change in *Jeevan*, a monthly magazine in the Nepali language. The involvement of journalists in this programme contributed to the dissemination of information and encouraged them to collect and publish climate-related data and information. The project also entered into an agreement with the Nepal Forum for Environmental Journalists in September 2004 to produce and transmit a television documentary on climate change, and on the project and its achievements. The documentary contains information on climate change issues and their impact on the environment, along with different factors, highlights of the project activities and their results, national commitments and the views of the people concerned. It has also developed its own web page.

74. The initial national communication report includes a separate chapter on research and studies and recommends areas of research in the energy, industry, transport, agriculture, forestry, water resources and health sectors. These recommendations suggest directions for the conduct of further research on specific issues related to climate change, the findings of which would contribute to better knowledge on climate phenomena and their implications in different sectors.

75. The project document specifies two key outputs: the first is information, in the form of information packages, video aids, relevant publications, and so on; and the second awareness, with enhanced public awareness at all levels and in all districts of the country. As the project did not prepare and disseminate specific information packages, this output has not been attained to the desired extent. Furthermore, public awareness programmes were exclusively centralized as the national-level print and electronic media, including FM radio broadcasting from the capital, have limited penetration in the districts of Nepal. Considering the remoteness, and coverage of print and electronic media in Nepal, some efforts were made to meet the expectations of the project document and the outputs were partially attained.

(h) Activity 8: Provision of other information

76. This activity includes a number of sub-activities, such as providing any other relevant information to meet the objectives of the Framework Convention, identifying technical and financial needs and constraints associated with information communication in the spirit of the Convention, and providing data and information for the calculation of global GHG emission trends. The project recommended research and studies. The review of project activities does not indicate any initiatives undertaken by the project in meeting the sub-activities as set out in the project document. The project document did not clearly specify the output under this activity but it included the need for describing the reduction of the margin of uncertainty in emission and removal of variables through appropriate institutional and capacity-building. Although information has been shared on general issues of climate change, the project has not touched on other sub-activities as outlined in the project document. This activity did not, therefore, get priority during the project implementation.

(i) Activity 9: Preparation of the national communication

77. The main objective of this project was to prepare and submit the initial national communication report. Preparation was started after the contract agreement with the University's Central Department of Hydrology and Meteorology on 23 August 2001 and was completed in April 2004. At its fourth and final meeting, in June 2003, the National Climate Change Committee endorsed the communication. The project collected comments and suggestions on the final draft of the initial national communication report from UNEP, four independent reviewers and concerned agencies. The Central Department of Hydrology finalized the report by incorporating appropriate comments and suggestions and submitted it to the project. The final initial national communication report does not, however, mention the incorporation of comments and suggestions made by the reviewers, received from competent national technical institutions and workshop participants (key stakeholders, policy and decision-makers). At its seventh meeting, the Steering Committee decided to submit the final communication report to the Government for necessary approval. It was approved by the Government in accordance with the decision by the Prime Minister and the then Minister for Population and Environment on 1 July 2004. A press conference was organized on 19 August 2004. The communication report was submitted to the Framework Convention secretariat in August 2004 and the secretariat posted it on its website (www.unfccc.int) on 1 September 2004. This report was also distributed at the tenth meeting of the Conference of the Parties in December in Argentina.

78. The preparation of this report was coordinated by the Steering Committee, it was drawn up by the national study team and reviewed by the National Climate Change Committee. A national communication group was formed as envisaged in the project document. Two major events were organized around the project and the communication report. The first workshop on project initiation was held on 4 January 2001, and a national workshop on initial national communications was organized on 16 and 17 October 2003. The first and second workshops were attended by about 94 and 80 participants respectively, representing central level organizations, the policy-making bodies, the academic sector, non-governmental organizations, journalists, and programme implementing agencies. The output of this activity 9 was fully attained.

(j) Overall achievement

79. As mentioned above, the activities envisaged in the project document were accomplished partly or fully. Some of the outputs under different activities were incomplete or only partially attained (see annex I below). Some of the outputs were not attained at all. The main objective of preparing the communication report has been fulfilled, however. All substantive activities for the preparation of the initial national communication report were completed within the extended project period. Hence, the overall achievement is rated as "very good".

3. Comparison between the project's actual results and planned results

80. Taking into consideration the objectives set forth in the project document, the planned results were to enable the country to harmonize and to update previous results, and to fill gaps and further to enhance its scientific and technical capacity to address climate change concerns. the attainment of these results is reviewed in the following paragraphs.

(a) Harmonization and updating of previous results

81. The project document emphasized the updating of previous results, especially those of the United States Country Studies Programme on a GHG inventory, and the GHG options for the energy sector. Other projects related directly to climate change were not implemented in the country. Various programmes and projects which could contribute to reduce climate change implications are in progress, however, particularly on alternative energy development, enhancement of sinks, vehicle emissions control and so on. The project recalculated the GHG emissions for 1994–1995, while other activities were not carried out to the desired extent. The initial national communication report includes reviewed information on policy measures, in particular national sustainable development policies, environmental management and legal measures. The information contained in the report is generic and inadequately linked with climate change phenomenon. Most of the information is related to environmental management in general.

82. The project made efforts to harmonize and update data and fill gaps but it could not do so as envisaged. One of the reasons for this is the low level of data, information and understanding on climate change phenomenon, and also the lack of effort to make the technical information user-friendly.

Although the technical staff of the Department of Hydrology and Meteorology understand the climate change phenomenon and its implications, there is a problem communicating with its partners, including the national focal point on the Framework Convention, which lacks the technical and knowledge-based staff necessary to handle it with competence. Similar situations obtain in other government partner organizations. There is, however, an increasing understanding of the implications of climate change in some of the specialized non-governmental organizations. The project tried to build on previous project outputs, underscored the importance of existing activities and encountered problems in harmonizing the project activities sufficiently in advance with current climate change-related activities in the country. It influenced the policy-making body, however, which decided to include it in the country's tenth development plan (2002–2007), the Sustainable Development Agenda for Nepal, and the rating accorded for those harmonizing and updating outcomes is "good".

(b) Enhancement of scientific and technical capacity

83. The expected result would have sufficiently long-term implications on avoiding or mitigating the impacts of climate change in Nepal. It was intended to build and enhance the capacity of the technical institutions concerned with aspects of climate change. As climate change occurs as a result of unregulated activities of different sectors, and also has impacts on a number of sectors, the development of scientific and technical capacity is a necessary building block for tackling this issue effectively. In this project, the Steering Committee was represented by an academic institution, Tribhuvan University which, in its Department of Hydrology, has the scientific and technical capacity to deal with climate change concerns in Nepal. The National Climate Change Committee was more technical in nature and function, and was mostly composed of the representatives of sectoral technical organizations and technicians. Similarly, the national study team was also technical in nature and function. Some of its specialists have been involved in climate change issues in Nepal.

84. During the evaluation period, officials and experts involved in the project activities were asked about the enhancement of capacity in climate change issues, and they responded that the project has contributed in enhancing the level of understanding on climate change and its potential impacts. Officials of the Framework Convention focal point, however, were not overly concerned with the enhancement of scientific and technical capabilities, as the personnel involved in Framework Convention business in the Ministry of Population lack the necessary scientific background for a full understanding of the science of GHGs and climate change-related aspects. It means that those with a science background find the project effective in enhancing their technical capacity. For others, the project results did nothing in terms of capacity-building.

85. As the project has enhanced understanding about climate change aspects, developed the skills of the national study team in climate change modelling and improved the scientific and technical capacity of the Department of Hydrology and Meteorology and Tribhuvan University officials, the rating for the achievement of results in this area is "good". The capacity thus built is expected to be sustainable, particularly at the Department of Hydrology and the University.

C. Project management

86. Project management is an important component for the successful completion of the project and in making the projects' outputs practical, usable and sustainable. Project management involves a number of elements ranging from day-to-day operations, institutional arrangement and staffing to monitoring and evaluation. The evaluator has considered some elements under this subsection in evaluating the project management comprehensively.

1. Institutional arrangements

87. The project document proposed an institutional framework, project management and coordination. It proposed the Department of Hydrology as the executing agency with the provision that it should work closely with the environment division of the Ministry of Population and Environment. The Steering Committee was meant to ensure the participation of various sectors and the National Climate Change Committee for technical advice and supervision on overall implementation. It also envisaged the strengthening of the existing institutional framework for project management. The project also viewed the role of UNEP, as a GEF implementing agency, in providing technical support and an advisory role. In line with the project document, the institutional arrangements were designed to implement the project. The institutional structure is set out in figure 2.1.

88. A review of the decisions of the Steering Committee and the National Climate Change Committee suggests that the Steering Committee was involved in guiding and making decisions on

policy matters. It was also entrusted with national coordination. The Climate Change Committee was involved in ensuring concurrence on such matters as the formation of the national study team, the memorandum of understanding or the terms of reference with the Tribhuvan University Central Department of Hydrology and Meteorology, endorsing the initial national communication report and providing inputs on project components.

89. Project management was severely affected by the frequent staffing changes at the policy level in the Framework Convention focal points. During the project period, four secretaries served as chair of the Steering Committee (see annex V below). As mentioned above, the Steering Committee met seven times, and the National Climate Change Committee four times to provide guidance and make necessary decisions for the smooth functioning of the project. The Steering Committee frequently met during the initial stage of the project. The meetings indicated some level of personal interest in guiding the project activities. This interest is reinforced by the members' academic qualification and commitment to implementing the project activities as designed. During the project period, the Department of Hydrology gave a briefing to the then Minister of State for Science and Technology in May 2002 about the inception report, at a meeting attended by 32 participants. Intermittent briefings on project progress were also given to the Minister for Population and Environment. Although representatives of various partner organizations were involved in the Steering Committee, the National Climate Change Committee and the national study team, there is insufficient institutional memory about the project activities, a shortcoming which may be attributed to the personalized approach in taking on board the inputs provided by of the officials. Even in the Framework Convention focal points, only a few people know about the project and its outcome.

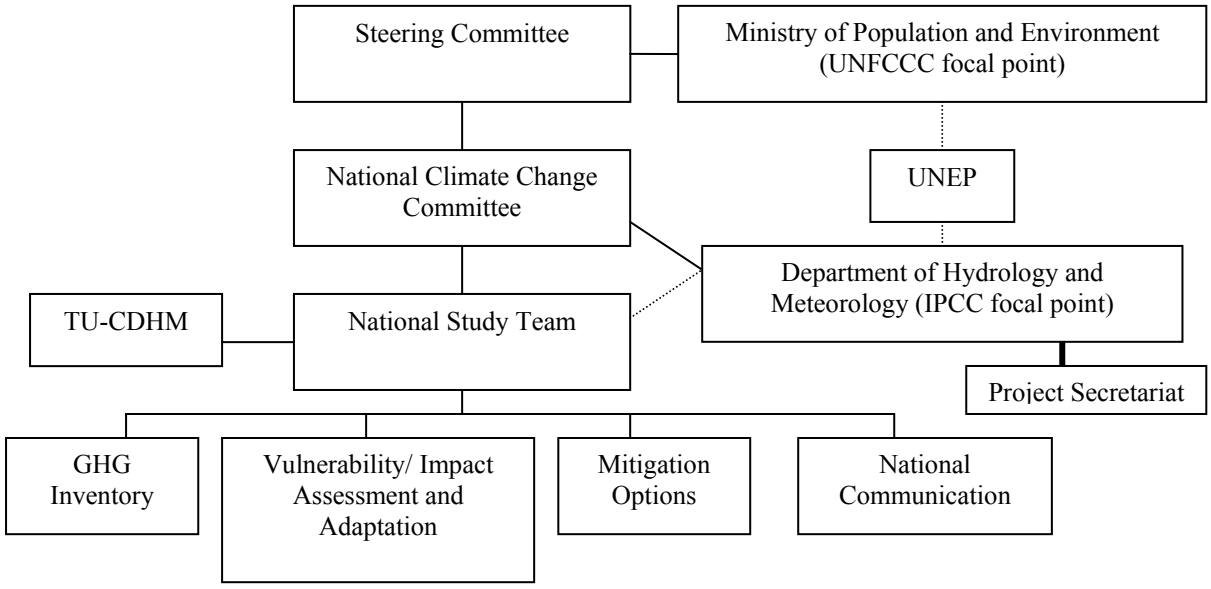

Figure 2.1. Project management structure

90. The project document specified the role of project coordinator for the overall coordination of various components of the project, and for fund management. The project has attained this outcome through a technical project coordinator and management of funds as specified in the project document. A programme officer from UNEP, in charge of climate change enabling activities in the Division of Policy Development and Law, served as the task manager for this project and efficiently provided inputs for the successful completion of the project.

91. Although the project management has no record of national study team meetings, it is known that several national study team meetings were held. Although the project document clearly specified the institutional arrangement, the project encountered problems in completing the work within the extended project period of four years. Coordination among various sectors and lack of technical know-how in addressing climate change issues seems to have been the main problem in delaying the project. Although the project was delayed substantially, the final output of preparing the initial national

communication report was attained. The overall rating for institutional arrangements, therefore, is "good".

2. Staffing

92. As mentioned above, the director-general of the Department of Hydrology and Meteorology served as the unpaid project coordinator, with due account for government rules and regulations. The director-general was designated project coordinator with a view to internalizing and institutionalizing climate change concerns in normal government business. The present director-general took over the functions and responsibilities of the project coordinator after the retirement of the former director-general in April 2003. Only two project coordinators, unlike the Steering Committee chair, were involved for the whole project period. The project coordinator was assisted by an assistant project coordinator, who has had a long experience in the Department up to the position of deputy director-general. The project was assisted by a finance officer from the Department. A separate secretariat was established with necessary assistants. The national study team was formed with four groups as identified in the project document. The project was also supported by the technical officials of the Department of Hydrology in scientific, technical and technological matters.

93. The Tribhuvan University Central Department of Hydrology and Meteorology was made responsible for the preparation of the sectoral reports and initial national communication report. As the project activities were all contracted out, the project secretariat lacked documented information on the number of experts and assistants involved in the project activities. In a nutshell, the project coordinator and all the project staff were instrumental in bringing into existence the project outputs, notably the final initial national communication report in its present form, although report completion took about four years after the project commencement. Accordingly, the achievement in the area of staffing is rated as "very good".

3. Financial management

94. A total of $310,000 was allocated for the project and Nepal received $276.770 for project implementation. The amount remaining from the total was retained by UNEP for different purposes. Based on the project document, UNEP transferred $60,000 to initiate project activities. It was envisaged that subsequent cash advances would be provided through the Ministry of Population upon a satisfactory financial report, showing expenditures incurred for the past quarter and timely and satisfactory progress reports on project implementation. The project document also envisaged that expenditure accounts would be sent to UNEP within 30 days of the end of each calendar quarter and that these were to be prepared by the Department of Hydrology and certified by the Ministry of Population. It also obliged the Department to submit detailed financial statements showing actual costs within 60 days of completion of the activities.

95. The project coordinator and secretariat managed the project account initially in a commercial bank and later in Nepal Rastra Bank, a government-owned bank. All government rules were applied to the project. The project coordinator, being the director general of the Department of Hydrology, was unpaid, and other staff were paid from the budget allocated to the project coordinator. The project entered into an agreement with the Tribhuvan University-Central Department of Hydrology and all amounts related to project activities such as GHG inventory and emission projections and the vulnerability and adaptation study were provided to the consultant as per the agreement concluded between the Department of Hydrology and Tribhuvan University on 23 August 2001.

96. The project duration was revised to run from August 1999 to June 2004. All allocated budget funds had been spent by the end of December 2004. The expenditure is given in table 2.1. The University received $137,093.33 for consulting work. Workshops were organized but workshop reports were not published.

Table 2.1. Total budget and total expenditure as of 31 December 2004

SN	Particulars	Project budget allocation year 2000	Total expenditure
1	Project personnel	15,000	15,000
2	Consultants	45,930.97	45,930.97
3	Administrative support	7,039.03	7,039.03
4	Travel on official business	22,500	22,435.61
5	Sub-contracts	96,900	96,900
6	Group training	57,800	57,800
7	Expendable equipment	4,500	4,500
8	Non-expendable equipment	15,000	15,000
9	Operation and maintenance of equipment	1,000	1,000
10	Reporting costs	4,100	4,100
11	Sundry	7,000	7,000
	Grand total (without UNEP cost)	276,770	276,704.65

97. The project coordinator submitted the financial reports on time and in accordance with the format and the provisions of the project document. Based on the above table, only $65.35 is unspent. This way, the project performance in spending the allocated budget is ranked as "excellent", taking into account such factors as compliance with financial reporting, budget transfer from UNEP, and compliance with Nepal's financial rules. The final audit report has already been sent to UNEP.

4. Procurement

98. The project procured consulting services from Tribhuvan University. It also procured computers, communication facilities and so on.

5. Time management

99. The project was designed to run for two years but it was completed in four years. It was unable to comply with the work plan of the project document. All substantive activities were planned to start immediately after the agreement about the project. The work plan was revised during the project period. Although time management is crucial for the successful and timely completion of the project activities and for the attainment of quality outputs, the following reasons were cited for the extension of the project activities:

(a) The project was conceived as a learning exercise to build the capacity of national professionals involved in the area of climate change. At the beginning, technical aspects of the project were less understood at different levels. Although the Department of Hydrology had technical expertise in climate change matters, this represented additional work for Department officials. The amount of manpower in the Department and its regular duties limited the possibilities for involving the required number of officials in the project activities. in addition, government rules prohibit the provision of incentives to government officials even if they are involved. About a year was taken to involve an academic institution – the Tribhuvan University-Central Department of Hydrology and Meteorology – in starting the project activities in any real sense;

(b) The national study team members faced difficulty in estimating GHGs and extrapolating GHG emissions in different scenarios. Significant time was taken to process existing climatic data to fit into the chosen climate change models. Until the Department officials and members of the national study team members had attended training at the UNEP/UNDP South Asian regional workshop on GHG inventories, held in New Delhi, India, in April, 2001; training workshops on vulnerability and adaptation held in Mumbai, India, in April 2002 and on the regional climate model in Pune, India, the project experienced great difficulty in selecting appropriate models for estimating and extrapolating GHG emissions and conducting vulnerability assessment;

(c) The conflict relating to the designation of Framework Convention focal points also delayed the project substantially.

100. Other reasons include the inability to recruit experts on a full-time basis. The needed expertise was available only from academic and technical institutions and the Steering Committee could not decide in sufficiently good time to use the available in-country manpower. The limited scientific studies and research on climate change also delayed the project.

6. Coordination mechanism

101. The project document envisaged the role of the Steering Committee and National Climate Change Committee as providing necessary coordination and technical and managerial inputs for the successful completion of the project activities. The partner organizations attended the meetings of the Steering Committee and the National Climate Change Committee and did not contribute substantially on technical matters, particularly on GHG emissions and their causes and the selection of climate change models. The coordination component was also hampered by the frequent change of Steering Committee chair and members, particularly the Joint-Secretary and Chief of the Environment Division of the Ministry of Population. This resulted in a heavy burden being placed on the project coordinator and secretariat staff.

102. Project coordination was also affected by confusion relating to the Framework Convention focal point at the beginning of the project. During project preparation, the Ministry of Population functioned as the Framework Convention focal point. As a technical arm of the Ministry of Science and Technology, the Department of Hydrology needed to process all decisions through the Ministry of Science and on a number of occasions was unable to contact the Ministry of Population directly. Being a technical ministry and having the Department of Hydrology under it, the Ministry of Science declared its interest in being the Framework Convention focal point and a conflict emerged between the two ministries. The case was forwarded for the necessary decision to resolve the conflict. Finally, the Government Council of Ministers chose the Ministry of Population and Environment as the Framework Convention focal point, and the continuing conflict was resolved.

103. Coordination at the national level was quite inadequate for completion of the project activities as scheduled. The evaluator is of the opinion that effective coordination could yield better outputs and facilitate timely accomplishment of the project.

7. Technical supervision from the executing agency and committees

104. It is evident that technical supervision is essential for successful and smooth implementation of the project, and also for providing technical inputs where and when necessary. Although not directly envisaged for technical supervision, the National Climate Change Committee was expected to provide overall guidance on technical matters. When the project was facing problems on estimating GHG emissions, and selecting models, the committees and executing agency could not provide concrete solutions to address the problem. The project searched for an appropriate training programme to send national study team members involved in GHG estimation, and model selection and usage. The executing agency and committees formed under the project were therefore unable to provide technical supervision, thereby indicating the need for strengthening local technical capacity on climate change concerns in the concerned bodies. It would be necessary to select an institution which understands the science of climate change and would have the capacity to deal with the issues of technical competence.

8. Monitoring and evaluation

105. The project document obliged the project coordinator to prepare and submit quarterly progress reports. It was also planned that they should be compiled in an electronic newsletter to facilitate evaluation of the project implementation by the National Climate Change Committee and supporting institutions and early identification of difficulties and shortcomings. Furthermore, the project document assigned the National Climate Change Committee responsibility for ensuring the quality, standard, comprehensiveness and conformity of the progress reports with the proposed terms of reference and dates of completion. The project coordinator submitted the progress reports which were endorsed in the Steering Committee meetings. But the electronic newsletter was neither produced nor did the National Climate Change Committee and supporting institutions involved in monitoring and evaluation of the project activities provide inputs in progress reports. The Steering Committee and National Climate Change Committee met seven and four times, respectively, during the extended project period and no decision was made on the quality, standard, comprehensiveness and conformity with the terms of reference and dates of publication.

106. With regard to financial reports to UNEP, these were submitted by the project coordinator within the specified time period based on UNEP formats. Furthermore, the project document stipulates the need for these to be prepared using UNEP monitoring and evaluation guidelines and procedures for the evaluation of project progress. Discussions with the project coordinator and assistant project coordinator revealed that such monitoring and evaluation guidelines and procedures were not used to evaluate the progress at the mid-term stage.

107. The project document also envisaged the inclusion of the UNEP logo and acknowledgement to UNEP as a part of the monitoring and reporting exercise. For evaluation, the role of UNEP was specified. The project document specified the need for external evaluation at the end of the project, and the present evaluation confirms that this activity was carried out. The UNEP logo has been included in the cover page of the initial national communication report and the Nepalese Government has acknowledged the contribution and financial and technical support of UNEP-GEF and the Framework Convention secretariat. Furthermore, the project coordinator has sent five copies of the first communication report to UNEP as stipulated in the project document.

9. Other reports

108. The Department of Hydrology has submitted progress reports and financial statements within the time period specified in the project document and in the prescribed format. Although the project document stipulates that the terminal report should be submitted within two months of the completion of the project, this was not complied with.

10. Problems encountered during project implementation

109. As mentioned above, the project activities were delayed for about two years. Originally, it was intended that the project be implemented from August 1999 to June 2002 but it was extended to June 2004 because of various problems during the initial stage of the project. The major problems are summarized below:

(a) The project was designed to develop human resources and make the project outputs sustainable. It envisaged the joint implementation of activities by the Ministry of Population and Environment and the Department of Hydrology and Meteorology. As mentioned above, the Department was unable to mobilize its manpower because of lack of incentives, and the Ministry also could not spare its manpower. Lack of technical competency in Ministry officials also hindered the project activities. Furthermore, the Ministry of Population and Environment lacks sufficient human resources with the necessary specialist knowledge to provide technical guidance about the priorities in tackling climate change issues, or to guide the project activities themselves. The managerial inputs received from the Ministry were cumbersome and unscientific and created confusion as to what the project should achieve;

(b) The initial meetings of the Steering Committee were pretty much a waste of time as it had insufficient familiarity with technical aspects of the climate change phenomenon to be able to guide the project activities. The Steering Committee also took an inordinate amount of time to approve the terms of reference and memorandum of understanding with Tribhuvan University-Central Department of Hydrology and Meteorology;

(c) Finally, the Steering Committee decided to involve an academic institution – Tribhuvan University – to accomplish the project activities. For this purpose concurrence from the Ministry of Finance and from the Ministry of Law, Justice and Parliamentary Affairs was also sought, a procedure which took considerable time. It took some months to negotiate the terms and conditions and formalize the memorandum of understanding with the University. The evaluator considers that there was no need, under Nepal's financial rules, for the Steering Committee decision to assign the work to Tribhuvan University to be approved by the Ministry of Finance and the Ministry of Law, Justice and Parliamentary Affairs;

(d) The frequent change of the Steering Committee chair and the Chief of the Environment Division in the Ministry of Population consumed substantial time and effort, devoted to repeated briefings about the nature of the project and its activities and to garnering their necessary managerial support for the execution of the project;

(e) The lack of emission data posed another bottleneck in the implementation of the project as conceived. Furthermore, the team leader of the GHG inventory group – one of the important groups of the national study team – was occupied with his regular project activities. Delays in the submission of emission data consequently delayed the project activities, as this was the project's main start-up activity;

(f) The project was also designed to develop human resources at the national level, and to internalize project activities in such a way that the forthcoming national communication reports could be prepared and submitted promptly to the Framework Convention secretariat, and that it could also strengthen national capacity to meet the commitments and obligations of the Convention. Although this is a highly positive part of the project, it took a long time to prepare national study team members

sufficiently for them to be able to start the project work and to train them in GHG estimation and selection of climate change models;

(g) The National Climate Change Committee also faced difficulties in finding sufficiently well informed scientists and academics for the national study team who were well versed in Framework Convention requirements, IPCC guidelines and national needs. Although the project contacted several people as potential nominees for the national study team, it took time to make the selections and to form the team while observing the necessary protocol and seniority considerations;

(h) In Nepal, the climate change phenomenon has only been understood to a limited extent and that by the scientific and technological communities. Only very few scientific studies have processed rainfall and temperature data with due consideration for climate change issues. It took time to reorganize the existing climate data and to fit them into models such as the Canadian climate change model and the global circulation model, in line with the recommendations of the IPCC guidelines;

(i) The selection of an appropriate model was also a huge and cumbersome activity for the Nepalese professionals. Although the national study team members were considered academically sound with regard to their level of theoretical knowledge, and had been exposed to different models, they lacked practical experience in calculating and estimating GHGs and extrapolating GHG emissions under different scenarios. Until the Department of Hydrology and Meteorology officials and members of the national study team attended training courses, the project had extreme difficulty in selecting appropriate models for estimating GHG emissions and conducting vulnerability assessments;

(j) The Framework Convention on Climate Change, being technical in nature, suffers from a lack of user-friendly information for politicians and decision-makers, rendering it difficult for the project coordinators to convince and influence them in an effective and timely manner.

11. Approaches adopted for problem-solving

110. To solve these problems, the Ministry of Population and Environment and the Department of Hydrology and Meteorology regularly contacted the UNEP task manager, requesting an extension of the project period. in addition, a number of measures were taken to address problems, as set out below:

(a) The Ministry of Population and Department of Hydrology organized the Steering Committee and National Climate Change Committee meetings as necessary, to brief the partner organizations and individuals concerned about the problems and to seek solutions;

(b) Government regulations limited opportunities to secure the services of government officials, as they could neither be paid nor hired for the project period. The Steering Committee and National Climate Change Committee decided to use the services of Tribuvhan University Central Department of Hydrology and Meteorology and entered into an agreement after one year of project implementation. The Department was entrusted with the conduct of most of the activities, and the preparation and submission of the initial national communication report by June 2002;

(c) The problem of GHG estimation, the development of criteria and bases for GHG projection, and the selection of climate change models were tackled through the provision of training in India. In fact, this training was instrumental in bringing the project activities to their present stage;

(d) The project also took initiatives to brief politicians, in particular the Minister for Population and Environment and the Minister of State for Science and Technology, as and when necessary to provide information on project outputs, and also to secure political support;

(e) The problems faced by the Ministry of Population and the Department of Hydrology and Meteorology about their roles and responsibilities and the designation of the focal points absorbed considerable time. Ultimately, the Council of Ministers decided to make the Ministry of Population responsible for the providing the Framework Convention focal point and the Department of Hydrology for the IPCC focal point;

(f) The project maintained close and regular cooperation with UNEP and informed the UNEP task manager about the problems and achievements of the project;

(g) Some of the difficulties and problems were also solved by heightening public awareness. The project supported environmental journalists in their efforts to raise public awareness by publishing articles and news on climate change issues in local newspapers. This initiative not only contributed to enhancing the level of understanding on climate change issues, but also encouraged other partners to collaborate and cooperate in project activities;

(h) The Ministry of Population sought inputs from professionals and non-governmental organizations, as and when necessary, as it had difficulty making its voice heard on climate change issues because it was still at a very early stage of institutional development and lacked technical competency in influencing and convincing partners and guiding the decision-making process.

111. Based on consultations with project staff, the project continued to maintain its good rapport with UNEP until the end of the project. The UNEP task manager was extremely supportive. Although the project took longer than expected to accomplish all its activities, the problems encountered during its implementation were solved through a process of extensive consultation, involving in particular the Ministry of Population, the Department of Hydrology and Meteorology and Tribhuvan University. Although the problems persisted throughout the project period, the final output of the project, the initial national communication report, was finalized and submitted.

12. Cost-effectiveness of the project

112. As mentioned in the consideration of financial management, the total cost of the project amounted to $310,000, out of which $276,770 was allocated for project activities in Nepal. The project was completed in June 2004, and had spent a total of $276,705 by 31 December 2004. As the existing foundation for the project activities was inadequate and more data were generated and processed, the allocated cost for project activities could be considered moderate. The project worked on a tight financial rein as there was no co-financing arrangement for its activities. The Government provided contributions in kind. The project outputs were achieved without any increase in the initially planned budget. It is also evident that the project could not have been implemented and Nepal could not have met its obligations under the Framework Convention without GEF and UNEP support. Moreover, this project has established a firm benchmark for climate change activities in Nepal. In this context, the project may be deemed to have been highly cost-effective.

D. Impact and sustainability

1. Impact

113. The project has brought about a significant impact in a number of areas. The first was meeting the commitment to prepare the initial national communication report. The Government has already submitted this report to the Framework Convention Secretariat and it can be viewed on the Convention's website. The project was instrumental in building the capacity of the personnel involved, including members of the Steering Committee and the National Climate Change Committee. The report was prepared by Nepalese professionals and it provided opportunities for them to improve their skills and expertise. The National Climate Change Committee and national study team members, in particular, benefited greatly from the project activities in clarifying the issues of climate change, enhancing their understanding about the requirements under the Framework Convention provisions and the GHG emission estimation methodologies and techniques. The exercise also helped build capacity in the area of selecting climate change models and customizing these for national use. The project provided an opportunity to synthesize existing climatic information and established a database for future use. It has not duplicated the work of similar organizations but built on previous efforts and benefited from earlier stocktaking work.

114. During the project period, the Government approved three important policy documents – the Tenth Development Plan (2002–2007), the Sustainable Development Agenda for Nepal and the National Action Programme on Land Degradation and Desertification. The Tenth Development Plan made an explicit commitment to develop a central level mechanism for the effective implementation of, among other instruments, the Framework Convention on Climate Change. The Sustainable Development Agenda for Nepal includes a small section on climate change and underscores the importance of promoting hydro-electricity as a clean source of energy leading to a decline in GHG emissions. No such section has ever been included in comparable texts prior to the launching of this project. The National Action Programme recognizes the impacts of climate phenomena and includes programmes to develop carbon sinks. It also underscores the importance of establishing synergies among the Rio conventions and of implementing common programmes that help to meet the obligations of those conventions.

115. Also during the project period, the Climate Change Network, an interest group, was formed. Similarly, Clean Energy Nepal has launched a website, which provides regular information on the emerging problems and initiatives on aspects of climate change. In Nepal, the project has also generated interest in the impacts of climate change on glacier lake outburst flood issues and expansion in the size of high altitude glacier lakes. The 25 year National Water Plan, prepared by the secretariat of the Water

and Energy Commission, has also recommended to the Nepalese Government that it establish a Himalayan climate centre to tackle climate change issues. The project also briefed Nepalese delegations about the major issues that Nepal should raise during meetings of the Conference of the Parties.

116. During the evaluation period, the evaluator interacted with members of the Steering Committee and the National Climate Change Committee and was convinced that the project had not only made a positive impact in the scientific, technical and academic community but had also influenced those at the policy and decision-making level. As the main output was attained, namely, the submission of the country's initial national communication report to the Framework Convention secretariat, and capacity-building has been enhanced and public awareness has been generated, the impact of the project has been rated as "excellent". notwithstanding some unaccomplished activities stipulated by the project document.

2. Sustainability

117. Also as mentioned above, the project was instrumental in changing the perception of the Nepalese authorities and professionals of climate change matters. The project emphasized the need to mobilize local human resources in accomplishing the relevant tasks and it enhanced the capacity of the local scientific and academic communities, in particular, and management authorities in general. It is expected that it will provide ample opportunities to continue the involvement of specialists with the necessary theoretical skills in future climate change-related activities. The project outputs are likely to be sustainable for the following reasons: institutional capacity has been strengthened and a database developed by the Department of Hydrology and Meteorology; policy documents have included thrusts on climate change issues; and about 50 officials and professionals have been directly involved as members of the Steering Committee and the National Climate Change Committee, the national study team, and reviewers. The project has contributed to enhancing their understanding of and technical capacity both in climate change issues and in measures to reverse the trend through adaptation and mitigation options; and the project has also increased the confidence level of the involved personnel and encouraged professionals to work together for the common cause. In future climate change projects, these professionals could work with technical competence and achieve the project outputs in time. It is expected that the benefits of capacity-building would be sustained as it has opened avenues for responsible institutions and professionals to continue work on, among other areas, climate change research and also policy analysis. Accordingly, taking note of the government initiatives on policy matters related to climate change, the rating for sustainability is "good".

E. Participation

118. The project envisaged preparing the initial national communication report through a participatory process and enhancing understanding on climate change issues at the national level. It made provision for two committees – the Steering Committee and the National Climate Change Committee – and the formation and involvement of the national study team in report preparation. In addition, it also included provisions to involve stakeholders and enhance public awareness at all levels and in all districts of the country. As mentioned above, about 50 people were directly involved in preparing and reviewing the initial national communication report. In addition, the project has enhanced stakeholder participation and public awareness. The Steering Committee met seven times to streamline project activities and to discuss the outcomes of the project activities. Similarly, the National Climate Change Committee met four times and concentrated its discussion on national study team selection, the terms of reference and the memorandum of understanding with Tribhuvan University and the results of the studies. Briefings on project activities given to politicians also provided a basis for further streamlining. The briefing meeting with the Minister of State for Science and Technology was attended by 32 participants, including members of the Steering Committee and the National Climate Change Committee. In addition, a meeting of the panel of experts was held in September 2003, at which it was decided to conduct a national workshop on the initial national communication in October 2003. This meeting was attended by 17 persons. Altogether over 400 persons participated in the project activities (see annex IV below).

1. Stakeholder participation

119. The project document clearly mentioned that the implementing agency should conduct workshops for eight activities with the participation of key stakeholders. The budget was allocated for eight workshops and the financial statement showed the expenditure on these activities. The project has conducted a total of five workshops during the project period. These were on the following issues: project initiation workshop on climate change, held in January 2001; climate change and its impacts on

the economic sector, including floods, and on the project, held in December 2001 and 2003 (two workshops) with the participation of the local journalists association; climate change in Nepal, held in March 2002; and national workshop on the initial national communication related to the Framework Convention on Climate Change, held in October 2003.

120. About 410 participants attended these workshops, giving an average of 82 participants per workshop. The workshops were intended to distribute information and provide stakeholders with opportunities to raise issues and concerns on project activities, to familiarize themselves with climate change phenomena in Nepal and to understand national obligations and commitments under the Framework Convention. The workshops were organized only in Kathmandu – the capital – and were attended by representatives of government institutions, international non-governmental organizations, academic institutions, donor agencies, the media and a few national non-governmental organizations. No efforts was made to solicit the opinions and concerns of other institutions working outside the Kathmandu Valley.

121. The project also provided training to Department of Hydrology and Meteorology officials and national study team members, in order to enhance their understanding and to develop their skills relating to GHG inventory methods, the selection of climate change models and matters related to vulnerability and adaptation. As Tribhuvan University and the Central Department of Hydrology and Meteorology were contracted to prepare the initial national communication report, this undertaking involved a number of professionals in the project activities.

122. In view of the nature of participation, the evaluator considers that the representation of civil society was quite limited. In brief, most of the project activities were attained using local professionals and stakeholder consultation was confined mostly to government institutions. The positive part of the workshop was the involvement of journalists, who helped disseminate climate change information. Although the project could not secure the adequate participation of GHG emitters and GHG reducers, the rating of stakeholder participation is "good".

2. Public awareness

123. The project document emphasized public awareness and proposed to "develop a cost-effective public awareness/outreach programme so that public awareness campaigns can be undertaken throughout the project cycle". It also included specific activity to provide additional information on climate change. The project document also emphasized the use of public and private media, including websites to enhance public awareness on all aspects of climate change in all districts of the country. Although this activity was ambitious in view of its coverage to all districts of Nepal, the project launched a number of activities to create and enhance understanding of the climate change phenomenon in Nepal. The main activities launched during the project period could be summarized as the following:

(a) Publication of feature articles in the print media;

(b) Broadcasting of weekly news and other information through the electronic media;

(c) Production of a TV documentary on climate change and project activities;

(d) Development of the website.

124. The evaluator considers that, while no wide-scale programme on public awareness was launched, the involvement of environmental journalists in the National Climate Change Committee and other workshops provided ample additional opportunities to disseminate information about climate change and project activities in Nepal during the project period. The awareness material was of a general nature and the scientific information was not made user-friendly or disseminated in an easily understandable manner. The public awareness campaigns were not conducted in accordance with the pointers provided in the project document. Although print and electronic media were used to some extent, the information did not reach the country's more remote areas because of its specific geographic position and landscape. As mentioned in paragraph 118 above, about 410 people participated in the workshops and were made aware of the climate change phenomenon. The website, particularly its section on Clean Energy Nepal, provided additional information about climate change-related activities in Nepal.

125. The evaluator also considers that the project document clearly indicated the need to develop outreach programmes to launch public awareness campaigns but notes that such programmes were neither prepared nor organized to create awareness at the districts level during the project period. As public awareness campaigns should not be mounted as a one-off exercise, the evaluator urges the Department of Hydrology and Meteorology and the Ministry of Population and Environment jointly to

develop and launch outreach programmes on climate change to enhance public awareness. Although the attainment of the project outputs is inadequate, the rating of this activity is given as "satisfactory".

3. Participation of women

126. The project document does not specify any activity to encourage the participation of women in project activities. No women were included in the Steering Committee, the National Climate Change Committee and the national study team. This may have been due to their low level of expertise on climate change matters. A few women did, however, participate in the workshops and a woman was employed in its secretariat. The project did not give much attention to seeking the contribution of women, nor did the initial national communication report touch upon women's roles and responsibilities or recommend any activities to bring them into the mainstream of climate change. In Nepal, women have a pivotal role in household energy use, particularly in gathering firewood, in agricultural practices conducive to methane generation and in other relevant land-use and forestry activities. The evaluator notes the need, therefore, for a better understanding of the role of women and the development of future outreach programmes that promote women's participation in tackling climate change issues.

4. Concerns and views of the study team and others

127. During the preparation of this report, the evaluator held discussions with selected members of the Steering Committee, the National Climate Change Committee and the national study team (see annex VI below) and they considered that the project has made a substantial contribution, at least, to compliance with the national obligations and commitments under the Framework Convention. They also expressed the view that the project had enhanced their understanding and helped them develop skills to deal with climate change phenomena, and that they could now provide a useful contribution to similar future activities. In particular, Nepal could embark on selected activities in such areas as mitigation options, vulnerability and adaptation measures and policy and research. It could develop and implement projects in most areas, as set out in the initial national communication report.

128. The project also obtained comments and suggestions on the draft initial national communication report from four reviewers and a few organizations. The evaluator found most of the comments and suggestions included in the final initial national communication report. He did not, however, find the recommendations of one of the reviewers, who suggested the inclusion of a list of potential projects with their outlines in the initial national communication report.

F. Rating of project implementation

129. The project document was prepared by UNEP in consultation with the Ministry of Population and the Department of Hydrology and Meteorology in Nepal. It included a number of activities without assessing the technical and institutional capacity of the potential organizations that were assigned responsibility for implementing the project. Although the Ministry of Population was only considered to be a collaborating agency for this project, it is the main government agency responsible for the Framework Convention and, hence, the body most technically competent to guide the project.

130. The evaluator considers that project was of high significance at the national level not only for the purpose of ensuring compliance with the obligations and commitments under the Framework Convention but also for providing a basis for the expansion of climate change-related activities in Nepal. This has greatly contributed to generating baseline data on GHGs and the regular updating and implementing of future activities. Nepal has full ownership of the outcome of the project, as the initial national communication report has been approved by the Government and submitted to the Framework Convention secretariat and informed discussions at the tenth session of the Conference of the Parties to the Framework Convention, held in Argentina in December 2004.

131. The terms of reference for this evaluation include 11 items for the rating of project outputs. They are:

(a) Attainment of the objectives and planned results;

(b) Achievement of outputs and activities;

(c) Cost-effectiveness;

(d) Impact;

(e) Sustainability;

(f) Stakeholder participation;

(g) Country ownership;

(h) Implementation approach;

(i) Financial planning;

(j) Replicability; and

(j) Monitoring and evaluation.

132. Each of the parameters outlined above was rated using the following rating system:

(a) 1 = Excellent (90–100 per cent achievement)

(b) 2 = Very good (75–89 per cent achievement)

(c) 3 = Good (60–74 per cent achievement)

(d) 4 = Satisfactory (50–59 per cent achievement)

(e) 5 = Unsatisfactory (49 per cent or below achievement)

1. Attainment of objectives and planned results

133. The objectives of the project were achieved. All activities were completed or partially completed, and the initial national communication report was prepared and published. Hence, a grade of 2, namely, "very good", is accorded against this parameter.

Rating of the attainment of objectives and planned results

Excellent 1 (90–100%)	Very good 2 (75–89%)	Good 3 (60–74%)	Satisfactory 4 (50–59%)	Unsatisfactory 5 (< 49%)
	√			

2. Achievement of outputs and activities

134. The main output of the project was to prepare the initial national communication report and submit it to the Framework Convention's Conference of the Parties. This output was attained and Nepal has submitted its report. The project also included several outputs and activities to foster attainment of the main output. The project did not attain or only partially attained some of the outputs, such as the development of a plan for the enhancement of sinks, preparation of workshop reports and so on. As the main output was achieved and most of the activities were carried out, and some outputs and activities were not attained in the spirit of the project document, a grading of 3 is given against this parameter.

Rating of the achievement of outputs and activities

Excellent 1 (90–100%)	Very good 2 (75–89%)	Good 3 (60–74%)	Satisfactory 4 (50–59%)	Unsatisfactory 5 (< 49%)
		√		

3. Cost-effectiveness

135. The project completed most of the planned activities within the allocated budget. It is almost certain that without GEF and UNEP funding this project could not have been possible and Nepal would not have been able to meet its Framework Convention obligation at the current time. As the budget was not spent within the time frame of the extended project period (i.e., by July 2004), a grading of 2 is given with due consideration for the financial management of the project.

Rating of cost-effectiveness

Excellent 1 (90–100%)	Very good 2 (75–89%)	Good 3 (60–74%)	Satisfactory 4 (50–59%)	Unsatisfactory 5 (< 49%)
	√			

4. Impact

136. The project has influenced the inclusion of climate change concerns in the Tenth Plan and the Sustainable Development Agenda for Nepal. It also generated baseline information on the GHG inventory, developed in-country capacity for GHG estimation and enhanced professional skill and expertise, and substantially boosted public awareness in the country's capital. It also promoted the establishment of the climate change network. The evaluator considers, therefore, that the project has had positive impacts in internalizing climate change concerns in Nepal's development activities, and a rating of 2 is accorded.

Rating of impact

Excellent 1 (90–100%)	Very good 2 (75–89%)	Good 3 (60–74%)	Satisfactory 4 (50–59%)	Unsatisfactory 5 (< 49%)
	√			

5. Sustainability

137. The project contributed to strengthening institutional capacity, developed a database, and also contributed to including climate change concerns in the major policy documents. It also boosted the confidence of the personnel involved in dealing with climate change issues. The Government has already started taking initiatives on climate change issues and the project has built a strong foundation for continuing climate change-related projects: accordingly a rating of 2 is accorded against this parameter.

Rating of sustainability

Excellent 1 (90–100%)	Very good 2 (75–89%)	Good 3 (60–74%)	Satisfactory 4 (50–59%)	Unsatisfactory 5 (< 49%)
	√			

6. Stakeholder participation

138. The project involved about 50 people in efforts to prepare and review the initial national communication report. A number of institutions also participated in the project initiation workshop, awareness-raising and the final national workshop on the draft initial national communication report. About 410 people participated directly in the programmes organized by the project. As the project could not secure the adequate participation of GHG emitters and reducers (including from the private sector), policy-makers and civil society, and could not arrange the participation of stakeholders from outside Kathmandu, a rating of 3 is awarded for stakeholder participation.

Rating of stakeholder participation

Excellent 1 (90–100%)	Very good 2 (75–89%)	Good 3 (60–74%)	Satisfactory 4 (50–59%)	Unsatisfactory 5 (< 49%)
		√		

7. Country ownership

139. The project was developed with the assistance of UNEP, to help Nepal meet its commitments under the Framework Convention on Climate Change. The climate change concerns were included in the national plans such as the Tenth Plan and Sustainable Development Agenda for Nepal. The project has enhanced awareness at different levels. It is expected that the project outputs would further help Nepal to develop and implement programmes and projects related to climate change. As the country has used the project outputs at the national level, a rating of 2 is awarded for country ownership, taking into consideration its ownership at different levels.

Rating of country ownership

Excellent 1 (90–100%)	Very good 2 (75–89%)	Good 3 (60–74%)	Satisfactory 4 (50–59%)	Unsatisfactory 5 (< 49%)
	√			

8. Implementation approach

140. The project was delayed by about two years. Time management was poor. Institutional arrangements were appropriately designated but frequent changes in the chair and membership of the Steering Committee meant that the committee was unable to guide the project as intended. The Steering Committee and National Climate Change Committee were capable of changing project implementation. The project involved an academic institution in preparing the initial national communication report. Although the partnership arrangement between the Government and the academic institution was appropriate, the monitoring and evaluation carried out was inadequate to improve the quality of project management. The evaluator, therefore, considers the project management as inadequately efficient, and a rating of 3 is accorded against this parameter.

Rating of implementation approach

Excellent 1 (90–100%)	Very good 2 (75–89%)	Good 3 (60–74%)	Satisfactory 4 (50–59%)	Unsatisfactory 5 (< 49%)
		√		

9. Financial planning

141. The project worked under an allocated budget for different activities. The Government provided some support in kind; no other co-financing arrangements were made. UNEP disbursed the amount set out in the project document. The project provided a sum to Tribhuvan University and the Central Department of Hydrology and Meteorology for the completion of the contracted activities. Almost all the budget was spent by 31 December 2004. As the allocated budget was spent by the end of 2004, after the project completion date, a rating of 2 is accorded against this parameter.

Rating of financial planning

Excellent 1 (90–100%)	Very good 2 (75–89%)	Good 3 (60–74%)	Satisfactory 4 (50–59%)	Unsatisfactory 5 (< 49%)
	√			

10. Replicability

142. The project was highly instrumental in promoting the transfer of knowledge on climate change issues during the report preparation process and through its various outputs has opened avenues for the development of additional programmes and projects. It has developed human resources, particularly in the areas of GHG estimation and the development of mitigation options, and strengthened the capacity of the Department of Hydrology and Meteorology and Tribhuvan University. It has also established a

mechanism for partnership between the Government and the selected academic institution. There is still a need, however, for a concerted effort by the coordinating agency to work in an integrated manner. Although the project could not maximize the inputs of the private sector and community groups during its implementation, the evaluator expects that the human resources developed during the project period could replicate project outcomes at the national level, and the partnership arrangement could also be replicated in other projects. A rating of 2, therefore, is accorded against this parameter.

Rating of replicability

Excellent 1 (90–100%)	Very good 2 (75–89%)	Good 3 (60–74%)	Satisfactory 4 (50–59%)	Unsatisfactory 5 (< 49%)
	√			

11. Monitoring and evaluation

143. Under the terms of the project document, the National Climate Change Committee was entrusted with monitoring the quality and standard, comprehensiveness and conformity and dates of completion of project activities. It focused on the use of electronic newsletters for the evaluation of project implementation. The Steering Committee and the National Climate Change Committee met several times and discussed issues but lacked meaningful technical guidance. Monitoring and evaluation was also not carried out as envisaged in the project document. That said, however, in the absence of the Steering Committee and the National Climate Change Committee, and without their involvement, the initial national communication report would not have been completed. A rating of 3, therefore, is accorded against this parameter.

Rating of monitoring and evaluation

Excellent 1 (90–100%)	Very good 2 (75–89%)	Good 3 (60–74%)	Satisfactory 4 (50–59%)	Unsatisfactory 5 (< 49%)
		√		

12. Overall project rating

144. The ratings accorded against the 11 parameters have either been 2 or 3, namely, “very good” or “good”. The evaluator considers that the main output – preparation of the initial national communication report – has been completed, public awareness has been raised and the project has opened opportunities to expand climate change activities in Nepal. Taking into account the 11 parameters of the terms of reference, the overall rating for this project as per UNEP standards is deemed to be “very good”. Using the GEF rating system, this gives the rating “satisfactory”.

Table 2.2. Summary of rating

SN	Items	Ratings					Remark
		Excellent	Very good	Good	Satisfactory	Unsatisfactory	
1	Attainment of objectives and planned results		√				
2	Achievement of outputs and activities			√			Some of the outputs such as identification of shortcomings and gaps in IPCC Guidelines, suggestions on revisions of existing IPCC GHG inventory methodology, and workshop reports, etc., were not attained
3	Cost-effectiveness		√				
4	Impact		√				
5	Sustainability		√				
6	Stakeholders' participation			√			Participation of private sector (GHG emitters and reducers) and community groups was not secured
7	Country ownership		√				
8	Implementation approach			√			SC and NCCC could not contribute substantially for effective implementation of the project activities although the partnership arrangement was appropriate.
9	Financial planning		√				
10	Replicability		√				
11	Monitoring and evaluation			√			M/E activities were not carried out in the spirit of the Project document.
	Total		7	4			
	Overall rating[a]		**√**				

[a] The overall rating is calculated as the average for the ratings awarded against the 11 different parameters: 2+3+2+2+2+3+2+3+2+2+3 = 26/11 = 2.36

145. The project has implemented most of the activities. The objectives and outputs were successfully attained, although only partially in some cases, owing to a lack of guidance from the Steering Committee and the National Climate Change Committee, and also to the lack of necessary knowledge and skills on the part of national study team members in carrying out GHG inventories and selecting appropriate climate change models. When assigning an overall rating to the project, the evaluator also took into consideration the fact that participation in the programme was mostly by government institutions and there was an absence of outreach programmes to create public awareness at the district levels. Only the selected group of professionals were involved. Neither the subcontract reports nor the workshop reports were seen during the project evaluation. Only the initial national communication report was produced. The project was, however, instrumental in influencing the policy-makers as climate change concerns were reflected in some of the policy and programme documents prepared and approved by the Government between 2002 and 2004. It is thought that the project contributed to non-governmental organization initiatives on climate change.

G. Assessment of the quality and usefulness of the project outputs

146. The main outcome of the project is the preparation and endorsement of the initial national communication report. The quality of the report was substantially improved in the light of the reviewer's comments and suggestions on the draft final report. The comments and suggestions from Mr. Ravi Sharma, UNEP task manager, were substantial, categorical and clearly understandable. They helped improve the quality of the report. The Ministry of Population official looking after the Framework Convention and actively involved in the project activities from beginning to end considers the quality of the report only satisfactory, in view of the limited data, inadequate infrastructures and

limited scientific studies in the country. For his part, however, the evaluator rated the project outputs as "good"–"very good" and considers that the quality of the initial national communication report is "very good" in spite of various technical and managerial problems that emerged during the project implementation.

III. Lessons learned

147. The project provides several lessons for future climate change initiatives and implementation of projects. These are summarized below:

(a) Project implementation requires enhanced understanding of the issues involved, and the frequent changes in key positions such as chair of the Steering Committee weakened the project activities and its outcomes. The overall guiding body should be technically competent and it should constantly monitor and evaluate the project activities. The Steering Committee members could significantly influence the policy-making and decision-making process and could help in integrating climate change concerns in future policies, strategies and plans, and also in influencing the decision-making process;

(b) Knowledge-based and skilled manpower is a prerequisite for project implementation and such manpower should be situated at least in the Framework Convention focal point. The focal point should also clearly understand the science of climate change and should have the ability to provide necessary guidance with technical competence. During the design stage, technical competency should also be available to ensure the successful completion of a project of a technical nature. Furthermore, the scientific information provided by the project requires a thorough understanding by the Framework Convention focal point of the best use to be made of such information during meetings of the Conference of the Parties to the Framework Convention and other technical meetings, and in developing and implementing future climate change projects;

(c) The Framework Convention focal point, formed by the Department of Hydrology and Meteorology (the technical arm of the Government on climate change) and Tribhuvan University, offers a good combination for achieving tangible outputs – albeit delayed – in this project. A capable project team is essential, however, for its success within the time frame;

(d) Institutional linkage should be established with organizations which have a more or less equal footing on scientific, technical and technological matters; coordination should be maintained at policy and working levels and the project should also consider the involvement of subject specialists and officials with an understanding, at least, of the science of climate change if its implementation is to be smooth. Accordingly, the involvement of science graduates would provide ample opportunities to implement climate change projects smoothly;

(e) The technical capacity of Department of Hydrology and Tribhuvan University has been substantially strengthened, and this would help in implementing similar future projects;

(f) The National Climate Change Committee and the national study team members also learned a great deal from project activities and enhanced their knowledge and skills. The experience also helped to develop their competence and confidence in climate change matters;

(g) The limited participation of the private sector, non-governmental organizations and community groups undermined the validity of the project outcomes and the publication of the initial national communication report in English only and in a limited print-run also places restriction on the extent to which the issue is understood in the country. Furthermore, the report summary should be published in the national language to inform stakeholders and to ensure informed decision-making. In Nepal, the majority of the people have only a low educational level and do not understand the science of climate change; nor can they read a report in English;

(h) Inputs of competent institutions like UNEP and other reviewers on the draft reports provide ample opportunities to improve the quality of the report and such initiatives should be continued. In addition, the report should also be subjected to an expert review process, as it guides the project outcomes.

IV. Conclusion and recommendations

A. Conclusion

148. The project has attained its main output of preparing the initial national communication report. Outputs from the various activities were at least partially met in most cases. The project document specifically mentioned the preparation of workshop reports. The project contributed to the enhancement of public awareness, provided inputs for policy intervention, developed a database for GHGs and enlisted the involvement of Nepalese professionals in preparing the report. The project involved the Ministry of Population as the Framework Convention focal point, used the expertise of the Department of Hydrology and Meteorology and involved an academic institution as the consultant, which demonstrated the team work and the working relationships between partners. It has enhanced the scientific and technical capacity of the local personnel so that it can sustain activities related to the implementation of the Framework Convention. It has also enhanced awareness at different levels such as among the general public, academic circles, policy and decision-makers, journalists and other stakeholders, and provided opportunities to gain a better understanding of climate change issues and their implications for natural resources and environmental management.

149. The project outcome will help in the development of priority projects on climate change. The project has initiated work on Framework Convention-focused areas in Nepal. This will also facilitate activities which promote the attainment of measurable environmental improvements through policy refinement, enforcement of regulatory measures, and incremental investments. It was the view of the Ministry of Population and Environment official that the project recommendations can be implemented, provided that Nepal can tap adequate financial resources from donor communities for their implementation. The Ministry official also suggested that there is a need to redefine environmental cooperation and recognize the benefits of non-financial cooperation (for example, transfer of knowledge, joint activities and trade potential of GHG emissions).

150. The project, which might be regarded as a learning exercise, enhanced capacity-building at the Department of Hydrology and Tribhuvan University conducive to continuing data generation and updating work in line with Framework Convention requirements. Although the Ministry of Population official rated the project outcome as only "satisfactory", the overall rating of the evaluator is "very good", based on the established criteria (as per the terms of reference).

151. On the basis of the overall performance of the project, problems encountered and lessons learned, the evaluator would like to make the following recommendations in order to institutionalize and internalize climate change aspects in Nepal's development planning and administration. UNEP is requested to take initiatives with a view to mobilizing technical and financial assistance to this effect.

B. Issues for future consideration

152. An analysis of project performance, project operational mechanism, availability of local experts in the field of climate change studies and past experience clearly indicates that the issues set out below are very important and need careful consideration for further activities.

1. Coordination issue

153. The project has suffered heavily from weak coordination. It has been observed that there is a wide gap between the various agencies concerned with climate change studies. The decision on the focal point (the Ministry of Population or the Department of Hydrology and Meteorology) itself consumed a great deal of project time. During the Steering Committee meetings, the Ministry of Finance was only represented once during the initial phase of the project, while the Steering Committee was represented only by government bureaucrats. It sometimes happened that the ministries were represented by different individuals at successive Steering Committee meeting, in addition to lacking the necessary knowledge in the field of climate change. As a result, the Steering Committee was not strong enough to provide dynamic leadership. The Department of Hydrology falls under the Ministry of Science and Technology and could not directly deal with the focal point of the Ministry of Population, despite having most of the country's experts on climate change. Hence the project seriously lacked strong and effective coordination.

2. Capacity-building issues

154. Climate change study is an emerging subject in Nepal and as such requires intensive capacity-building activities. The process of selecting appropriate climate models itself consumed several

months of this project. As discussed earlier, the related project professionals were to be trained initially on modelling aspects and only then could the project move forward. Institutional capacity-building is required both in the Ministry of Population and Environment and the Department of Hydrology and Meteorology. Capacity-building includes financial, technical and human resource development.

3. Identification of climate change-related projects

155. Nepal is endowed with vast natural resources: water, sun, and wind. They are the major sources of clean energy. The initial national communication recommends few specific projects in these fields. The evaluator considers it very important that tangible projects be identified in the area of alternative energy which will help reduce GHG emission and support the Government's poverty reduction programme.

4. Deglaciation process

156. There are certain verified field data gathered by the Water and Energy Commission Secretariat and the Department of Hydrology and Meteorology which clearly indicate that deglaciation is active in the Nepal Himalayas. A 2001 ICIMOD/UNEP study also shows the same trend in Nepal and Bhutan. The reason for this is presently attributed to the climate change phenomenon. Widespread and significant warming is observed in Nepal, as shown by temperature network data, while Nepalese precipitation stations do not show any specific trend except periodic oscillation. Precipitation stations in the Himalayas are very sparse and there are no snow survey data for analysis. Limited precipitation figures are not sufficient to show a clear picture of the processes involved in deglaciation. Although there are circumstantial linkages between temperature warming and deglaciation, a detailed understanding of the processes involved is lacking. It is therefore essential to carry out research work to establish a scientific understanding of the overall climate change picture and its impact on the Hindu Kush-Himalayan environment.

C. Recommendations

157. Based on extensive consultation with political leaders, key government officials, and professionals involved in climate change matters in Nepal, and also in view of the above observations, the following recommendations are made.

1. Development and implementation of the next phase

158. The first phase of the project has generated important information, particularly on sector-wide GHG emissions and mitigation options, vulnerability and adaptation, and also provided policy measures and areas for research and studies. The project has laid the foundation for climate change activities in Nepal, and to some extent developed human resources. As a least developed country, with limited technical and financial resources, it is likely that the climate change activities would not receive adequate attention in the development planning and budget allocation of the Government, even in the future. Efforts are required, however, to establish and strengthen a permanent system which will help internalize and institutionalize climate change activities in government programmes. There is an urgent need, therefore, to develop and implement its next phase to continue important activities of the first phase, and meet additional commitments under the Framework Convention.

159. The project could include a number of relevant activities depending upon the availability of technical and financial resources. The next phase of the project should complement the initiatives of the first phase and focus, among others, on the following activities:

(a) Assessment of technology needs on GHG emission, removal by sinks and other activities;

(b) Identification and implementation of climate change projects;

(c) Development of micro-modelling of climate change impacts (through regional and local circulation models) at the local level, taking into account the inherent topographical and climatic variations within Nepal;

(d) Further strengthening of capacity, particularly in the area of GHG estimation and climate change modelling, systematic observation systems, and development of local emission factors.

160. This project could be implemented jointly by the Framework Convention focal point and the Department of Hydrology and Meteorology. The proposed project is of a technical nature while the Ministry of Population is administrative and the Department of Hydrology both technical and administrative in their functions, roles and responsibilities. The Himalayan Climate Centre could, therefore, be made responsible for the implementation of this proposed project. This Centre has yet to

be established, however, in the spirit of the Water Resources Strategy (2002), endorsed by the Government of Nepal.

161. This project will be of about two years duration and may require about $300,000 for its implementation. Details of project duration and activity costs would be estimated during the preparation of the project document.

2. Institutional strengthening of government institutions

162. The first phase of the project has developed infrastructure at the Department of Hydrology and also developed human resources to repackage and synthesize climate change-related data and information. Although the Department has extensive experience in collecting climate data, these data have not met the Framework Convention's requirements. Nepal is also in the process of ratifying the Kyoto Protocol. Once the ratification process is completed, it intends to implement projects under the Clean Development Mechanism. Furthermore, the Ministry of Population has neither an implementation arm (a technical institution under its responsibility) nor the capacity, including human resources, to collect, update and synthesize climate change-related data. A project on the strengthening of Government institutions could be developed to implement, among other things, the following activities:

(a) Capacity-building for the development and implementation of projects related to the Clean Development Mechanism;

(b) Updating information from the initial national communication report and preparing a second national communication;

(c) Enhancing the technical capacity of the Department of Hydrology and Meteorology and other partner organizations to prepare emissions inventories and vulnerability and adaptation assessments through deeper analysis and understanding of climate change issues;

(d) Enhancing the capability of the Department of Hydrology to collect weather and climate related data to monitor climate change at different locations in Nepal;

(e) Internalizing a mechanism for the systematic collection, updating and synthesis of relevant data and information as a resource bank on climate change;

(f) Organizing training programmes to develop and implement locally suitable models;

(g) Developing institutional capacity to respond to climate change by enabling local, regional and national authorities and civil society to respond to disasters, to adapt to climate change and to plan and adopt mitigation measures;

(h) Strengthening the capacity of national focal points such as in negotiating skills by increasing the capabilities of the ministries of forests and soil conservation, agriculture and cooperatives, health, water resources, science and technology, internal affairs and communications to respond to impacts of climate change;

(i) Supporting the departments of disaster preparedness by evaluating increased vulnerabilities in agriculture, health, water resources, and forestry;

(j) Boosting the capabilities of ministries to generate Clean Development Mechanism projects to mitigate climate change while at the same time bringing in investment to contribute to the sustainable development of Nepal.

163. This project will be of about three years duration and would require over $500,000 for its implementation. Details of project duration and activity-related costs would be estimated during the preparation of the project document. UNEP could use its good offices to explore funding for the institutional strengthening of government institutions. Alternatively, a single component, such as capacity-building, data updating or a mix of activities could also be set up to develop a separate project for UNEP-GEF funding.

3. Preparation of a national adaptation programme of action

164. The preparation of the national adaptation programme of action would involve development partners, GHG emitters and reducers in climate change activities. The initial national communication report has laid the foundation for adaptation options in different sectors such as agriculture, water resources, biodiversity and health. To build upon and to expand practical and implementable adaptation options, a project should be developed and implemented for the preparation of the programme of action.

165. This project could be implemented by the Framework Convention on Climate Change focal points in collaboration with the Ministry of Agriculture and Cooperatives, Ministry of Water Resources,

Ministry of Forests and Soil Conservation (focal point for the Convention on Biological Diversity), and Ministry of Health. The project duration would be two years and the estimated budget for the preparation of the national adaption programme of action would be about $100,000.

4. Project on deglaciation (monitoring and development of early warning systems and reduction of the risk of glacial lake outburst floods) in the Hindu Kush-Himalayan region

166. Deglaciation is a very important and critical issue encountered in the Himalayas. Deglaciation processes need to be properly monitored and assessed. They are the source of the disastrous glacier lake outburst flood phenomenon. The 2001 ICIMOD/UNEP project on an inventory of glaciers, glacial lakes and glacial lake outburst floods of Nepal and Bhutan has laid the foundation for further monitoring and developing early warning systems in the Hindu Kush-Himalayan region. Glacier lake outburst floods cause enormous loss of property and human life. The project will include the development of a proper system for monitoring the deglaciation process and the development of an outburst flood early warning system for identified highly vulnerable glacier lakes. Some of these lakes may also require activities designed to reduce the risk of floods.

5. Permanent technical coordinator

167. For effective coordination between agencies and the various above-mentioned projects, the evaluator considers it necessary to recruit a permanent technical coordinator with a base office in Nepal, who shall be responsible for project coordination from the UNEP side.

168. The evaluator also recommends that the Ministry of Population undertake the three activities outlined in subsections (a), (b), and (c) below. These do not form part of the project itself but they are recommended for effective use of the initial national communication report and the development of a permanent system for effective cooperation and coordination among the partners, public awareness-raising campaigns, information dissemination and a system of wide participation of the stakeholders including industrialists, GHG emitters and forest managers and users. The activities are of a permanent nature and are related to effective coordination and hence do not necessitate any increase in the project budget. The Ministry of Population should absorb the financial requirements for these activities in its regular government budget.

(a) Publication of the initial national communication report in the Nepali language

169. Taking into consideration the literacy rate in Nepal, the executive summary (with some elaboration) of the initial national communication report should be translated into Nepali and widely distributed, as the project proved unable to ensure the development of an outreach programme, and increased public awareness at all levels and in all districts of Nepal. This publication and its wide dissemination would help boost awareness among the local people and would encourage them to implement activities that reduce GHG emissions. It would also encourage the public to take adaptive measures to minimize the effects of climate change. This activity should be implemented by the Ministry of Population as early as possible through national funding.

(b) Establishment of a system for effective coordination

170. Effective coordination should be an integral part of the future project component. The Ministry of Population is encouraged to conduct confidence-building measures for its partners so that stakeholders and competent government partners will join its climate change activities and reap the many associated benefits. For this, it is recommended that a permanent system be developed that provides opportunities to involve stakeholders and development partners in climate change activities. It is also recommended that the Ministry involve, at the very least, science graduates in dealing with climate change projects and activities. Such an arrangement would give them an opportunity to implement climate change programmes and projects with professional competence.

(c) Building capacity to address climate change issues as a national focal point

171. As the national focal point for the Framework Convention, the Ministry of Population has to build its capacity to implement the country's obligations. For this purpose the Ministry may need to create an independent technical department that would be responsible for the routine dissemination of national, international, scientific and technical and methodological information. It should develop mutual cooperation with related organizations and prepare appropriate documents. The department should establish and maintain a national database and create a database management system, in accordance with the standard methodology, such as that provided by IPCC. The department should formulate projects on climate change issues and seek possible funding. It should employ leading experts who have experience in preparing national communications and who have acquired experience in

formulating, designing and executing national projects. The incentives and facilities provided to these experts must be sufficiently attractive to make them interested in providing their services.

172. Alternatively, the Government is encouraged to establish a Himalayan climate centre, as recommended in the 2002 Water Resources Strategy. As this strategy has been approved by the Council of Ministers, the centre could be established immediately as an autonomous body and umbrella institution for climate change matters.

Annex I

Activities, elaborated sub-activities, outputs and accomplishments

SN	Activities	Sub-activities	Outputs	Accomplishments
1	Establishment of SC and NCCC	1.1 Formation of SC, NCCC and NST for GHG inventory, vulnerability/ impact assessment and adaptation, mitigation options, and national action plan and national communication	1.1 Establishment of SC, NCCC and NST	1.1 10-member SC established and 7 meetings held 1.2 18-member NCCC established and 4 meetings held 1.3 19-member NST established[3].
2	GHG inventory	2.1 Inventory of CO_2, CH_4, and N_20 for the 1994 baseline year in (a) all energy sources, (b) industrial processes, (c) agricultural processes, (d) land use change and forestry, and (e) other sources 2.2 Update information on GHG estimates for cement production 2.3 Set-up data collection and management system 2.4 Coordinate with regional efforts such as ALGAS programme 2.5 Convene review workshop at the end of the GHG inventory study	2.1 Refined and updated GHG inventory for the year 1994 2.2 Identification of shortcomings and gaps in IPCC Guidelines related to local conditions, especially for land use and forestry sectors, and industrial processes 2.3 Recommendations on areas of targeted research and suggestions on revisions of existing IPCC GHG inventory methodology 2.4 Improvement of country specific emission factors or coefficients 2.5 Description of original research needed, and/or apply new emission factors for specific sectors 2.6 Data management system for regular updating of GHG inventory 2.7 Strengthening of inventory study team 2.8 Workshop report	2.1 GHG inventory conducted in sectors as specified in sub-activities including other sources such as wastes 2.2 Short-comings and gaps in IPCC guidelines not identified 2.3 Recommendations for research and studies on various sectors proposed but not on IPCC GHG inventory methodology 2.4 Country specific emission factors or coefficient not determined 2.5 Data management system set-up and updated at DHM 2.6 Coordination with ALGAS programme not documented 2.7 National study team mobilized for technical reports preparation 2.8 Separate workshop for GHG inventory not conducted and workshop report not prepared

[3] National study team members – 6 in GHG inventory, 4 in vulnerability/impact assessment and adaptation, 4 in mitigation options, and 5 in national communication with a total of 19 members as listed in the report of the first meeting of the Intergovernmental Negotiating Committee for the Framework Convention on Climate Change.

3	Programmes to address climate change and its adverse impacts, including abatement and sink enhancement	3.1 Update range of potential mitigation options to develop national strategy and plan to abate increase in GHG emission, and to enhance removals by sinks 3.2 Fill-up crucial gaps of the USCSP sponsored project in land use and forestry sector and modelling of macro-economic aspects 3.3 Identify and assess opportunities for promoting carbon conservation and sequestration 3.4 Undertake task to strengthen capacity of mitigation option group 3.5 Conduct workshop for key stakeholders and policy-makers to review options and strategies	3.1 Identification and assessment of mitigation options in all relevant sectors 3.2 Recommendations on reducing the amount and intensity of emissions from various sources and a plan for the enhancement of sinks 3.3 Preparation of first national mitigation strategy for the national communication 3.4 Workshop report	3.1 Mitigation options identified for sectors as mentioned in GHG inventory; filling-up of gaps of the USCSP sponsored project not clearly mentioned in the report 3.2 Mitigation options recommended in specified sectors 3.3 Mitigation strategies not prepared 3.4 A separate team on mitigation options formed and their capacity enhanced 3.4 A separate workshop neither organized nor report produced
4	Policy options for monitoring systems and response strategies for impacts	1.1 Identify and develop policy options for adequate monitoring systems and response strategies. For this, following sub-activities have been outlined: 1.1.1 Assess the impact of increased temperature and increased seasonal variability in precipitation on elevation shifts of ecosystems 1.1.2 Assess vulnerability and impacts of climate change in health sector 1.1.3 Extend the work of USCSP funded assessment on vulnerability and impacts on forests, soil conservation and biodiversity, and also assess temperature rise on river systems, soil erosion, sedimentation and slope stability 1.1.4 Extend the work done on the river basin by estimating surface run-off using scenarios for doubling CO_2 concentrations 1.1.5 Assess impacts of climate change on grassland/ livestock 1.2 Form vulnerability/impact assessment and adaptation group and strengthen the capacity of this group where necessary 1.3 Coordinate capacity-building and training activities with the regional efforts 1.4 Identify and develop policy options for the response strategies 1.5 Organize workshop for various stakeholders and decision-makers to review and publicize the results	4.1 Important baseline data required for assessment of climate change vulnerability impacts and adaptation options 4.2 Better understanding of the long-term behaviour of water basins in relation to climate change 4.3 A comprehensive vulnerability assessment for all important sectors based on established procedures 4.4 Enhance capacity to apply models for assessing climate change impacts 4.5 Policy options for adequate monitoring systems and response strategies for climate change impacts on terrestrial and mountain ecosystems	4.1 Vulnerability and adaptation study conducted by NST in areas identified excluding on soil conservation 4.2 Long-term behaviour of water basin and climate change not clearly mentioned 4.3 Vulnerability assessment carried out using different models 4.4 Participation on vulnerability adaptation training programme 4.5 Adaptation strategies proposed for consideration 4.6 A separate workshop for stakeholders and decision-makers not organized

5	Policy frameworks for implementing adaptation measures and response strategies	5.1 Identify, analyse and assess a range of potential adaptation options (Stage I) and develop a national strategy of viable measures 5.2 Reproduce adaptation measures developed for Koshi River under USCSP project for other 3 river systems 5.3 Develop policy frameworks to implement adaptation measures and response strategies and to integrate into national planning and decision-making systems 5.4 Strengthen capacity of the vulnerability assessment and adaptation group 5.5 Conduct a workshop for key stakeholders and policy-makers to review adaptation options and strategies and policy frameworks	5.1 Identification and assessment of adaptation (stage I) option 5.2 Policy frameworks for implementing adaptation measures and response strategies 5.3 Workshop report	5.1 Technical and technological needs identified for adaptation options not clearly mentioned 5.2 Existing policies reviewed but no specific adaptation measures and response measures proposed 5.3 Adaptation measures developed for Koshi River not reproduced for other 3 river systems 5.4 A separate workshop on adaptation options, strategies and policy frameworks not organized and hence no workshop report
6	Building capacity to integrate climate change concerns into planning	6.1 Education and training on climate change for national development planners, and policy and decision-makers	6.1 Enhanced capacity of the national development planners and policy-makers to integrate climate change concerns into national planning	6.1 An education and training for national development planners, policy and decision-makers not organized on climate change
7	Programmes related to sustainable development, research, public awareness etc.	7.1 Identify and develop programmes in climate change related to sustainable development, research and systematic observation, education and public awareness, training etc. 7.2 Develop cost-effective public awareness/outreach programme 7.3 Use public and private media to enhance public awareness on all aspects of climate change 7.4 Use CC:INFO/Web fro national and international information low 7.5 Establish CC:Website in coordination with CC:INFO/Web initiative	7.1 Information packages, video aids, relevant publications etc. 7.2 Enhanced public awareness at all levels and in all districts of the country	7.1 Reviewed information on education and public awareness included and establishment of Climate Change Study and Research Centre proposed under MOPE 7.2 Some publications made, electronic media used to enhance public awareness, website establishment on progress, outreach programme for all districts of the programme not included
8	Provision of other information	8.1 Provide any other information relevant to achievement of the objectives of UNFCCC 8.2 Identify technical and financial needs in response to Article 4 of UNFCCC 8.3 Provide material or data relevant for calculation of global GHG emission trends 8.4 Describe financial and technological needs and constraints associated with information communication	8.1 Information generated on reduction of the margin of uncertainty in emission and removal variables through appropriate institutional and capacity-building (not included in the project document as output)	8.1 Information dissemination ensured through print and electronic media, but the quality of information to generic 8.2 Information as demanded in output 8.1 not published or aired

9	Preparation of national communication	9.1 Prepare and submit national communication to UNFCCC COP 9.2 Coordinate this task by National Communication Group 9.3 Use experience gained by other countries which have submitted initial national communications 9.4 Review the draft national communication report by competent national technical institutions and produce revised version 9.5 Conduct a workshop for key stakeholders and policy and decision-makers 9.6 Incorporate comments of the workshop participants and present final draft to the Nepalese Government through MOPE for approval and submission to the COP of United Nations Framework Convention on Climate Change	9.1 Submit initial national communication to the UNFCCC COP	9.1 Initial national communication report endorsed by the Rt. Hon'ble Prime Minister (and the then Minister for Population and Environment) on 1 July 2004 9.2 Press conference organized about the INC report in August 2004 and sent to UNFCCC Secretariat 9.3 Review of draft INC report made by independent experts, and UNEP 9.4 A national workshop organized in October 2003 on draft INC

Annex II

Terms of reference for the evaluator

The evaluator shall:

(a) Analyse the quality and usefulness of the planned and current project outputs, and determine how these contribute to the attainment of results and overall objectives identified in the approved project proposal in meeting its UNFCCC commitments. It should determine whether the project has been able to answer the identified needs and problems in Nepal.

(b) Measure the impact of the planned and current results of all the activities to prepare the initial national communications to the UNFCCC. The consultant will consult the members of the Steering Committee composed of members of national institutions responsible for environmental policy and the National Committee on Climate Change (NCCC) which includes government departments, universities, research institutions, private sector and NGOs. The officials of the Ministry of Population and Environment will also be consulted to evaluate the mainstreaming of project outputs in the national policies.

(c) Assess the decision making process and criteria used to attract qualified consultants for the implementation of the various project components and identify the lesson learned providing recommendations on how such involvement could be improved.

(d) Assess the role the project made in building the capacity of the participating national institutions in the area of reporting to the UNFCCC and assess the long-term sustainability of the benefits of this capacity-building.

(e) Determine the future assistance required from UNEP and GEF, specially in ensuring successful implementation of future GEF funded projects identified in Section II. Identify the lessons learned and provide recommendations that might improve the delivery of similar assistance in similar projects.

(f) Review the adequacy and effectiveness of national international monitoring and evaluation systems developed to supervise and implement the project and based on the lesson learned, provide recommendations that could improve current procedures related to monitoring and evaluation.

(g) Review the effectiveness of the institutional structure, management and financial systems, which played an important role in the implementation of the project, investigating the staffing, administrative arrangements and operational mechanisms with an emphasis on coordination within and outside of UNEP. The evaluator will solicit the views of relevant UNEP staff members on the usefulness of the project in enhancing both UNEP's and GEF's work in the area of climate change.

(h) Assess the cost-effectiveness of the project, i.e., whether the project achieved its goals and objectives within planned and/or reasonable time and budget.

(i) Identify any technical and/or operational constraints encountered during project implementation including those that contributed to delays in implementing the approved work plan. Identify further the actions required by UNEP and the national executing agency to overcome the constraints, and any appropriate alternative measure that needs to be taken.

(j) Identify and asses any measures that national institutions have initiated to integrate the results and recommendations of the initial national communications into national policy making and/or planning. The evaluator should also make specific recommendations regarding follow-up measures that would enable longer-term benefits and sustainability of project activities.

(k) Determine the potential contribution of the project to furthering the objectives of the relevant global, regional, and national environmental assessments, policy frameworks and action plans, and to strengthen the UNFCCC.

(l) Evaluate whether the actual results of the project compare with the long-term and short-term results identified in the project document and what needs to be done further.

(m) Determine the extent to which gender considerations were incorporated into the various technical and operational aspects of the project.

(n) Propose concrete suggestions or recommendations, to the national executing agency and UNEP and advise them in undertaking them as appropriate.

Annex III

List of major initiatives on public awareness

A. Completed Works within the Project Period

1. National level information dissemination
   (a) Preparation and publication of climate change issues/problems, its impact and the Project in Nepal
   (b) Yearly Journal on Environment and Human Rights
   (c) Monthly Journal on Environment, Health and Common Knowledge
   (d) Weekly Environment News
   (e) Weekly News
   (f) Weekly Morning News
   (g) Journal on Environment and Tourism
   (h) National Daily News on Kantipur Daily
   (i) Monthly 'Life' for Environment, Health and General Knowledge – a special issue
   (j) Publication of special issue on climate change (in *Jeevan* monthly magazine)

2. Information disseminated through
   (a) Use of electronic media such as Kantipur TV and Kantipur Radio; and Space Time TV, Radio Sagarmatha

B. Completed in between June to December 2004

3. Production and transmission of TV Documentary on Climate Change, its Project and Achievement (specific objective is to disseminate information on climate change, its projects in Nepal and the achievement through production of a documentary and its transmission/ broadcast via NTV (Nepal Television)

4. Development of a WWW. Web page and posting of first INC report including other information on climate change related activities

5. Additional training to the DHM personnel

Annex IV

List of major events organized by and involving the participation of the project

SN	Date	Topic	Organizer	No. of Participants	Participating Institutions	Remark
1	4 January 2001	Project Initiation Workshop on Climate Change, Kathmandu	MOPE/DHM	94	NPC, MOPE, MOST, MFSC, DHM, DOI, DWSS, MOF, AEPC, NARC, TU, IOE, MOWR, NEFEJ, IUCN, ICIMOD, Winrock, RSS, Kantipur, Himalayan Times, Space Times, ESPS, Radio Sagarmatha etc.	National policy-making institutions, few NGOs and media
2	16-17 April 2001	UNEP/UNDP South Asian Regional Workshop on GHG Inventories, New Delhi	Ministry of Environment and Forests and National Physical Lab., India	16	Indian institutions including from Climate Change Project/DHM, Nepal	Participants sent to attend the workshop
3	20-23 December 2001; and 25-27 December 2003	Climate Change, Impacts on Economic Sector including Floods and the Project	Society of Environmental Journalists (SEJ) Nepal on its 8th and 10th anniversaries	155	Climate Change Project/DHM	Partnership with journalists to communicate information
4	25 March 2002	Issues on Climate Change in Nepal, Kathmandu	WMD Organizing Committee	81	TU, DHM, Media (NTV, Rajdhani, Himalaya Times, Annapurna, Kathmandu Post and Gorkhapatra), Patan Campus, AEPC, IOE, Bureau of Standards, NARC, DANIDA, Hokkaido University, DFRS and MOPE	Media focussed
5	23-29 April 2002	Vulnerability and Adaptation Training Workshop, Mumbai	Indian Institute of Technology (IIT), Mumbai	18	IIT and DHM (Nepal)	Participants sent for workshop
6		Training workshop on Regional Climate Module	Indian Institute of Technology (IIT), Mumbai		IIT and DHM (Nepal)	Participants sent for workshop
7	29 June to 10 July 2003	Short-term Training on Climate Change National Communication	Korean Meteorological Association, Seoul	6	Climate Change Project/DHM, Nepal	Participants sent for workshop
8	16-17 October 2003	National Workshop on initial national communication related to UNFCCC, Kathmandu	MOPE/DHM	80	World Bank, UNDP, ICIMOD, WHO, ADB, FAO, MOPE, MOST, TU, MFSC, MOAC, WWF, Winrork, Clean Energy Nepal, IOE, NPC, DHM, NTV, RSS, Kantipur etc.	International institutions, governmental and non-governmental organizations

Annex V

Decisions of the Steering Committee and the National Climate Change Committee

The Steering Committee met seven times within the extended project period. The major decisions are in all meetings as follows:

1. Organize the Steering Committee meeting every three months;
2. Invite subject specialists in the Steering Committee meetings as deemed necessary;
3. Approve reports of the implementation committee and other subject committees containing data and statistics, information, financial statements and other records and information; such approved information to be sent to Convention secretariat and other international agencies by the Member-Secretary of the Steering Committee or MOPE;
4. Officials or specialist members of the National Climate Change Committee (NCCC) and national study team (NST) to be nominated or appointed by the Chair of NCCCC after consultation with the Steering Committee;
5. Change members of the Steering Committee only after approval from the Minister (or Minister of State for Population and Environment);
6. Provide guidance, monitoring and evaluation of the UNEP supported project;
7. Provide NRs. 1,000 for each member of the Steering Committee or invitees in each meeting;
8. Minute and approve decisions of the Steering Committee, to be signed by all members of the Steering Committee;
9. Decide on any obstacles and constraints related to the implementation of the project;
10. Approve progress report submitted by Member-Secretary of the Steering Committee;
11. Request for technical and financial proposals from the Tribhuvan University to conduct a study on GHG inventory, vulnerability and impact assessment, mitigation options and national action plan based on UNEP guidelines; and discuss the proposals in NCCC meeting and submit to the Steering Committee with recommendations of NCCC; revise agreement (between DHM and TU) in line with the discussion of the Steering Committee meeting, get concurrence from the Ministry of Law, Justice and Parliamentary Affairs and the Ministry of Finance, and submit for decision from the Steering Committee; approve MOU between DHM and TU as per the concurrences from MLJPA and MOF; and enter into agreement with TU for conducting studies as mentioned in the project document;
12. Make necessary arrangement to complete the work from TU with quality outputs;
13. Approve the inception report by including comments about brick and rubber factories as furnished by MOPE;
14. Send letter about the extension of the project duration from 30 June 2002 to 31 December 2002;
15. Instruct the consultant to submit the quality report in time;
16. Conduct a workshop about the submitted INC report by ensuring participation of stakeholders, panel of experts, and collect written comments from concerned ministries within 2 weeks; and finalize and submit INC report to the Steering Committee; and
17. Approve INC final report (at its seventh meeting).

Attendance of the Steering Committee Members

SN	Designation	Dates of Meetings							Remarks
		August 1999	March 2000	June 2000	August 2000	July 2001	July 2002	March 2003	Decision by first SC to hold meeting every three months and meetings range from 2 to 12 months
1	Secretary, MOPE	√	√	√	√	√	√	√	4 secretaries looked after project
2	Joint-Secretary, MOPE	√	√	√	√	√	√	√	2 JS looked after project
3	Joint-Secretary, MOST	√	√	√	√	√	√	√	2 JS involved
4	Joint-Secretary, MFSC	√	√			√	√	√	2 JS and 1 US involved
5	Joint-Secretary, MLJPA	√	√	√	√		√		2 JS and 1 US involved
6	Joint-Secretary, MOF		√						
7	Joint-Secretary, MOICS			√	√	√	√	√	3 JS involved
8	Joint-Secretary, MOAC	√	√				√	√	2 JS and 1 US involved
9	Prof. Dr. B. P. Upadhyay, TU representative		√	√	√	√	√	√	Continuous participation except 1st meeting
10	Director General, DHM	√	√	√	√	√	√	√	2 DGs involved
	Total members	**7**	**9**	**7**	**7**	**7**	**9**	**8**	
11	Invitees			3	3	1	3	1	1 US of MOPE regularly involved

Note: MOPE = Ministry of Population and Environment
MOST = Ministry of Science and Technology
MFSC = Ministry of Forests and Soil Conservation
MLJPA = Ministry of Law, Justice and Parliamentary Affairs
MOF = Ministry of Finance
MOICS = Ministry of Industry, Commerce and Supplies
MOAC = Ministry of Agriculture and Cooperatives
TU = Tribhuvan University
DHM = Department of Hydrology and Metrology
JS = Joint-Secretary
US = Under Secretary

Minutes of the meetings authenticated
First meeting = Decision authenticated by Member-Secretary (MS)
Second meeting = Decision authenticated by Chairman and MS
Third meeting = Decision authenticated by 7 members
Fourth meeting = Decision authenticated by 7 members including I US invitee
Fifth meeting = Decision authenticated by 7 members including I US invitee
Sixth meeting = Decision authenticated by 7 members including I US and invitees
Seventh meeting = Decision authenticated by 6 members

Major decisions of NCCC:
Decision on formation of NCCC was made in October 1999.

1. **November 1999** (2057.7.18 B.S): 17 members attended the meeting and major decisions are: (a) form NST within 15 days by the NCCC Chairman; and (b) also provide names of experts for NCCC members; and (c) organize NCCC meeting **at least in 3 months**, and (D) provide NRs. 1,000/ as remuneration – decision not authenticated

2. **25 January 2001** (2057.10.12 B.S.): 16 members (out of 20 members) attended the meeting and made decisions such as (a) involve participation of concerned specialists; (b) provide Project Document to each NCCC member; (c) write articles on climate change issues; (d) conduct collaborative study with TU and it should be finalized by NCCC Chairman – decision signed by 12 members
3. **April 2000** (2057.12.30 B.S.): 16 members attended the meeting and made decisions (A) give concurrence on memorandum of understanding/terms of reference. Remark – note of disagreement by Mr. P. Kunwar from MOPE about taking the services of TU). Although SC (chaired by MOPE Secretary) has had accepted on taking the services of TU.
4. **June 2003** (2060.3.3 B.S):-10 members out of 18 members including 3 invitees, decision on draft final report on GHG inventory, vulnerability and adaptation options, mitigation options and INC submitted for discussion and include only relevant comments

Other meetings

1. **June 2001** (2059.2.2 B.S): Inception report discussed with ST Minister Mr. Balayaer, and 32 participants attended the meeting
2. **September 2003** (2060.6.7 B.S.) Meeting of Panel of Experts held, and decided to conduct national workshop on INC on 15-16 October 2003. 17 persons attended the meeting.

Note: Minutes of NST meetings were not available.

Annex VI

List of persons consulted

1. Hon'ble Bachaspati Devkota, Minister for Population and Environment
2. Hon'ble Pratibha Rana, Minister of State for Science and Technology
3. Bhakta Bahadur Balayar, Ex-Minister of State for Population and Environment, and Science and Technology
4. Mohan Bahadur Karki, Secretary, Ministry of Health, (Former Secretary, Ministry of Population and Environment)
5. Dev Raj Regmi, Secretary, Ministry of Population and Environment
6. Suresh Raj Chalize (Prof.), Member, NCCC
7. Binayak Bhadra, PhD. Kathmandu
8. Bidur P. Upadhyay (Prof.) PhD., Central Department of Hydrology and Meteorology, Tribhuvan University
9. Binod P. Gwayanli, Joint-Secretary, Ministry of Population and Environment
10. Madan Lal Shrestha PhD., Director General, Department of Hydrology and Meteorology
11. Bijaya K. Vaidya, Deputy Director-General, Department of Hydrology and Meteorology
12. Madan B. Basnyat, PhD., Alternate Energy Promotion Cenre
13. Bikash Pandey, Country Representative, Winrock International Nepal
14. Purna Bahadur Shrestha, Assistant Project Coordinator, Climate Change Project
15. Purushottam Kunwar, Under-Secretary, Ministry of Population and Environment
16. Arun B. Shrestha, PhD, Hydrologist, Department of Hydrology and Meteorology

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