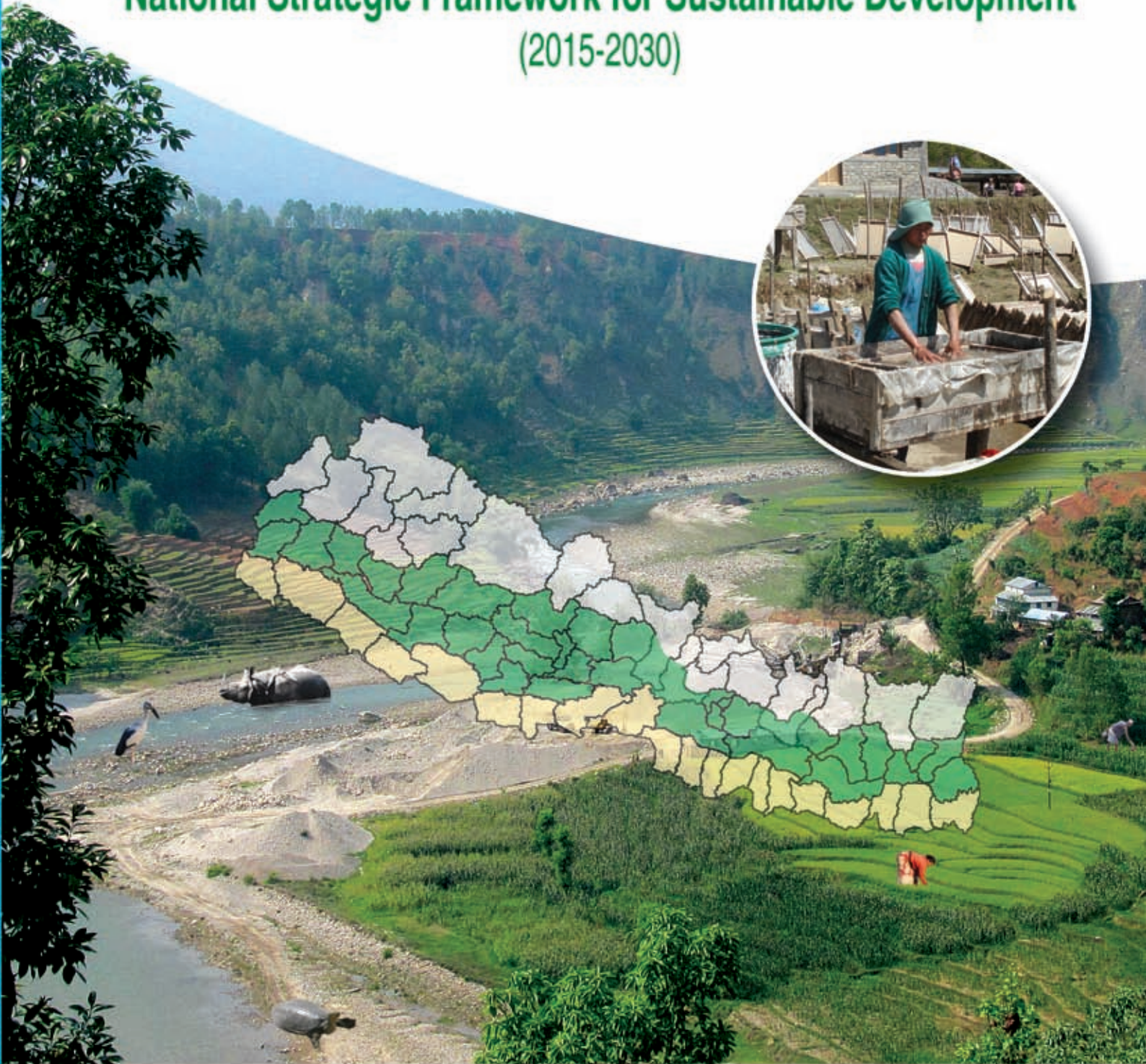




Unofficial Translation

Nature Conservation National Strategic Framework for Sustainable Development (2015-2030)



Government of Nepal
National Planning Commission
Singh Durbar, Kathmandu
July 2015

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National Strategic Framework for Sustainable Development
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Kathmandu, Nepal

The Prime Minister

MESSAGE

The National Planning Commission (NPC) has prepared 'Nature Conservation National Strategic Framework for Sustainable Development (NCNSFSD)' with extensive effort.

Nepal's past journey on development became sluggish in the lack of democratic governance, sustainable peace and political stability. The education, road, air service, industrial and social development efforts of the country started with pace only after the restoration of democracy in 1990. The government of Nepali Congress established after the parliamentary election of 1991, formulated and implemented the plans and programmes, which became vital basis for socio-economic development of Nepal.

The concern of Nepalese citizen on education, employment, peace, stability and development is increased after the success of second people's movement. The constitution assembly, elected by the Nepalese, not only declared the republic state but also promulgated a constitution, which institutionalized all achievements of the people's movement. I believe this constitution will be basis for the development, peace and prosperity of Nepal, which ensures the linguistic diversity, religious and cultural traditions and identity rights of women, dalit, madhesi, ethnic and indigenous people, tharu, muslim, minorities and marginalised people as well as their basic fundamental rights.

We need to improve our traditional thoughts and lifestyle for sustainable development by conserving natural ecosystems. Realizing this fact, the National Conservation Strategy was developed and implemented in 1988. Since then, new issues have emerged, including: addressing the loss of biodiversity due to green gas emissions and climate change, deforestation and degradation; along with reduction in carbon sequestration capacity; emission of harmful chemicals into the atmosphere due to emissions from industries, factories and nuclear plants; and soil erosion and siltation of agricultural land due to excessive exploitation of mineral resources. Arguments, debates and concepts on the adoption of programmes such as green economy, green industry and ecosystem-based climate adaptations are on-going. As it is not possible for a single sector or country to conduct such programmes, a number of countries have articulated their global commitment through various conventions, agreements and treaties. Nepal has also expressed its commitment to more than twenty such conventions, including the Convention on Biodiversity (1992).

As guaranteed by Constitution of Nepal, every Nepali citizen has the right to live in a clean environment, while the State is responsible for using natural resources for people's welfare. Furthermore, the State is, on the one hand, committed to achieving industrialization, urbanization and physical infrastructure building through various policies, strategies and periodic plans, on the other hand, expressed its commitment to the conservation of biodiversity and precious wildlife such as tiger, rhinoceros, red panda and snow leopard. Hence, it is necessary to make development and conservation complementary to each-other. Formulation of this framework has become imperative in order to serve as a guideline to provide direction to overall development efforts by playing a coordinating role in attainment of the goals of national development and natural conservation, while simultaneously fulfilling the nation's commitments.

As this Framework aims to make development sustainable and environmentally sensitive by integrating nature conservation into all development efforts, it will guide the concerned sectoral agencies, private sector, civil society and development partners in how to best ensure that the plans, programmes and projects they conduct are nature-sensitive. Furthermore, I believe this Framework can contribute to poverty alleviation in a sustainable manner.

Finally, I thank all involved in the formulation of this Framework and heartily appeal to the concerned sectors to provide their invaluable support for its successful implementation.

July 2015

Sushil Koirala
Prime Minister
and Chairperson
National Planning Commission



Government of Nepal

National Planning Commission

Prof Dr Govinda Raj Pokharel
Vice Chairperson

Ref. No.
D. No.

Date:

FOREWORD

For the past six decades, planned programmes have been formulated and implemented for the country's holistic development. Nepal has achieved notable progress in the areas of production growth, physical infrastructure development and social development during this period. Because of the failure to attain sustainable economic development, more effort is needed to generate sufficient employment and self-employment in the country. The physical destruction, environmental calamities and associated human loss caused by the recent earthquake revealed the extent to which infrastructure and landscape management in Nepal have failed to account fully for its vulnerability to natural disasters, especially earthquakes and associated landslides. Nepal should now have to increase economic growth at a rapid pace in order to attain the Sustainable Development Goals within the Post-Millennium Development Goals in a meaningful manner and upgrade the country from the category of least developed country (LDC) to that of developing country.

The history of global development has shown that rapid industrialization, urbanization, electricity generation, transportation and physical infrastructure construction have had negative impacts on agricultural lands, forests, watersheds and the overall environment, which has in turn caused loss to biodiversity and ecosystems, apart from environmental pollution. Development is imperative; however, as the loss of biodiversity and core ecosystems also hinders attainment of vital development indicators, integration of nature conservation into overall development efforts is critical to sustainable development.

Achievement of development targets include: rural infrastructure such as irrigation and agricultural roads; industrial infrastructure such as hydropower and highways; human development infrastructure such as hospitals, schools and playgrounds; and tourism infrastructure such as airports and indigenous heritage preservation is not possible through the isolated efforts of a single sector alone, particularly in the complicated context of post-earthquake reconstruction and hazard mitigation.

As thematic and sectoral strategies are focused on sectoral development, to achieve the goal of sustainable development – a cross-sectoral issue – and to play a coordinating role in its implementation, the need for an umbrella strategy that steers overall development has been realised. To fulfil this need, the National Planning Commission has formulated this National Strategic Framework for Nature Conservation. The implementation of this framework will make singular contributions to mainstreaming environmental sensitivity, maintaining harmony between sectoral strategies, achieving coordination between concerned agencies, valuing and accounting ecosystem goods and services in development investments, and enhancing accountability of all concerned in relation to the results of conservation. This Framework addresses topical questions, such as how to carry out conservation of heritage sites such as National Parks and sensitive watershed areas such as Churia, mitigation of water and air pollution and reduction in green gas emissions, while developing physical infrastructure that does not compromise the environment. In addition, the implementation of this Framework will play an effective role in achieving the country's development goals at a rapid pace and in a sustainable manner.

I would like to thank the Framework Drafting Steering Committee, the seven thematic groups – including forest and biodiversity; agriculture; physical infrastructure; environment and disaster risk management; society, indigenous peoples and the environment; legal and policy provisions – various ministries, central agencies, organisations and development partners who provided guidance in drafting the Framework. I would also like to thank all staff of the National Planning Commission Secretariat, particularly Mr Sharada Prasad Trital, Member Secretary of the NPC, for his contributions to the drafting of this Framework.

July 2015

Prof Dr Govinda Raj Pokharel
Vice Chairperson
National Planning Commission



Government of Nepal

National Planning Commission Secretariat

Singh Durbar, Kathmandu, Nepal,

Ref. No.

D. No.

ACKNOWLEDGEMENT

As the 'Nature Conservation National Strategic Framework for Sustainable Development' has come at a time when Nepal is recovering from a devastating natural disaster and Post-Millennium Sustainable Development Goals are a priority throughout the world, this Framework has become highly topical and relevant. Drafted for the first time in Nepal, this National Strategic Framework is not a strategy in itself, but an umbrella framework, which emphasises nature conservation, sustainable use of natural resources and equitable distribution of their benefits.

The Government of Nepal will implement this Framework through its periodic and annual plans and programmes over the next 15 years. Based on this document, the National Planning Commission will play the role of a facilitator in exploring measures for solving problems faced in nature conservation, as well as in overall development, facing emerging challenges and appropriately addressing the issues that have emerged, as well as guiding the concerned sectors in taking appropriate steps. This has provided a basis for integrating nature conservation into sectoral development, guiding the various ministries in formulating their plans based on sectoral strategies and evaluating nature sensitivity of the programmes prepared by the sectoral ministries.

In the course of preparing this framework, suggestions and feedback were collected from experts, government organisations and NGOs, civil society, professional groups representing various sectors and development partners from the VDC to the central level by organising extensive interactions and discussions. Interactions were also held with the representatives of various bodies, including district-level sectoral agencies, political parties, local groups and organisations, NGOs, civil society, intellectuals and journalists at different phases. The NPC would like to express its gratitude to all of the individuals who contributed to this task.

The NPC would like to express thanks to Hon'ble Member of NPC, Dr Bimala Rai Poudyal, Former Member Secretaries, Mr Yubaraj Bhusal and Dr Som Lal Subedi, for their guidance and important contributions in the course of formulating this framework and Joint Secretary of Agriculture and Rural Development Division, Mr Pushpa Lal Shakya, as well as Joint Secretary of Monitoring and Evaluation Division, Dr Tirtha Raj Dhakal, for formulating and reviewing this framework. The active participation of the Programme Directors of the NPC Secretariat, Mr Mahesh Kharel and Mr Prakash Kharel, Planning Officers, Mr Bishnu Poudyal, and all other staff was invaluable to the process. We would also like to gratefully recall the contributions of the Joint Secretary of the Agriculture and Rural Development Division, Late Bhava Krishna Bhattarai during the initial stage of the Framework formulation.

The NPC especially appreciates the suggestions of the Steering Committee that guided this task, as well as the thematic groups: the Forests and Biodiversity Group, headed by Joint Secretary of the Ministry of Forests and Soil Conservation, Mr Braj Kishor Yadav; the Agricultural Group, headed by Joint Secretary of the Ministry of Agricultural Development, Dr Udaya Chandra Thakur; the Physical Infrastructure and Environment Group, headed by Joint Secretary of the Ministry of Physical Infrastructure and Transportation, Mr Madhav Karki; the Environment and Disaster Risk Management Group, headed by Joint Secretary of

the Ministry of Science, Technology and Environment, Mr Ram Prasad Lamsal; the Society, Indigenous Peoples and Environment Group, headed by Joint Secretary of the Ministry of Federal Affairs and Local Development, Mr Gopi Krishna Khanal; and the Legal and Policy Provision Group, headed by Joint Secretary of the Ministry of Law, Justice, Constituent Assembly and Parliamentary Affairs, Mr Kamal Shali Ghimire.

Last but not least, the NPC would like to thank, among others, Dr Yam Malla, Country Representative of IUCN Nepal, Mr Rajendra Khanal, Programme Coordinator at IUCN Nepal and Ms Sony Baral Gauli, Programme Officer at IUCN Nepal, for providing technical facilitation of the framework drafting process; Dr Prahlad Kumar Thapa for coordinating many components of the drafting process, from preparation of the framework drafting methodology to drafting the detailed document; Dr Ambika Prasad Gautam for providing the services of an expert (Biodiversity); Dr Jhamak Bahadur Karki (Biodiversity); Mr Bhavani Prasad Kharel (Forest); Mr Bijendra Basnyat (Forest); Dr Devendra Gauchan (Agriculture); Dr Taranidhi Bhattarai (Physical Infrastructure); Dr Purna Nepali (Land and Regional Planning); Mr Dipak Poudyal (Water and Disaster Risk Management); Mr Ram Chandra Khanal (Climate Change and Renewable Energy); Dr Rajeev Dahal (Tourism); Dr Bandana Pradhan (Health); Dr Badri Dev Pandey (Environmental Education); Dr Mukta Singh Lama (Society and Indigenous Peoples); Dr Sushila Nepali (Gender and Social Inclusion); Mr Narayan Belbase (Legal and Institutional Provision); Mr Dil Raj Khanal (Legal and Institutional Provision); and international consultant Dr Pierre Galland. Similarly, we would like to thank former Vice Chairperson of NPC, Dr Pitamber Sharma, Prof. Dr Ram Prasad Chaudhary, Executive Director of Applied Science and Technology Research Centre and Dr Ganesh Raj Joshi, former Secretary of GoN for reviewing and providing suggestions on the Framework.

Finally, the NPC appreciates the technical assistance of the International Union for Conservation of Nature (IUCN) and financial support of the Swiss Development Corporation (SDC), United Nations Development Programme (UNDP) and Asian Development Bank (ADB).

July 2015

Sharada Prasad Trital
Member Secretary
National Planning Commission

ABBREVIATIONS AND ACRONYMS

ACC	Association of Chambers of Commerce
ADB	Asian Development Bank
ADDCN	Association of DDCs in Nepal
ADS	Agriculture Development Strategy
AEC	Agriculture Enterprise Centre
AEPC	Alternative Energy Promotion Centre
AFU	Agriculture and Forestry University
BCN	Bird Conservation Nepal
CBD	Convention on Biological Diversity
CBS	Central Bureau of Statistics
CBFGs	Community Based Forest Groups
CDM	Clean Development Mechanism
CECA	Construction Entrepreneurs Central Association
CEDAW	Convention on the Elimination of all forms of Discrimination Against Women
CEN	Clean Energy Nepal
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DA	Dalit Association
DDC	District Development Committee
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
ECCA	Environmental Camps for Conservation Awareness
EFLSGA	Environment Friendly Local Self Governance Act
EIA	Environment Impact Assessment
EIA	Environmental Impact Assessment
EVI	Economic Vulnerability Index
FECOFUN	Federation of Community Forestry Users Nepal
FNCCI	Federation of Nepalese Chambers of Commerce and Industry
FNCSI	Federation of Nepal Cottage and Small Industries
FSS	Forest Sector Strategy
FY	Fiscal Year
GMO	Genetically Modified Organism
GoN	Government of Nepal
ha	Hectare
HAI	Human Assets Index
HAN	Hotel Association Nepal
ICIMOD	International Centre for Integrated Mountain Development
IEC	Information, education and communication
IEE	Initial Environmental Examination
INGO	International Non-Government Organization
ITPGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
IUCN	International Union for Conservation of Nature
km	Kilometer
KU	Kathmandu University
LDCs	Least Developed Countries
LI-BIRD	Local Initiatives for Biodiversity, Research, and Development
LSGA	Local Self Governance Act
MDGs	Millennium Development Goals

MoAD	Ministry of Agricultural Development
MoAD	Ministry of Agricultural Development
MoCPA	Ministry of Cooperatives and Poverty Alleviation
MoCS	Ministry of Commerce and Supplies
MoCTCA	Ministry of Culture, Tourism and Civil Aviation
MoE	Ministry of Education
MoEn	Ministry of Energy
MoF	Ministry of Finance
MoFA	Ministry of Foreign Affairs
MoFALD	Ministry of Federal Affairs and Local Development
MoFSC	Ministry of Forests and Soil Conservation
MoGA	Ministry of General Administration
MoHA	Ministry of Home Affairs
MoHP	Ministry of Health and Population
Mol	Ministry of Industry
MoIC	Ministry of Information and Communication
Molr	Ministry of Irrigation
MoLJPA	Ministry of Law, Justice, Constituent Assembly and Parliamentary Affairs
MoLRM	Ministry of Land Reforms and Management
MoPIT	Ministry of Physical Infrastructure and Transport
MoSTE	Ministry of Science, Technology and Environment
MoUD	Ministry of Urban Development
MoWCSW	Ministry of Women, Children and Social Welfare
MoYS	Ministry of Youth and Sports
MuAN	Municipal Association of Nepal
MW	Megawatt
NARC	Nepal Agriculture Research Council
NASC	Nepal Administrative Staff College
NAST	Nepal Academy of Science and Technology
NAVIN	National Association of VDCs in Nepal
NBCC	National Biodiversity Coordination Committee
NBSAP	National Biodiversity Strategy and Action Plan
NCCNCR	National Council for Conservation of Natural and Cultural Resources
NCCSP	National Climate Change Support Programme
NCNSFSD	Nature Conservation National Strategic Framework for Sustainable Development
NCS	National Conservation Strategy
NDC	National Dalit Commission
NEFIN	Nepal Federation of Indigenous Nationalities
NFDIN	National Foundation for Development of Indigenous Nationalities
NFN	NGO Federation Nepal
NMA	Nepal Mountaineering Association
NNSD	National Network for Sustainable Development
NPC	National Planning Commission
NQMD	Nepal Quality and Measurement Department
NTB	Nepal Tourism Board
NTNC	National Trust for Nature Conservation
NWC	National Women Commission
PPCR	Pilot Programme on Climate Resilience
PRSP	Poverty Reduction Strategy Paper

RCT	River Conservation Trust
REDD	Reducing Emissions from Deforestation and Forest Degradation
SAARC	South Asian Association for Regional Cooperation
SAFTA	South Asian Free Trade Area
SAWEN	South Asian Wildlife Enforcement Network
SDC	Swiss Development Cooperation
SDGs	Sustainable Development Goals
SEAN	Seed Entrepreneurs' Association of Nepal
SWC	Social Welfare Council
mt	Metric Ton
TAAN	Trekking Agents' Association Nepal
TEEB	The Economics of Ecosystems and Biodiversity
TU	Tribhuvan University
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UWDB	Underground Water Development Board
VDCs	Village Development Committees
WA	Women Association
WB	World Bank
WCED	World Commission on Environment and Development
WCS	World Conservation Strategy
WEC	Water and Energy Commission
WUA	Water Users' Association
WWF	World Wildlife Fund

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CHAPTER 1

INTRODUCTION

1.1 Background

Both population and income have increased worldwide, intensifying the demand for food, water, energy, housing, transportation and other public services. Similarly, rapid industrialisation, urbanisation, electricity generation, transportation and construction of physical infrastructure have adversely affected agricultural land, forests, reservoirs and the environment, which has, in turn, caused a loss of biodiversity and ecosystems, as well as environmental pollution. This loss of biodiversity and core ecosystems has hindered international attainment of the Millennium Development Goals (MDGs) such as reduction of poverty, hunger and morbidity. An assessment of the millennium ecosystem services, carried out in 2005, corroborated that the increase in global population and concomitant increase in demand for food, water, cloth and energy has led to negative impacts on nature and individual ecosystems. As human contributions to nature conservation have lagged behind the ecosystem services and other uses society receives from nature, food and water have become scarcer. Based on this, many international agencies involved in nature conservation have reached the conclusion: nature does not need human beings to the same extent that human beings need nature.

The development concepts that emerged in the 1980s did not adequately address emergent and important environmental and ecosystem issues. Traditional models of development concept did not seem to concern themselves much with the question of external costs such as the environmental cost of production. After the Rio Convention in 1992, however, environmental and ecosystem concerns started emerging as integral components of socioeconomic development. Thereafter, the concept of sustainable development has been adopted.

Of the eight MDGs adopted in 2000, only the seventh goal, regarding ensuring environmental sustainability, is directly concerned with nature conservation, while the other goals are concerned with issue such as poverty reduction, primary

education and gender equity. As these goals are particularly focused on production growth and income generation, they did not necessarily generate positive impacts on nature conservation. Since the goal of ensuring environmental sustainability to the green zone (Goal 7) encompassed these, they were not highly focused on nature conservation.

Sustainable development has been hindered by an array of factors, including: increase in global temperature due to green gas emissions; decline in carbon sequestration capacity due to deforestation and forest degradation; emission of harmful chemicals into the atmosphere by industries, factories and atomic plants; and land erosion, siltation, salinization due to exploitation of non-renewable mineral resources over the past two decades. In this context, integration of nature conservation into development efforts is imperative for the achievement of sustainable development. Discourse on adoption of programmes such as green economy, green enterprise and ecosystem-based adaption are ongoing. Consequently, Rio+20 has announced its decision to maintain sustainable development as a priority after 2015, when the MDGs are scheduled to end. Of the 17 goals proposed by it, six are directly concerned with nature conservation (Annex1), whereas the other six are indirectly concerned. Therefore, as the goal of sustainable development after 2015 is to achieve balance between development and nature conservation, integration of nature conservation in development interventions has become imperative.

In 1980, the International Union for Conservation of Nature (IUCN) prepared and started implementing the World Conservation Strategy. Being a member state of IUCN, Nepal also formulated and enforced the National Conservation Strategy (NCS) in coordination with the National Planning Commission (NPC) in 1988. As there were no other strategies at that time, NCS 1988 served as the overarching national strategy on nature conservation. After the country's political shift in 1990, various sectoral strategies and master plans were formulated. Since then, these strategies and

master plans have been guiding thematic and sectoral development programmes.

In order for Nepal to graduate from the category of Least Developed Countries (LDCs) to that of developing countries by 2022 as per GoN's decision, the country will have to achieve progress at a rapid pace within a short period of time – and this progress must be realized through proper planning and oversight, so as to reduce the impacts of future natural disasters such as the 2015 earthquake. Through the efforts of a single sector alone, it will not be possible to achieve goals such as an 8 per cent GDP growth rate within the next eight years (2022)¹; increasing irrigation coverage from 1,311,000 ha to 1,713,000 ha by 2027²; rehabilitating 1.6 million ha of degraded land by 2033^{3,4}; increasing the proportion of population with access to electricity facility from the current 67⁵ per cent to 87 per cent by the end of the Thirteenth Plan; constructing 1,776 km of mid-hill highway⁶ by the end of the Thirteenth Plan; the policy of constructing one road and one bridge in every electoral constituency⁷; constructing 945 km of Mechi-Mahakali electric railway; constructing international airports in Pokhara, Nijgadh and Bhairahawa⁸; maintaining forest coverage in 40 per cent of the land in the country and maintaining 'one house, one tree' and 'one village, one forest'; maintaining open space for every 25,000 persons in each municipality area; maintaining a playground in each electoral constituency⁹; bringing down overall poverty from 23.8 per cent to 18 per cent by the end of the Thirteenth Plan period and rural poverty from 27 per cent to 10 per cent within 20 years¹⁰ and other goals. Furthermore, as natural resources are used in the course of development, achieving balance between overall development and nature conservation is imperative.

Since thematic and sectoral strategies are centred on regional development, the need for a single umbrella strategy has been realised to guide overall development and to play a coordinating role in their implementation in order to achieve the development goals that cannot be achieved by a single sector. Although the NCS has previously adopted such objectives, it could not be implemented effectively for various reasons. Furthermore, as conceptual changes have taken place in the country in a number of areas, including nature conservation, since 1988, this

strategic framework for nature conservation has been prepared for sustainable development to suit the contemporary context.

1.2 Introduction to the Framework

This National Strategic Framework, formulated in Nepal for the first time, is not a strategy in-itself but an umbrella strategy. It emphasizes nature conservation, sustainable use of natural resources and equitable distribution of their benefits; hence, it covers all other sectoral strategies related to nature conservation. The GoN will implement this Framework through its periodic and annual plans and programmes over the next 16 years. The NPC will play a coordinating role, and will also guide the concerned sectors to take appropriate measures, in order to explore solutions to issues encountered in nature conservation and overall development, face emerging challenges and address emerging concerns, based on this document. In this way, the Framework has provided a basis for integrating nature conservation into sectoral development, guide the various ministries in sectoral strategy-based planning processes and evaluate nature sensitivity of the programmes prepared by the thematic and sectoral ministries.

This Framework has six chapters. Chapter 1 is the introduction chapter and in Chapter 2 nature conservation has been briefly analysed. Chapter 3 presents a detailed account of nature conservation integration into development efforts, Chapter 4 contains National Strategic Framework, Chapter 5 highlights arrangements for implementation of the Framework and Chapter 6 describes monitoring, evaluation, information management and use.

1.3 National Strategy Framework Formulation Method/Process

This Framework has been prepared based on a review of international experience, Nepal's commitment to nature conservation and active participation, discussions and consultations of local communities, district and central-level stakeholders based on the opportunities and challenges seen in nature conservation. The concept of the drafting method of the National Strategic Framework is shown in Annex 2.

The sectors that need to be given priority and its pillars were identified based on the review of Nepal's international commitments and the National Conservation Strategy (1988). Thereafter,

the status of nature conservation-friendly development, opportunities, challenges and priority sectors were identified after reviewing reference materials, holding interactions with the district and central-level agencies and stakeholders directly or indirectly concerned with nature conservation, and holding community-level discussions. During this process, issue-based interactions, discussions and workshops were held in 26 districts on the question of, among others, geographical, ethnic and financial conditions and conservation. A list of the districts in which interactions took place is provided in Annex 3. The members of the Framework drafting team directly participated in the interactions and discussions in 15 districts, whereas, in the remaining districts, interactions and discussions were held with the participation of the Federation of Community Forest Users' Nepal (FECOFUN), Water Users' Association (WUA), Federation of Agricultural Groups Nepal, National Association of Village Development Committees in Nepal (NAVIN) and Nepal Forum of Environmental Journalists (NEFEJ). In the course of these meetings, the views of nearly 1,500 people were collected. Apart from these, suggestions were collected from networks such as the National Network for Sustainable Development (NNSD) via electronic media. The results of the perception analysis derived from face-to-face interviews during district and community-level discussions are presented in Annex 4.

Directions and guidance necessary for drafting this Framework were provided by a 19-member high-level Steering Committee, chaired by the Member Secretary of the NPC. In addition, seven thematic groups were formed, namely forest; agriculture; biodiversity; physical infrastructure and the environment; society, nature and

indigenous peoples; climate change and energy; and legal and policy provisions. Chaired by Joint Secretaries of the concerned ministries, each of the thematic groups consisted of eight to ten representatives from various agencies. The names of the members of the Steering Committee and Thematic Committees are presented in Annex 5.

The National Strategic Framework formulation methods and draft were shared at a national-level workshop and suggestions were collected from the participants. The final draft was reviewed by six subject-matter experts.

1.4 Limitations

Although the Nature Conservation National Strategic Framework identifies priority sectors and sub-sectors, it does not encompass all of the activities that need to be carried out by the thematic and sectoral agencies. Furthermore, the issues that directly or indirectly affect conservation are covered only from the economic, social and environmental aspects. These priority sectors have been identified and prioritised based on the NCS (1988), its review, and emerging issues and challenges. It has been further revised and refined following interactions with stakeholders at various phases. Hence, although efforts have been made to cover all sectors concerned with nature in this Framework, it has not been possible to include many sectors.

Owing to a lack of periodic data on progress in the past, data was collected through the interaction method. Nevertheless, efforts have been made to review the actual situation by carrying out, among other assessments, interactions on common issues among various stakeholders and reviewing available data.

CHAPTER 2

CONTEXTUAL ANALYSIS OF NATURE CONSERVATION

2.1 Concept of Nature Conservation

Nature encompasses the five elements¹¹ of the universe, namely earth, water, light, air and sky, as well as flora and fauna, and the natural, cultural and physical (artificial) environment that interact with them. The term 'natural resources' refers to the resources that are available in nature in natural (non-artificial) form. Development achieved by human beings for their benefit, which is based on these natural resources, is civilisation and culture.

Nature conservation refers to the judicious utilisation of natural resources, achieved by remaining within its renewable capacity in a sustainable manner. It ensures use of the available natural resources in a manner that can fulfil human development needs of present and future generations.

In its initial conception, the idea of nature conservation was based on the concept of nature protection. Protection is the idea of protecting natural resources, particularly flora and fauna, from loss or damage. In this sense, protection means keeping natural resources in their present state without human interference. As such, the concept of nature conservation, at the beginning, touted a message in favour of protecting and saving the resources available in nature, and did not include management concepts such as deriving benefits from natural resources. In the 1950s, there was a paradigm shift in this perspective. The notion that people should also derive benefits from the protection of natural resources started gaining momentum and the concept of conservation was developed^a. Hence, nature conservation has come to mean conservation, maintenance, sustainable utilisation and equitable sharing of benefits derived from it through increasing human access to natural resources.

2.2 International Context of Nature Conservation

After World War II, the western countries that

had suffered extensively as a result of the war, engaged in industrial revolutions without paying attention to the environmental impacts of these movements. In these countries, agriculture also developed as a successful industry, earning the name Green Revolution. The Green Revolution had its main basis in irrigation development, mechanization, and use of seeds of improved crop varieties, chemical fertilizers and pesticides. The publication of *Silent Spring*, a book by an American, Rachel Carson, in 1962, claimed that use of pesticides had caused harm to environmental health and subsequently contributed to spreading general awareness of the effects of pesticides¹². This served as a catalyst for the establishment of an environmental conservation agency in the USA. From the beginning of 1970, this was the most visible environmental issue; in subsequent years, the Ramsar Convention (Convention on Wetlands of International Importance, especially Waterfowl Habitat), in 1971, the United Nations Conference on the Human Environment, in 1972, and the World Heritage Convention, held the same year, expressed the message that conservation and development cannot be seen in isolation¹³. Subsequently, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), held in 1973, imposed a ban on trade in endangered wildlife, their remnants and flora species. This has contributed immensely to conservation of endangered species. Subsequently, in 1980, the World Conservation Strategy, prepared and implemented by the IUCN, presented the concept of Conservation of Bio-Resources for Sustainable Development. This was further clarified by the report, *Our Common Future*, prepared by the World Commission on Environment and Development (WCED), also known as the Brundtland Commission, in 1987. It recommended implementing eight questions, namely population and human resources, industries, food security, species and ecological system, urban challenges, management of public

^a In line with this concept, organizations such as the IUCN changed their names from protection to conservation in 1956 (Christoffersen, 1997).

property, energy and environment degradation¹⁴. This agenda was further reinforced by the Earth Summit, held in Rio in 1992.

The Earth Summit, had three achievements: Declaration on Environment and Development, Agenda 21 and Forest Principles. Among the 27 principles¹⁵ of the Declaration on Environment and Development, principle one describes the human role for sustainable development; it is believed that they have the right to live healthy and productive lives in harmony with nature. The social and economic aspects for sustainable development (especially poverty alleviation) were included in Agenda 21, including those related to natural resource conservation and management that reinforce the role of children, youth, women, indigenous peoples and farmers. Similarly, the Forest Principles include the issues of conservation and development of forests.

The Rio Summit (1992) put forth three conventions. The first among them is the Convention on Biological Diversity (CBD), which considers that conservation of biodiversity is a subject of human concern and an integral part of development processes. The second is the United Nations Conference on Environment and Development (UNCED), which regulates human interventions in the climate system by stabilising greenhouse gas emission. The third is the United Nations Convention to Combat Desertification, which is focused on minimisation of impact of desertification and drought.

In 2000, the Millennium Development Goals (MDGs) were adopted. As mentioned in Section 1.1, most of the goals are focused on production increase and income generation, therefore lacking any significant focus on nature conservation. However, the first MDG, to halve poverty, is a goal that is linked to the livelihood of the poor, who are almost fully-dependent on natural resources in poor countries. An evaluation of the Millennium Ecosystem Services, carried out in 2005, has identified ecosystems as property of the poor. In addition, it mentions that necessary investments will be undertaken to strengthen services, such as supporting the ecosystems and provisioning, controlling and providing cultural benefits¹⁶.

In 1999, the World Bank and the IMF adopted a policy requiring the countries that borrowed loans

to help to achieve the MDGs to formulate a Poverty Reduction Strategy Paper (PRSP) with the goal of enhancing accountability towards poverty reduction efforts in these countries. The policy established the condition that the PRSPs formulated by the borrowing countries must be country-specific, results-oriented, comprehensive, participatory and long-term. Stressing poverty alleviation, it gave priority to health, education and transportation. However, it could not ensure integration of nature conservation in the implementation of such development programmes.

Following the emergence of genetically modified biodiversity, in 2002, the world adopted the Cartagena Protocol on Biosafety (Biosafety Protocol). It extends countries the right to ban import of genetically modified organisms (GMOs) that are not considered safe for human health.

The Convention on Biodiversity requires every member state to formulate and enforce a National Biodiversity Strategy and Action Plan (NBSAP). In 2004, the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) was introduced, which was consistent with the CBD. It asserts that food security should be ensured through access, exchange, conservation and sustainable use of the available vegetation in the world through a multi-faceted approach to genetic resources, apart from equitable distribution of the benefits derived. At present, ITPGRFA has a provision regarding conservation and sustainable use only of the agricultural genetic resources listed in the ITPGRFA Annex 1 (64 species, of which 35 are food and 29 forages).

The United Nations Framework Convention on Climate Change (UNFCCC) Reducing Emissions from Deforestation and Forest Degradation (REDD) in Developing Countries states that deforestation exacerbates greenhouse gas emissions and thus deforestation should be reduced. Based on scientific conclusions that 17 to 29 per cent of emission of greenhouse gases into the atmosphere that took place over the past two decades is due to land-use changes such as deforestation and forest degradation, the concept of REDD was further developed to that of REDD+ (Reducing Emission from Deforestation and Forest Degradation in Developing Countries). This has added a new dimension to the conservation sector.

The Rio+20 World Summit, held in Brazil in 2012, declared that it would provide continuity to sustainable development after the end of the MDGs in 2015. Discussions are currently being held in international fora to determine the goals of these global resolutions. Pending finalization, the United Nations Open Working Group on Sustainable Development Goals will be centred on 17 sectors for sustainable development after the MDGs 2015. Among them, to end hunger, achieve food security, improve nutrition and promote sustainable agriculture; ensure availability and sustainable management of water and sanitation for all; ensure access to affordable, reliable, sustainable and modern energy for all; take urgent action to combat climate change and its impacts; conserve and sustainably use the oceans, seas and marine resources for sustainable development; protect, restore and promote sustainable use of terrestrial ecosystems; sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss¹⁷ are directly related to nature conservation. The question of what type of nature conservation strategy should be formulated and adopted to achieve the sustainable development goals has emerged among the nations in favour of sustainable development goals.

The recent nature conservation guidelines began to emphasise people's participation. Following the Fifth World Park Congress, held in Durban, South Africa, in 2003, rights started being delegated to local communities in the area of nature conservation in many countries¹⁸. Recently, the World Park Congress 2014, held in Sydney, Australia, articulated its commitment to declaring new conservation areas in the near future and to meaningfully scale-up the nature conservation sector globally in the coming decade. Commitment was also expressed to delegate the core responsibility for this to indigenous nationalities and the youth. The Congress has drafted a framework covering various aspects on the issue of how to facilitate implementation of the agreements and commitments regarding conservation of protected zones in the future.

2.3 National Context of Nature Conservation

Based on the concept of conservation that is evolving at international level and the commitment articulated by the member states of the various

conventions in relation to it, conservation campaigns have also taken off in Nepal and the country has translated its commitment to conservation in action.

2.3.1 Development of the concept of conservation in Nepal

For many years, institutions such as *guthi* have been established and endowment funds have been set up to be operated by them to build *gumba*, monasteries, temples, water spouts, canals, resting places and public platforms and to celebrate various *jatras* and festivals. Such customs have been practiced up to the present. Religious tolerance, co-existence and people's participation are the core elements for the operation of such *guthis*.

This tradition can still be seen as living examples in many places. For wildlife reproduction, acts such as not tampering with caves, planting and protecting tall trees for reproduction of birds, building holes in walls in the backside of houses for sparrows, swallow, starling and owls, worshipping rivers as goddesses and not releasing human faeces in rivers are helpful in maintaining balance in nature conservation. However, such types of traditional practices of nature conservation are on the verge of extinction. Especially, the impacts of industrialisation, urbanisation and modernisation are gradually increasing.

In institutional form, nature conservation started in 1957 with the enactment of the Forest Conservation (Special Provision) Act 2014 Bikram Sambat (BS), Land Act 2014 BS, Nepal Mines (First Amendment) Act 2014 BS. Thereafter, the major legal provisions regarding nature conservation include the Aquatic Animals Act 2017 BS, Wildlife (Conservation) Amendment Act 2019 BS, Land Act 2021 BS, Tourism Industry Act 2021 BS, Food Act 2023 BS, Canal and Electricity and Related Water Resources Act 2024 BS, Forest Conservation (Special Provision) Act 2024 BS, Plant Protection Act 2029 BS, Rangeland Nationalization Act 2031 BS, Natural Calamity (Relief) Act 2039 BS, Nepal Petroleum Act 1983, Mines and Minerals Act 1985 and Seeds Act 1988.

The promulgation of the National Conservation Strategy by the GoN in 1988 has had a highly positive conceptual impact. For the first time, in the Constitution of the Kingdom of Nepal

(1990) mentioned that the State will adopt the policies of conservation of cultural heritage, preventing adverse effects on the environment through conservation measures, conservation of rare wildlife, forests and vegetation, increasing agricultural productivity and implementing land reform programmes (Article 26).

Most of the policies of Nepal aimed at conservation of the natural environment between the fourth and seventh periodic plans were focused on control. Even those periodic plans (Eighth, Ninth, Tenth) that were launched after the environment conservation policy was incorporated into the Constitution started adopting the policies of conservation. In the Eighth Plan (2048–2053 BS), programmes such as environment and resource conservation programmes, institutional development, environmental impact assessment, identification and conservation of sensitive areas, conservation of natural and cultural resources, pollution control, and mass awareness-building were incorporated. The Eighth Plan also adopted the policy of implementing suitable programmes for narrowing the gap between the public and forests, increasing people's participation in forest management and reducing people's dependence on forest. In the Ninth Plan (2053–2058 BS), environment and nature conservation received greater priority. Among the 19 sectors that received emphasis in the Ninth Plan, use of ecological variation and biodiversity, development of the agricultural sector, development of agricultural enterprises, electricity generation, tourism development and poverty alleviation were the sectors related to conservation. It also adopted the policy of enhancing people's participation in watershed areas such as Churia. The four pillars of the overall strategy of the PRSP of the Tenth Plan (viz. high, sustainable and broad economic growth, social sector and rural infrastructure development, targeted programme and good governance) did not include the environment. However, the plan covered additional subjects, namely water-induced disaster management, community-based natural resource conservation and use, strategic environmental evaluation, etc.

After the political change in 2007, many environmental policies were promulgated. The Interim Constitution of Nepal (2007) guarantees every person the right to live in a clean environment (Article 16). New dimensions have been added in

the nature conservation sector in the three three-year plans formulated since then: Three-Year Interim Plan (2064–2067 BS), Three-Year Plan (2067–2070 BS) and Thirteenth Plan (2070–2073 BS). The major dimensions among them are integrating environment conservation into physical infrastructure development and economic and social development programmes; documenting biodiversity and indigenous knowledge and skills for conservation, promotion and sustainable use; promoting ecosystem services through scientific, inclusive and participatory management of forest heritage; establishing genetic and seed banks; and encouraging environment-friendly agricultural production. Other dimensions include enhancing access of the poor to forest production to establish forest-based industries; developing infrastructure for increasing the number of tourists visiting for nature watching; cycling back a part of the revenue earned through use of natural resources in the conservation of the same natural resource; enhancing access of indigenous peoples in the conservation and promotion of natural resources such as water, land, forest and minerals; strengthening community-based, inclusive, equitable and poverty reduction-oriented systems in sustainable and balanced conservation, management and utilisation activities; as climate change has emerged as a global concern, according greater importance to environmental conservation and promotion.

2.3.2 Nepal's commitment in nature conservation

National commitment: The Interim Constitution of Nepal (2007) guarantees every Nepali citizen the right to live in a clean environment and to food sovereignty as per the provisions of the law. In the Obligations of the State, the Constitution states, "To use natural means and resources including water resources of the country in the interests of nation", whereas it mentions that it will adopt eight policies: (1) The State shall pursue a policy of according priority to the local communities while mobilising the natural resources and heritage of the country in such a manner as to be useful and beneficial to the interests of the nation; (2) The State shall make such arrangements as may be required to keep the environment clean; (3) The State shall give priority to the protection of the environment and special safeguard of rare wildlife; (4) The State shall make arrangements for the protection of, sustainable uses of, and the equitable distribution of benefits

derived from, the flora and fauna and biological diversity; (5) The State shall conserve and promote national resources; (6) The State shall guarantee citizens' right to food sovereignty; (7) The State shall raise the standards of living of the general public through the development of basic elements such as education, health, transportation, housing and employment; (8) The State shall create conditions for economic progress of the majority of the people who are dependent on agriculture by raising productivity in the agriculture sector through encouragement to the farmers.

The Government implements the policies mentioned in the Constitution through periodic plans. Nepal's commitment is guided by the MDGs for a period up to 2015. Of these goals, the goals of poverty reduction (Goal 1) and environmental sustainability (Goal 7) are directly related to nature conservation.

Apart from this, Nepal is committed towards the goals adopted by the various sectoral strategies. In accordance with these goals, the Thirteenth Plan is in implementation, with the target of reducing the population below the poverty line to 18 per cent. As poverty has an interdependent relationship with nature, formulation and implementation of programmes with the aim of achieving such goals can directly impact nature conservation. Other targets include raising the annual growth rate of agriculture from 1.1 per cent to 4.5 per cent; raising the annual average growth rate of the non-agriculture sector from 4.6 to 6.7 per cent; raising the total length of road transport from 25,133 km to 28,133 km by the end of the Thirteenth Plan; raising electricity generation from 758 MW to 1,426 MW; increasing irrigation coverage from 1,311,000 ha to 1,487,275 ha; and constructing 945 km electric railway lines from east to west through the Chitwan National Park^b are the development targets that will have direct impact on nature conservation. The government has expressed its commitment to increasing the tiger population from 155 in 2010 to double this number in 2022¹⁹. Likewise, the populations of rhinoceros and wild buffalo will be increased by 50 per cent from the current 635 and 259, respectively by 2025²⁰. Similarly, forest cover will be maintained at 40 per cent of the total land mass. The NPC will play the role of a

facilitator in order to achieve all these targets and commitments.

An important mid-term goal articulated by the GoN is to lift Nepal's status from an LDC to a developing country by 2022. For this, the United Nations has determined three indicators, namely per capita average gross national income, Human Assets Index (HAI) and Economic Vulnerability Index (EVI) and their standards. To be elevated to the rank of developing countries, it is mandatory to fulfil at least two of the three indicators. Since production and income play major role in achieving this goal, the achievement of this goal is also directly associated with nature conservation.

The Government is also committed to the Everest Declaration on Climate Change made by the Government at the Everest Base Camp in December, 2009. As all ten commitments expressed in it (Annex 6) are for the entire humanity to move ahead in the preservation of world heritage, bio diversity, sustainable economic, social, cultural development, tourism development, as well as to help preserve mountain ranges, including, Sagarmatha, they are directly related to nature conservation.

International commitment: On one hand, natural resources such as rivers, air, birds, and wildlife do not have any political boundaries and, on the other hand, natural resources such as one-horn rhino, snow leopard, tiger, glaciers, and lakes are found in only one country or region. Hence, in view of the need to evaluate both the national and international interests in and need for natural conservation, Nepal has also articulated its commitment to various international conventions and covenants. Nepal's commitment to nature conservation is manifested by its membership of around 30 treaties, conventions and agreements (Annex 7). Among them, the Convention on Wetlands of International Importance Especially Waterfowl Habitat (Ramsar Convention 1971), Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention 1972), Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973), Convention on Biological Diversity (1992), and International Treaty on Plant Genetic

^b The railway has an alternative and, if it passes through settlements, it can also avoid the park area and serve greater number of people, whereas there is not alternative to the Chitawan National Park. It would be desirable not to affect the alternativeless park when alternatives are available.

Resources for Food and Agriculture (2001) are more related to nature conservation.

With regard to international commitments, Nepal prepared the Fifth National Report for the CBD in 2014. This report contains a plan of action for achieving the Aichi Biodiversity Targets. The National Biodiversity Strategy and Action Plan (2014), which is designed in line with this plan, was approved by the GoN in 2014.

Regional and bilateral commitments: The major SAARC-level agreements/declarations related to nature conservation to which Nepal is a party include the SAARC Charter (1985), SAARC Environment Action Plan (1997), Agreement on establishing the SAARC Food Bank (2007), Dhaka Declaration on SAARC Action Plan on Climate Change (2008), 16th Summit (2010) Thimphu Silver Jubilee Declaration “Towards a Green and Happy South Asia” (2010), Agreement on South Asian Free Trade Area (SAFTA) (2004) (for details, please see Belbase and Khanal, 2014). The country is also a member of the South Asian Wildlife Enforcement Network (SAWEN), formed by the SAARC countries in 2011. This network has expressed its commitment to addressing problems of poaching and trading in wildlife at the SAARC level. Nepal and India have been holding bilateral meetings to solve problems related to wetlands. Such high-level meetings were held in 1997 and 1998. In July 2010, Nepal and India signed a bilateral agreement with a view to strengthen biodiversity conservation, including wildlife such as the tiger and conservation of ecosystems in border areas. In January 2013, another agreement on biodiversity conservation in the border areas was signed. It stressed conservation of the tiger, rhinoceros and elephant. Likewise, Nepal and China have been holding bilateral meetings. During the signing of the agreement on forest and biodiversity conservation between Nepal and China in 2010, China expressed its desire to participate in meetings of SAWEN as an observer. After that agreement was signed for the first time, in January 2012, a meeting was held on forest and biodiversity conservation.

2.4 National Conservation Strategy 1988: Major achievements and lessons learned

The National Conservation Strategy (NCS) was enacted in 1988, and the NCS Implementation Project was carried out from 1990 to 1997. Although the National Council for the Conservation of Natural and Cultural Resources (NCCNCR) envisaged by the NCS has not been formed, the NCS Implementation Review study (2013) revealed that its implementation has yielded many achievements. A summary of the findings of that study is as follows.

a) Major achievements

The mainstreaming of the concept of NCS started in 1990 when the issue of mobilisation of natural resources and heritage was incorporated in the Constitution of the Kingdom of Nepal (1990) and the recent periodic plans became successful in enhancing people’s awareness and orientating themselves towards environment improvements and nature conservation. The NCS had had a conceptual impact on the policies and development documents that were formulated after its enforcement. Separate chapters on the environment and natural resource management were incorporated in the Eighth and Ninth Plans, which were formulated thereafter. Incorporation of environmental education in school education, in the bachelor-level curriculum of the Education Faculty and in the training programmes of the governmental and nongovernmental sectors, and establishment of the Ministry of Population and Environment can be taken as milestones. The NCS (1988) included a series of recommendations, including the introduction of a Churia Conservation Policy, establishment of a Crop Protection Section for regulating application of pesticides, and joint pasture management by the Department of Forest and Livestock Management. In addition to these qualitative achievements, some of the direct and indirect quantitative achievements related to nature conservation that took place following the implementation of the NCS (1988) are presented in Table 1.

Table 1: Major achievements in select indicators of conservation			
Indicator	Unit	Status at the time of formulation of National Conservation Strategy (1988)	Status of 2012/13
Population below the poverty line	Per cent	49	23.8
Forest area	Per cent	42.8	39.6
Protected area	Per cent	7	23.23
Electricity generation	MW	157.4	758
Population having electricity facility	Per cent		67.3
Installation of bio-gas	Number	1620	284,000
Improved cooking stove	Number	160,000	753,000
Contribution of agriculture to Gross Domestic Product	Per cent	61	35.1
Irrigated area	Hectare	338,672	1311,000
Use of hybrid seeds (maize, rice and vegetables)	MT	—	2,390
Distribution of chemical fertilizers	MT	172,056	795,295
Productivity of rice	Mt/ha	2.09	3.31
Productivity of wheat	Mt/ha	1.25	2.41
Milk production	l/cow	350	470
Milk production	l/buffalo	775	867
Road	Km	1,516	25,133
Airport	Number	42	44
Cement factory	Number	3	>15
Population growth rate	Per cent	2.66	1.3
Average life expectancy	Year	50.53	68.8
Literacy	Per cent	28.9	65.9
Household with access to drinking water	Per cent	22	85
Household with clean latrine	Per cent	6	62
Tourist arrival	Number	179, 405	803,092
Radio broadcasting centre	Number	1	>30
Television channel	Number	1	>20

Source : Periodic plans, National Conservation Strategy (1988)

b) Lessons learned

Land-use change management: Land-use policy and plan implementation is of great importance in nature conservation. Therefore, indiscriminately increasing expansion of settlements in agricultural land, forest areas and riverbanks should be regulated and managed.

Addressing livelihood issues: Policies and programmes of land resource conservation and sustainable use should address the livelihood issues of local communities dependent on land.

Mainstreaming nature sensitivity: To integrate nature conservation into development, it is necessary that due attention be paid to policy, law, guidance, plan, programme, organisational

structure, human resources, capacity building and investment in conservation in all sectors
Information flow and capacity building: If the conservation strategy adopted by the country cannot be communicated with the public, expected objectives cannot be achieved^c; lack of adequate knowledge of care and maintenance of cultural heritages leading to insignificant public participation in their conservation results in degradation of these heritages.

Regular monitoring: To ensure nature-sensitivity in development efforts, an agency with authority should be specified for monitoring environmental standards, policy, law and provisions of environmental management plans. In addition, a

^c It seemed that less than 5 per cent of people were aware of the National Conservation Strategy 1988.

system that updates nature conservation-related data for effective monitoring should be given priority.

Legal remedy: Duplication, policy, and legal contradictions in management of some natural resources should be removed and legal arrangements should be made as per some international commitments.^d

2.5 Major Sectoral Achievements in Nature Conservation and Major Issues

This National Strategic Framework has covered forest, biodiversity and environmental services, agriculture, land management, physical infrastructure development and environment, society, culture and education, climate change and energy, water resource and disaster risk management, environmental education, health and law, and policy provisions.

2.5.1 Forest Sector

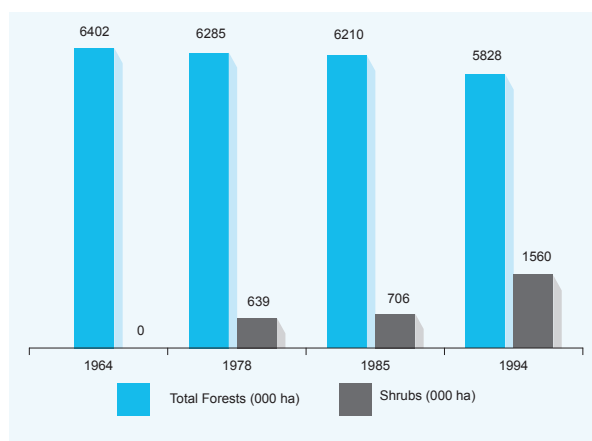
Although forests are an integral part of the agriculture system and principal source for generating non-agricultural employment in Nepal, the forest areas that occupied 45.5 per cent land area in 1964 decreased to 39.6 per cent (29% forests and 10.6% shrubs) in 1994 due to encroachment and conversion to other purposes²². Wetlands cover 5.56 per cent (49% irrigated paddy field and 48% rivers) of the land area. Nine of these wetland areas lie under the Ramsar Area. The wetland areas of the rivers and public ponds that are not covered by the Ramsar Area are losing their natural characteristics and

quality due to encroachment by agricultural, settlement and physical structures; excessive exploitation of sand, pebbles and stones; over-fishing; water pollution due to settlements, industries and agriculture; invasion by invasive species; and siltation. Of the total landmass, 23.23 per cent lie within twenty protected areas²³. Among them, ten national parks, three wildlife reserves, one hunting reserve, six protected areas and nearly 5,602 sq km around the nine national parks, except the Nagarjuna–Shivapuri, lie within buffer zones²⁴. Forty per cent of the forest area has been managed with the involvement of local communities, whereas 10 per cent is in the form of protected areas and the remaining 50 per cent are government forests. Nearly 2.8 million households (53%) are involved in 25,089 community-based forest management groups (community forests, collaborative forests, leasehold forests and protected forests)²⁵. Similarly, another 880,330 households are involved in management of buffer zone and protected forests²⁶ and notable achievements have been made as these groups have made great efforts to internalize the principle of inclusiveness.

Achievements to date: The major achievements due to the Forest Development Master Plan according priority to community-based forest management are: rehabilitation of the degraded landscape in the mid hills; increase in protected areas from 7 per cent to 23 per cent; implementation of the Rastrapati Chure Terai–Madhes Conservation Development Programme for Churia Conservation; making the management system of forest and protected areas participatory; and boost in tourism in protected areas.

Current and emerging issues: The major issues are how to: increase the supply of forest products as supply is less than demand; attract private sector investment by formulating stable policies; reduce the afforestation rate; regulate forest degradation and loss of habitat; control poaching and smuggling of forest products; improve the law enforcement capacity of regulating bodies; curb the tendency of settling displaced people and the landless in forest areas; manage pressure on forests in Nepal following increased demand for herbs products as a result of economic growth in neighbouring countries; and promote good

Figure 1: Changing forest area



^d For example, legal provisions regarding CITES, CBD, ITPGR, etc have not been made.

governance of forest management. Similarly, the question of how to ensure the conservation of biodiversity, sustainable use and equitable distribution of benefits as a right and duty is equally crucial. In addition, the possibility to contribute to mitigating the impacts of climate change on forests as well as the impact of climate change from appropriate forest management has not been properly evaluated. In the past, areas in which a river changed its course were replaced by forest, but now gravels and stones are extracted from such areas. As this has caused decrease in forest area and has provided an impetus for the registration of forest areas as private property, this problem should be addressed.

2.5.2 Biodiversity

Nepal is relatively rich in biodiversity due to great geographical and climatic diversities. Nepal occupies an area of 0.1 per cent in the global map, whereas it is home to 3.2 per cent of the world's flora and 1.1 per cent of the fauna. This includes 5.2 per cent of the world's mammals, 9.5 per cent of the birds, 5.1 per cent of gymnosperms and 8.2 per cent of the bryophytes. The country is also rich in agronomic crops, vegetables, fruit and domestic animals, which include more than 550 cereal species, 220 vegetable species and 45 fruit species. The IUCN Red List includes nine species of flora, 55 species of mammal, 149 species of bird, 15 species of herpetofauna and 21 species of fish. Similarly, 15 flora, 55 mammal, 108 bird, 10 reptile and three insect species are listed in the CITES list. In Nepal, 118 ecosystem types are found²⁷.

Achievements to date: Nepal has achieved notable progress in biodiversity conservation and sustainable use over the past three decades. The major achievements are population recovery among some large animals, including tiger and one-horn rhinoceros; improvements in ex-situ conservation of agricultural biodiversity through gene bank and community seed bank; increase in benefits of the protected zone and biodiversity management programme; increase in awareness of conservation among urban youth; enhancement of knowledge of diversity of flora; and increase in revenue from nature-based tourism. During this period, a number of conservation policies, strategies and laws have been enacted. They include the National Biodiversity Strategy and Action Plans (2014–2020), Biodiversity Policy

(2006), National Biosafety Framework (2006) and Agricultural Biodiversity Policy (2007) (Amended in 2014) are some of the policy and strategy documents that have been enacted by the government.

Current and emerging issues: Important issues that have recently emerged are: prevention of the destruction of habitats such as natural forests, wetlands and rangelands due to uncontrolled construction of physical infrastructure, pollution of reservoirs, attacks by invasive species; mitigation of negative impacts on biodiversity conservation (such as destruction of habitats of endangered species, change of habitat) due to use of improved and hybrid varieties and climate change; resolution of increasing conflicts between the wildlife and human beings alongside conservation; resolution of disputes noticed on the issue of traditional and participatory conservation; control of poaching of wildlife due to high demand for some wildlife body parts and their high prices in the international market; and conservation of crops in remote hilly regions due to subsidized rice. Similarly, there is an issue of how to mitigate the current and possible future effects of the pressure of transportation and other infrastructure development on the habitats of endangered flora and fauna. The proposed railway and postal roads through the Chitwan National Park are recent examples of this issue.

Lack of coordination in formulation, planning and implementation of conservation policies; weak implementation of the environmental assessment provisions in economic development projects; weak monitoring and regulation of application of agricultural pesticides are some of the other important issues. Another issue that has recently come up is how to control the destruction to farming caused by wildlife, as there has been decrease in wildlife food diversity due to monoplanting.

The issues that remain to be addressed and have newly emerged in this sector are: lack of research into the impact of the biosafety and GMO; lack of genetic analysis and gene mapping of endangered flora and fauna; lack of monitoring capacity of the changes at community, population and land arc levels; limited human resources and capacity in forest and protected area management; biodiversity conservation; sustainable use and equitable distribution of benefits; and lack of laws in areas such as protection of Intellectual Property

Rights. As bio-sources are constantly involved in trans-border movements, it will be important to determine how to bring about uniformity in the policies and rules formulated based on the geographical and ecosystem variations existing between the two countries and how to formulate conservation plans based on the landscape concept.

2.5.3 Agriculture

Although agriculture is the backbone of Nepal's economy, more than 70 per cent of the production is subsistence-based²⁸. On one hand, the total size of cultivable land is shrinking as cultivable land is gradually being converted into housing, industry, transportation and other physical infrastructure construction. On the other hand, agriculture is being expanded even in and around urban areas and bazaars and in uncultivable slope land. In sum, it has not been possible to increase agricultural productivity. The Agriculture Perspective Plan stresses commercialisation of agriculture. However, programmes on conservation of agro biodiversity, recharging of underground water, increasing soil fertility, and so on have not received priority. Out of the three million hectares of cultivated land in the country, nearly 290,000 hectares (10%) are degraded²⁹. The size of land under cultivation between 2058 and 2068 BS has decreased by 5 per cent from 2.65 ha to 2.52 ha³⁰. As shown by a study, 16 per cent of the agricultural land in eastern Terai (Sunsari, Morang and Jhapa) has been used for housing and industrial purposes.



Rice farming in Jumla

Achievements to date: Some of the major achievements in the agriculture sector related to conservation are: operation of farmer schools related to integrated pest management and integrated plant nutrient management, and soil management; determination of national standards for organic farming products and their processing; development of various species of crops; improvement of local animal breeds; and plant and animal quarantine programmes.

Current and emerging questions: The important issues that have emerged are: increasing demand for agricultural products due to increased population; increasing demand for processed products due to increased income; supply management of non-toxic products due to increased knowledge of nutrition to match the increasing demand; and need to mechanize agriculture in view of feminisation of agriculture and lack of labour; and increase in agricultural production through commercialisation. Decreasing agricultural land management due to the current housing plans, haphazard urbanisation, settlement expansion and physical infrastructure development have emerged as new issues. Other issues include: addressing the impact of climate change on agriculture; sustainable management of agricultural and pasture land; increasing application of pesticides in soil and plants; minimisation of negative impact of the residues of antibiotics used in animal feeds and impact on human health; ensuring food safety, and strengthening and capacity enhancement of agricultural labour force. Although agriculture commercialisation and productivity increase are crucial from the conservation point of view, the question of how to minimise use of chemical fertilizers and pesticides while increasing agricultural productivity is also important.

2.5.4 Physical Infrastructure Development

Construction of physical infrastructure such as roads, hydropower generation and transmission, irrigation, drinking water, industrial zone building, schools, hospitals, parks, and playgrounds has had an excessive impact on land-use changes. As of last year (2070 BS), a total of 25,599 km of highways and 55,000 km of rural roads has been constructed. In addition, unpaved roads constructed by DDCs/VDCs and the landslides and soil erosion occurring in the rainy season have had notable impact on land-use in wide areas

above and below the road. Some roads are under construction such as the Mid-Hill Highway, postal roads, and the Kathmandu–Terai Expressway. Similarly, the 945 km Mechi–Mahakali Railway, 179 km Simra–Butwal Railway, 44 km Butwal–Bhairawaha–Lumbini Railway, five new airports^e, 20 cement factories, and 45 new hydropower projects are being constructed. Likewise, it has been proposed that large highways and electricity transmission lines passing through forests and protected areas be constructed due to complications related to encroachment and compensation. The electric railway passing through the Chitwan National Park that has been proposed is one such example. As the value of the land under cultivation around both sides of the road increases with the road construction and are sold for plotting, agricultural land is increasingly being diverted to non-agricultural purposes. Feasibility studies have been started being carried out for other proposed projects such as Bheri–Babai, Sunkoshi–Marin, Kaligandaki–Tinau, Kaligandaki–Nawalparasi, Trishuli–Chitwan and Madi (Dang), Kaligandaki–Tinau river diversion, and studies of their geological conditions have been accomplished. Although such large projects are indispensable for development, they should be properly monitored as they could generate massive impact on nature conservation.

Achievements to date: Some of the major achievements related to conservation are: formulation of environmental standards to be adopted while constructing physical infrastructure; implementation of Environment Friendly Local

Governance Framework (2013); development of a bio-engineering manual; according importance to nature conservation in road corridors; formulation of a policy requiring planting of 25 trees in place of a tree that has been cut while constructing a road; and formulation of Environmental Guidelines for Physical Infrastructure Construction.

Current and emerging issues: The following have emerged as important issues for nature conservation: how to mitigate the negative impact of the development of transportation facilities such as roadways, railways, hospitals and housing; expansion of electricity and telephone lines; and provision of drinking water and drainage. Furthermore, how to integrate construction programmes in the road construction sector, feasibility studies, environmental evaluation and construction work in single packages; how to curb the tendency to construct roads along river banks; how to reduce use of bulldozers in the construction of unpaved roads in rural areas; how to plan postal roads and proposed railways so that they circumvent parks and protected areas; how to enforce the provision requiring release of 10 per cent of water below the dam level during dam construction; how to ensure construction of fish ladder^f for the movement of fish. Pollution in urban areas caused by the development of physical infrastructure has also emerged as a new question.

2.5.5 Water Resources

The National Water Strategy has accorded priority to water resources, asserting that the



Hydro power station at Modikhola, Parbat district

^e As large airports destroy massive forest areas, trees should be planted in other areas and new forests developed to compensate for this.

^f The principal objective of fish ladder is to ensure unhindered movement of aquatics. So, fish ladders are imperative for aquatics that travel long distances and move according to the season.

potential for economic development of the country lies in water resources. Although there has not been any change in the amount of water flowing from the snow-capped mountains, the flow, as well as quality of water, from the rivers and lakes in the Mid Hills has been reduced, which has in turn started to decrease the level of water in streams and rivers. As changes in rainfall and land-use changes in the watershed areas have posed problems in the water-related processes, water scarcity is occurring in water sources. Due to intensive land use, uncontrolled deforestation, haphazard urbanization in rural areas, unsystematic infrastructure construction, climate change, open grazing and lack of water absorbing capacity, water is decreasing in both surface and ground water sources. Similarly, water has become increasingly scarce because of a rapidly growing population, excessive exploitation of the Chure, which is the main source of groundwater in the Terai, unsystematic and rapid use of underground water source in urban and large urban centres.

The Water Resources Strategy (2002) and the National Water Plan (2005) state that the concept of integrated water resource management and basin management will be stressed in development. Although the Water Resources Strategy calls for developing and managing water, land and other resources in an integrated and coordinated manner for sustainable economic development, integrated watershed management is yet to be developed. In addition, the habitats of flora and fauna in and round rivers, rivulets and natural watersheds have not been protected.

In addition, the number of glaciers in the Himalayan region is decreasing, though average glacier area has increased. According to a study conducted by the International Centre for Integrated Mountain Development (ICIMOD), 14 glaciers in Nepal and 10 in China have burst in the last 450 years, causing human and physical casualties. For instance, Nepal's Dig Tsho Glacier burst on 4 August 1985, causing massive loss. In studies conducted in 2001, a total of 2323 glaciers covering approximately 76 sq km decreased to 1,466 glaciers covering approximately 65 sq km. However, the average area of glaciers has increased from 0.033 sq km to 0.044 sq km, which has resulted in an increased risk of glacial lake burst³³.

Achievements to date: Some of the major achievements related to water resource conservation include: expanding irrigation facilities to 1,311,000 ha; increasing national sanitation coverage from 30 per cent to 62 per cent between 2000 and 2011; increasing basic water supply coverage to approximately 85 per cent of the population; construction of small, medium and large irrigation structures using rainwater harvesting; and applying public-private partnership models for hydroelectricity development.

Current and emerging issues: Emergent issues include: how to enhance access of the grassroots communities to the services of the agencies concerned with water resources development, especially the Department of Irrigation and Department of Water-Induced Disaster Prevention; how to enhance the effectiveness of the coordination between the agencies concerned with water resources; and how to address the problems of soil conservation and watershed seen in the implementation of hydropower development in the national conservation areas. The issues of preventing drainage of sewage into rivers, preventing the use of tap water for house-roof-top gardening, mitigating the possible occurrence of landslides due to rainwater storage in ponds in hilly regions, recharging ground water, ensuring pond for wildlife and birds in forest areas; and mitigation of adverse impacts on water resources due to construction of infrastructure have emerged as issues that need to be addressed. From the perspective of usage, rivers have not yet been classified based on use for hydropower generation, tourism promotion, conservation of biodiversity of aquatics and multipurpose. Although the Irrigation Policy mentions about the formulation of an irrigation act, no irrigation act has been formulated yet. The challenge of how to achieve integrated water resource management, considering the multi-faceted usefulness of water resources in line with the concept of integrated water management, including social, economic and environmental aspects, should be addressed.

Issues pertaining to trans-boundary river networks and watershed areas have also arisen. Studies must be conducted to analyse the effects of hazardous glacial lakes, whereas the issue of the various types of physical infrastructure constructed on the Nepal-India border obstructing the flow of water in the rainy season and affecting human settlements, ecosystems and agricultural

production by inundating river bank areas and low-lying areas also needs to be addressed.

2.5.6 Energy

Lack of energy is a major problem for the development of Nepal. Hydropower is a chief factor that affects nature conservation. Ninety per cent of the electricity in the country is derived from hydropower^{34,35}. Out of the country's total electricity generation potential (83,000 mW), 45,610 mW is feasible from economic perspective and as of 2069/70 BS, 705 mW of electricity had been linked to the national grid. This includes 473 mW of governmental generation and 232 mW of private sector generation. Additional 668 mW from the hydropower projects to be accomplished in the Thirteenth Plan period will be linked to the national grid, whereas other hydro power projects generating additional 584 mW will be launched in this period. Careful monitoring of the potential adverse impacts of physical construction works (e.g. link roads, dams and tunnels), river diversion and pond construction on nature conservation has become imperative. In Nepal, 85 per cent of energy is still derived from traditional organic sources³⁶, and of the remaining 15 per cent, nine per cent from petroleum products, three per cent from coal, two per cent from electricity and one per cent from renewable energy³⁷. Increasing use of fossil fuels is also leading to negative impact on greenhouse gas emissions and causing air pollution. The general masses also lack knowledge of the impact of the use of fossil fuel on the environment. Whereas cooking gas consumption⁹ was 25,772 MT³⁸ in 2058/59, it increased to 133,271 MT³⁹ in 2070—an increase of 5 per cent a year. As of 2069, the Alternative Energy Promotion Programme has promoted 621 thousand improved stoves and 180 thousand biogas plants. Improved stoves are 40 per cent more economical than normal stoves in firewood consumption. This has immensely contributed to forest conservation. Furthermore, improved stoves protect housewives' health from the smoke emitted by traditional stoves.

Achievements to date: Some of the achievements related to conservation are: generation of 758 mW of hydropower and 26.27 mW of micro hydropower; installation of 284 thousand household, institutional and community biogas plants; installation of 2,272 solar dryers/cookers; installation of 9,819 improved

Box 1: Pollution caused by tourism industry

While celebrating diamond jubilee anniversary on the occasion of the 60th anniversary of the conquest of Mt Everest, a special sanitation campaign was launched and 22 tonnes of garbage was collected.
MOF, 2014 p. 203

water mills, 753 thousand improved stoves; and promotion of 1,000 tonnes of bio briquettes a year.

Current and emerging issues: The issues to be addressed that have emerged are: how to increase the coverage of renewable energy in remote areas, given the high cost of material transportation and need to enhance consumption effectiveness; make provisions for checking the quality of stoves locally built of tin sheets, providing them recognition and offering subsidies as the demand for improved stoves has increased; weak implementation of the Water Resources Act; lack of attention to development of bio energy technology that does not emit carbon dioxide; lack of fish ladders constructed at hydropower dam sites; limited availability of credit for rural energy; lack of appraisal of indirect benefits of electricity use; non-compliance with the legal provision requiring release of 10 per cent of water from the dams constructed for hydro power generation; lack of monitoring indicators on renewable energy with central and regional agencies. Apart from these, there is the issue of appraising the environmental impact and negative impact of hydropower projects on biodiversity and flora and fauna.

2.5.7 Tourism

The total number of tourists has been increasing over the past ten years. The average duration of stay per tourist has been approximately 12 days for the past ten years. Currently, approximately 800,000 tourists visit Nepal each year. Of them, more than 50 per cent visit for first-hand observation of natural and cultural heritage. Although an analysis of the tourist arrival data for the past ten years does not show a definite trend, tourists visiting on holidays, leisure, travel/visit, trekking, mountaineering and religious purposes make up more than two-thirds of the total tourists⁴⁰. Domestic tourism has also

⁹ One kg of gas is equivalent to 21.2 kg of firewood (ie almost one load) (GIZ, 2014).

witnessed growth. According to the data for 2070 BS, among the tourists visiting Lumbini, 67.5 per cent were domestic, 17.7 per cent were Indian and 14.8 per cent were from third countries. The number of trekking tourists increased by 25 per cent, and this figure is expected to further grow in the future; as this could directly impact nature conservation, it is necessary to adopt an appropriate policy to address potential effects.

Achievements to date: Some of the achievements related to conservation are: The Tourism Act (2035 BS), introduction of legal provisions for keeping the Himalayan region pollution-free; the Ministry of Forests and Soil Conservation, Ministry of Agricultural Development, Ministry of Industry and Ministry of Energy's integration of tourism into their respective sectoral development strategies; enforcement of operational procedures on tourist homestays; incorporation of tourism management conservation in the post-graduate curriculum; and introduction of a provision allocating 30 per cent of the revenue from trekking, tourists and from entry fees to DDCs, etc. Furthermore, framing and enforcement of a code of conduct for trekking and rafting by the private sector can be taken as a positive step. This has, on the one hand, presented an example of using tourism and nature conservation in an integrated manner and, on the other, shown the possibility of using tourism as a tool for nature conservation.

Current and emerging issues: The problems that have been encountered include: exploration of alternative trekking routes before upgrading the tourism trekking routes to roads; decrease in local products due to increasing tourist demand; management of increasing garbage; negative impact on normal behaviour of wildlife; increasing use of forest resources; and impact of external culture on infrastructure development. Concomitant problems have been increasing with the number of tourists, and there is a great possibility of aggravating the risk to natural resources. The emerging issues that need to be addressed include: lack of knowledge at the district and community levels of the importance of nature conservation for tourism development; lack of both human resources and investments at the local level; inability to curtail the impact of labour availability on agriculture through tourism development in coordination with agriculture; inappropriateness of the natural/cultural resource conservation

programmes with the customs, culture and livelihood bases of women, Dalits and indigenous peoples; failure to conserve the houses built in traditional styles in villages; lack of conservation of archaeological heritage through income earned by using traditional houses as guest houses; and non-implementation of the Tourism Master Plan despite its formulation. The Tourism Act (2035 BS) is only focused on prevention of pollution in the Himalayan region through mountaineering. A primary issue pertaining to tourism legislation is the need to strengthen the Tourism Act, which has become obsolete, so that it can prevent and control environmental problems and pollution that have emerged and will be problematic in the future through the establishment, development and operation of tourism enterprises, as well as providing a legal basis to the policy issues raised by the Tourism Policy (2009 BS) and the Tourism Vision (2020 BS).

2.5.8 Land Management

Of Nepal's total land area, 27 per cent is covered by cultivable land, 39.6 per cent by forest, 12 per cent by grazing land, 17.2 per cent by snow and rocks and 2.6 per cent by reservoirs⁴¹. Of the total 26.5 million hectares of cultivable land, 1.7 million hectares can be irrigated, whereas only 1.1 million hectares are currently under irrigation.⁴² Lack of irrigation is the main problem in agricultural production and productivity in the country. On the other hand, access to land and credit is quite low for landless farmers and free Kamaiya; as a result those dependent on the land are semi-employed. Access of such sections of society to the benefits of conservation of natural resources is yet to be ensured. These are the groups that should be the foci of research and grants when there is a predominance of small and marginal farmers.⁴³ Production and conservation programmes should also give equal priority to this.

Achievements to date: The main achievements of land management include: promulgation of the Land-Use Policy; preparation of land-use map; systematic record keeping of all types of land in the country; availability of data pertaining to and maps of protected areas and forests; introduction of provision for providing a rebate on the registration fee while passing deeds for purchasing land, at the rate of 15 to 40 per cent to women, Dalits, Janajatis, less developed classes and 100 per cent to the families of martyrs in order to enhance

their access; promulgation of the National Land-Use Policy (2069 BS); preparation of a 13-point action plan by two high-level commissions; initiation of overall land-used law drafting process in accordance with the land-use policy; and formulation of an integrated labour law draft.

Current and emerging issues: Management of human settlements and urbanization, special zoning for industries and business, minimisation of the use rate of agricultural land for non-agricultural uses; regulation of the tendency of keeping land fallow; and controlling the tendency of encroaching government and public land in the name of resettlers have emerged as important issues. In addition, the issue of how to introduce mechanisation of family land that is small, upland and terraced has emerged. Other issues include provision of piecemeal contracts in mines (not taking them as industry); not considering the land-use changes in the Churia Region; failing to establish the types of land area in which industrial zone can be established; lack of systemisation in settlement planning; loss of soil fertility due to construction of rural roads; lack of integration in land-use planning; and increased tendency to keep cultivable land fallow due to foreign employment. Similarly, other emergent issues include a lack of updated data, lack of detailed guidelines on land use, lack of land management guidelines, and a lack of local-level planning and monitoring in land use and management.

2.5.9 Health

In Nepal, 117 hospitals, 208 primary health centres, 675 health centres, 3,127 sub-health posts and 13,180 primary health facilities provide health services. Through them, 48,489 Female Community Health Volunteers (FCHVs) provide services. As of the Three-Year Plan period, 85.8 per cent of the population has access to basic drinking water services and 11.06 per cent has access to safe drinking water. Similarly, 62 per cent of the population has been covered by primary sanitation services. While the government has adopted the goal of providing health service to all citizens within a walking distance of 30 minutes, such a service has reached 62 per cent.

In the Terai, such populations make up 76 per cent. Ineffective management, supervision and monitoring of human and physical resources, medicines and equipment necessary for providing

quality services in health institutions and irregular supply of essential medicines are major problems. According to a study conducted by the World Health Organisation in 2007, 25 per cent of diseases are caused by environmental degradation⁴⁴. From this perspective, drinking water and sanitation, which directly impact human health, have not been given adequate attention. By 2015, the target is to extend drinking water service to 73 per cent of the population and sanitation services to 53 per cent and to extend basic drinking water and sanitation services to 100 per cent of the population by 2017. If the environment and ecosystem services were properly conserved, 10 types of disease, including diarrhoea, dysentery, pneumonia and gastritis, could be minimised⁴⁵.

Achievements to date: The notable achievements include: the Government of Nepal's emphasis on the implementation of health-related policies, plans and programmes; notable progress in health-related indicators; reduction in the mortality of children under five years of age; reduction in maternal mortality; and an increase in the average life expectancy to 68.8 years. Another notable progress is promulgation of the Bird Flu Control Ordinance (2006) to prevent the outbreak of epidemics like bird flu.

Current and emerging issues: The health issues related to the environment include: unhealthy food; presence of agricultural pesticide residues in food, especially residues of antibiotics and hormones in chicken and milk; lack of safe drinking water; weak sanitation; and lack of production and consumption of nutritious cereals. Similarly, due to unsystematic urbanisation, expansion of settlements without access to minimal services, and scattered locations of rural and remote settlements, the issue of how to make drinking water and other health-related facilities available to meet demand has emerged. The incidence of vector-borne epidemics such as malaria, Japanese encephalitis, dengue, and kalajar has increased due to climate change. Thus, the issues that need to be addressed include: how to make payment to the ones maintaining cleanliness of water; need to control the outbreak of various diseases caused by water contamination; and the need for the provision for toilets in all houses and public places, including trekking routes. If the current urbanisation rate continues to grow at an uncontrolled pace, it may aggravate the quality of

ecosystem goods and services such as air, water, food, as well as increasing temperature in cities, thus rendering the management of epidemics caused by this more difficult.

2.5.10 Climate change

In terms of climate change, Nepal is the fourteenth vulnerable country in the world. Due to climate change, the average temperature has increased and the time and intensity of rainfall have changed. Because of an increase in temperature by 0.06°C annually, winters will become warmer and the rainy season will experience heavier rainfall⁴⁶. The majority of people depend on climate change-sensitive sectors, such as agriculture, forests, biodiversity and eco-tourism, for their livelihood. The impact of climate change has been perceived in terms of the degree of temperature, rainfall, and variations in the timing of their occurrence. Higher overall temperatures have increased the risk of glacial bursts in the Himalayan region due to melting of ice. Alterations in the rainy season, too, have led to prolonged droughts and occasional heavy rainfall. The temperature increase has even affected the number and behaviour of flora and fauna and agricultural system. For example, it has become possible to practise maize farming in high hilly regions due to a warmer climate. For adapting to such changes, National Adaption Plan of Action and Local Adaptation Plan of Action are being implemented in a few districts. Minimum Carbon Economic Development Strategy and REDD+ Strategy are being formulated for reducing greenhouse gas emissions, which is the main cause of climate change.

Achievements to date: The notable achievements include: designation of the Ministry of Science, Technology and Environment as the agency responsible for overseeing climate change; formation of a high-level climate change council in the chairpersonship of the Prime Minister; formulation of the Climate Change Policy (2011); implementation of the National Adaptation Plan of Actions; implementation of the Local Adaption Plan of Actions; formulation of the Climate Resilience Planning Framework (2011); development and implementation of Strategic Programme on Climate Resilience; development and implementation of the process to be adopted under the clean development mechanism; appraisal of the economic aspects of the climate change on agriculture, energy and natural calamities; and

launch of the ecological system-based adaptation programme on a pilot basis.

Current and emerging issues: The major issues include: how to enhance knowledge of the impact of climate change on ecosystems and species; how to mitigate the negative impacts of climate change; and how to promote nature-based adaptation methods. The impact evaluation of the nature-based adaptation method on the agriculture-based economy that has the compulsion to produce more is yet to be done. Hence, it is important to carry out studies and evaluations of the possible impact of climate change in various sectors. Additional issues include how to strengthen the process for translating the policy into implementation; mitigation of dependence on foreign technology for climate change adaptation due to inability to develop domestic technology along with climate change; strategic enhancement; evaluation of the contributions of local genetic resources in climate change adaptation; and need to strengthen monitoring mechanism and system.

2.5.11 Urbanisation

Although Nepal is the least urbanised country in South Asia, it holds the distinction as a country most rapidly moving towards urbanisation. According to a World Bank study, since 1970, urban population has been growing at a rate of 6 per cent annually⁴⁸. Urban areas have a greater share in GDP (62 per cent). Compared to the overall poverty rate of 25.4 per cent, poverty is lower in urban areas (15 per cent). Whereas the overall population growth rate is 1.35 per cent, the population growth rate is quite high in urban areas (3.4 per cent). As the rural population seeks income-oriented employment opportunities in urban areas, this growth rate is expected to continue.

Achievements to date: The notable achievements related to conservation in the urbanisation sector concerned include: establishment of the Ministry of Urban Development; enforcement of the Building Code (2014); implementation of the Clean City Programme in 13 municipalities; implementation of infrastructure development and environment improvement work in eight cities; formulation of periodic plans in 20 municipalities and physical development plans in 30 municipalities; implementation of model infrastructure development programmes in one VDC each in 20 districts; and formulation of sewage and road

network plan in 21 VDCs that are to be declared municipalities.

Current and emerging issues: The major issues that need to be addressed include: how to control the trend of farming on marginal land; how to regulate urbanisation on main agricultural and irrigated land; how to regulate settlement in areas around irrigation canals; how to control water, air, sound and land pollution caused by uncontrolled road construction; how to enforce urban environment guidelines; how to update environmental data. Furthermore, there are issues of how to maintain additional natural and open areas to protect the natural environment in cities; how to protect the existing natural and open areas; how to make provision for park and other natural spaces and how to maintain the existing ones; how to prevent encroachment of public land for conversion into settlements; how to remove the settlement areas that have arisen in areas sensitive from the environmental point of view.

2.5.12 Industrialisation

In the first eight months of the FY 2013/14, a total of 45,941 industries were registered⁴⁹. Among the registered industries, 54 per cent including: agriculture (5 per cent), construction (1 per cent), energy (3 per cent), production-oriented (44 per cent) and mines (1 per cent). Similarly, tourism has a share of 18 per cent and services 28 per cent⁵⁰. Whereas 475 industries obtained permission for establishment in the FY 2012/13⁵¹, the energy and mine sectors recorded only negligible growth, marginal reduction in service and production-oriented industries, and no growth in all others. With the objective of encouraging establishment of various categories of natural and mine-based industries, particularly cement industries have been encouraged under the Industrial Infrastructure Development Programme, which

Box 2:

In Rautahat, the toxic waste discharged by distillery and sugar factories had negatively affected rice farming and the health of aquatic animals and human beings immensely.

Peasants for Food Sovereignty, 22 Oct 2014/lvcsouthasia.blogspot.com



Box 3: Air Pollution in Kathmandu

A measurement of the air quality in the major cities in 178 countries shows that Nepal ranks 177th, which is only one level above Bangladesh. The number of vehicles in Kathmandu has increased by three folds since 2000. Vehicles are the major cause of air pollution.

Environmental Performance Index, Yale, 2014

has been conducted in the country since the FY 2008/09. Access roads are being constructed and electricity transmission lines are being laid for 13 cement industries that have been established and operating in various parts of the country so that the country becomes self-reliant in cement by using the mineral resources available within the country. As this is likely to increase the use of agricultural and forest areas for other purposes, as well as causing negative impacts on biodiversity and nature conservation, it is necessary to pay proper attention to this aspect as well. For ensuring sustainable development, the development of industrial and commercial sectors should be based on science, technology and exploration. Furthermore, the promotion of the technology and knowledge brought back by those returning from foreign employment should be effectively utilised.

Achievements to date: The main achievements related to conservation in the industrialization sector include: institutional strengthening of the Nepal Business Forum; infrastructure construction, especially of the economic zone in Bhairahawa, which has reached the final phase; enforcement

of the Industrial Policy (2010); initiation of formulation of the New Industrial Business Act and Regulations; initiation of the formulation of the Intellectual Property Rights Policy; implementation of the Micro-Enterprise Development Programme for Poverty Alleviation.

Current and emerging issues: The issues that have emerged include: how to maintain agricultural production and productivity, along with establishment and expansion of industries and preventing negative impacts on the forest area; how to prevent negative impacts of the dust and smoke emitted by industries on human health; how to impose a ban on discharging of waste and slurry into rivers, lakes and ponds; how to enforce the provision of the Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA), especially in industries that were established even before the enforcement of the legislation. Other issues include: the inability to promote green industries; inability to frame industrial business acts and regulations; absence of an intellectual property rights policy; increase in carbon emissions while using fossil fuels; negative impacts on residential areas caused by industrial areas due to lack of coordination in the construction of industrial areas and residential areas; devaluation of long-term effects on human health; non-implementation of compliance of the environmental standards.

2.5.13 Environment Conservation

Internal factors such as increasing urbanisation, the haphazard expansion of settlements, deforestation, loss of biodiversity, and an uncontrolled application of pesticides have caused negative impacts on the environment. External air pollution sources consist of smoke emitted by vehicles, brick kilns, and cement factories. The main domestic pollution source is the smoke emitted by burning firewood. The main problems include: air, water and sound pollution in urban areas; river cutting and floods in Terai districts; landslides and heavy snowfall in hill districts; avalanches and glacial outbursts and their impact in Himalayan districts; increasing application of pesticides; and loss of biodiversity. Construction of roads; increased incomes (especially remittance); increase in the number of vehicles due to soft loans provided by financial institutions; increase in domestic and international flights; and increase in the number of industries based on firewood, coal

and diesel energy have been contributing to air pollution. Discharges of industrial slurry, human sewerage, hospital waste in rivers and flowing of pesticide residue used in agriculture in water have caused a high level of pollution in reservoirs. Due to such forms of pollution, almost all rivers in Kathmandu are in peril.

Achievements to date: The main achievements include: determination of standards for air quality, sound and water; implementation of environment awareness enhancement and promotion programme; accomplishment of safe management of long-term pesticides; implementation of programmes to translate the treaties and conventions on environment aimed at environment conservation and sustainable development ratified by Nepal; implementation of the National Adaptation Plan of Actions; and the beginning of earned income from carbon trade under the Kyoto Protocol in Nepal through the development of clean energy.

Current and emerging issues: The issues that have emerged as new challenges include: maintaining environmental adaptation; minimising emissions from industrial and other physical infrastructure development activities; preventing deforestation resulting from poverty and other causes; implementing results-oriented programmes by enhancing access to climate finance; integrating climate finance in the national budgeting system; enhancing general awareness about environment conservation; internalising programmes on climate change at the grassroots level; internalising pollution prevention and control; and ensuring the right to live in a clean environment granted by the Constitution. Furthermore, the issues that have arisen and need to be addressed include: ineffective enforcement of environmental evaluation in local development programmes; in respect of programmes directly disbursed by the centre to the VDC, absence of provision requiring payment by the centre only after approval by the VDC; lack of implementation and monitoring of the measures for minimising the negative impact shown by environmental evaluation; lack of a monitoring mechanism and system; lack of a system wherein the public is made aware of the results of environmental evaluations.

2.5.14 Environmental Education

At present, environmental education has been

incorporated from the primary to the secondary level. For young children, topics have ranged from introduction of flora and fauna to the need for conservation; in addition, the topics of health, population and environment have been made compulsory subjects. Environmental study is an optional subject in higher education. Similarly, non-formal education covers training programmes conducted by governmental and non-governmental organisations. These include training conducted by the National Trust for Nature Conservation, Environmental Camps for Conservation Awareness (ECCA), IUCN, WWF–Nepal, Ministry of Forests and Soil Conservation, Ministry of Agricultural Development and Ministry of Federal Affairs and Local Development. Although two decades have passed since environmental education was incorporated in school education, no notable revisions have been made in the topics included in environmental education. Current and emerging issues such as climate change, excessive application of chemical fertilizers in farming, misuse of pesticides in farming, excessive use of hormones and antibiotics in animal husbandry should be included as well.

Achievements to date: Some of the notable achievements include: incorporation of environmental education at the school level; inclusion of a few subjects and degree-oriented courses in universities and affiliated colleges; production of curriculum, reference material, and awareness-oriented materials on environment education; inclusion of environmental education by the training and projects of governmental and non-governmental agencies; and increased mass awareness of the necessity of nature conservation.

Current and emerging issues: Most of the feasibility study reports have not paid adequate attention to the issue of conservation of cultural heritage. The main issues that have emerged include: how to identify cultural heritage and organise them; how to enhance knowledge of conservation of cultural heritage; and how to enhance general awareness. The further issues concern: availability of policies, rules and documents on environmental conservation in the VDCs; information flow of environmental standards and conservation programmes; enhancement of practical knowledge of environmental services among teachers; applying learning into practice;

environmental education design linked with local customs and culture; provision of applying environmental education and awareness programmes from school level; provision of assessing the impact on nature by joint monitoring system; and provision of carrying out public hearings at public venues only after providing prior information.

2.5.15 Nature Conservation and Poverty Alleviation

As poverty is more pervasive in rural areas and because the mainstay of the rural economy is natural resources, natural resource management and access of the poor people to such resources are important for the development of rural socio-economic sector; specifically, agricultural land, forests, rivers and streams are the natural resources that are within the access of the rural poor. While 23.82 per cent of the population was below the poverty line in the FY 2009/2010, rural poverty was 27.4 per cent. The State has set the target of reducing rural poverty to 10 per cent within the next 20 years. These data indicate that natural resource conservation should be linked to poverty alleviation. Inclusive and broad-based economic growth, improvements in food and nutrition security, and poverty alleviation have received priority in almost all policies, strategies, plans and programmes. Nevertheless, the implementation aspect of such issues has been rather weak. While implementing nature conservation and sustainable use programmes, various controversial issues have been raised, including legal contradictions. Priority areas following the MDG period (2015) include achieving zero population within poor and marginalised groups, nature conservation, and sustainable development for life protection.

Achievements to date: It is mentioned in the Interim Constitution and all other important laws and policies that the access of the poor to natural resources should be enhanced and the natural resources should be used in a sustainable manner and their dividends equitably distributed. This is a major achievement. The community forestry programme, leasehold forestry programme, collaborative forestry programme, and community forestry implemented in buffer zones such as the Kanchanjunga Conservation Area are some of the successful programmes that have been launched for socio-economic development in rural areas. Another notable achievement is the Community

Seed Programme, implemented for biodiversity conservation and easy availability of seeds in the agriculture sector.

Current and emerging issues: Promotion of rural livelihoods; required balance between rural development and nature conservation; and continuity and promotion of interrelationships between natural resources such as land, water and forest for agricultural development are crucial issues of rural socio-economic projects. Similarly, how to derive optimal benefits for the poor from the opportunities of nature conservation programmes; how to minimise the negative impacts of the conservation programmes; how to reduce the damage caused by wildlife; and how to minimise the loss of indigenous knowledge about conservation due to scientific conservation methods are important considerations.

2.5.16 Nature and Culture

In Nepal, the history of cultural heritage is quite old. Even in the traditional Gurukul schools, education was imparted about the importance of natural and cultural heritage and the need for their conservation. In these schools, the pupils study about worshipping peepal trees (*Ficus religiosa*) and tulasi plants (*Ocimum sanctum*) as gods; offering special flowers on occasions of special worship; need for specific flora on special occasions; and placating the vehicles of gods by protecting them to please specific gods. It is clear that the flora and fauna for such worships and festivals that were taught in the Gurukul education was for the purpose of maintaining balance in nature. The following hymn, which is read in the Swastiwachan Abhishekh (anointment with sacred water during a hymn chanted at the beginning of a religious ceremony), signifies that human development and attainment of peace are only possible through their balanced development:

Om, dyu shanti anriksha shanti, prithvi shanti rap shanti roshdhaya shanti. Vanaspataya shanti viswadeva shanti brahma shanti sarvagnu shanti shantirev shanti sama shantiredhi (May I also be imparted the peace that is there in the world of the gods, space, earth, water, medicines, vegetation, God of the World, God of Creation and all and within peace itself). Hence, the hymn declares that if you want peace within yourself, you should also wish for peace within all else, which also means conservation.

In eastern Nepal, Limbus keep Chwanche pigs and Sherpas keep Jhopkhos for culturally significant reasons. Bel bibah (traditional marriage of girls observed with the fruit of *Aegle marmelos*) in the Newar community and Menlhpuja (worship of god of herbs) in the Lama community are further examples of natural associations in ethnic culture. The Ubhauri-Udhauri, celebrated by Kirats with change of season, is also associated with transhumance and agricultural systems. Some of the customs practised by ethnic groups in Nepal, such as the worship conducted by the Tamang community to the shibda (land) so that floods and landslides do not occur (Singila Hill in Dhading, Fikuri Hills in Nuwakot, Kalinchok and Sailung Hills in Dolakha and Ramechhap, Temal Hills in Kavrepalanchok, Bhamrup Hills (Mahabharat Series) in Makawanpur, Phulchowki and Nagarjun Hills in the Kathmandu Valley; river worship practised by Majhi, Bote, Kumal, Danuwar, Raji and Darai communities; and the Chepangs' tradition of presenting chiuri (*Sterculia coxinia*) trees to their daughters as dowry are also associated with nature conservation. Study, research, exploration, survey, excavation and conservation, maintenance and promotion of some of our heritage have commenced at some cultural sites, whereas others are lying in a state of neglect. For example, repair of old houses in Kathmandu, Bhaktapur and Lalitpur is to be carried out without tampering with their traditional facade. For this, Telia bricks are provided free of cost and wood is also provided on subsidy. Communities and VDCs are declaring open defecation-free areas to reform harmful, traditional culture.

Achievements to date: The inclusion of eight of Nepal's cultural and two natural sites in the World Heritage List; initiating the process to include 15 other sites in the World Heritage List; implementation of the National Cultural Policy (2010); preparation of a master plan for the development of Narayanhiti Palace Museum area; inclusion of 10 districts comprised of different ethnic groups, communities and sections in the country on the Intangible Cultural Heritage list; and establishment of different museums are the major achievements to date in the cultural sector.

Current and emerging issues: To make a project compatible with local needs, effective and sustainable, analysis of culture in project cycle management is an important task; however, in

most of feasibility study reports, issues of cultural heritage conservation do not seem to be covered adequately. Thus, major issues in the sector include: how to identify and manage cultural heritage; how to enhance knowledge regarding the promotion of cultural heritage; and how to raise awareness. Other issues are: how to sustainably conserve heritage sites included in the World Heritage List; how to repair and manage stone spouts; how to control encroachment at archaeological sites; how to maintain the stability of royalty collection organisations to be formed in different sectors; how to enhance coordination between working agencies; how to inspire organisations to be involved in participatory conservation activities, and how to fulfil country responsibilities under the Convention for the Safeguarding of Intangible Cultural Heritage (2003) to which Nepal is a State party.

2.5.17 Society and Indigenous Peoples

The National Foundation for Development of Indigenous Nationalities Act (2002) has enlisted 59 cultural groups of Nepal as indigenous peoples. However, the Ministry of Federal Affairs and Local Development is re-assessing those that are listed. According to the 2011 census, 35.81 per cent of the total population of the country is considered indigenous people. The 2011 census also revealed that indigenous peoples speak 78 of the total 123 languages spoken in Nepal.

There is also diversity and unique qualities between these people from the perspective of geographical location of settlements, ecological zones in which they live and dependence on natural resources. Therefore, knowledge of forests, wildlife, flora, herbs, agriculture and livestock and conservation of methods and technology of these resources are also integral parts of nature conservation⁵⁵. According to indigenous peoples, the natural resources they have been using for livelihoods will not go extinct if these resources are used only for local livelihoods. For example, Chepangs, an ethnic group in Juwang VDC of Dhading district, collect only 75 per cent of *gitthas* (edible yam), leaving the remaining 25 per cent for regeneration. However, the availability of *gitthas* has begun to decrease due to its commercial collection and lack of appropriate growing areas due to the initiation of stone extraction in the area.

Society and nature are dependent on each

other. Therefore, the results of environmental conservation cannot be perceived in isolation from the continuity of social life and progress. The conservation of biodiversity is not possible without the conservation of cultural diversity. The sustainable availability of food and medicinal herbs seems to be based on the interrelations between cultural diversity and biodiversity. Languages are indicators of cultural diversity, and knowledge of understanding, using and conserving the nature is inherent in them; thus, if languages are instinctive, the knowledge and practice of safeguarding nature also becomes instinct.

Achievements to date: Implementation of targeted programmes; provision of allocating by local bodies a minimum of 15 per cent of budget (except for capital budget with condition) to projects from which the target group derives direct benefits; implementation of special programmes on the conservation, promotion and development of the traditional skills, languages and culture of the target community; provisions made to enhance the access of indigenous peoples to natural resources like water, land, forests and mines; and adoption of a policy of giving priority to inclusive communities in the conservation, promotion and use of natural resources are the major achievements.

Current and emerging issues: It is necessary to include issues specific to indigenous peoples and local communities – such as how to specify the importance of their traditional knowledge, technology and practices – in nature conservation-related strategic documents. Existing policies should also show the relationship between the conservation of material and non-material cultural heritage and nature conservation. Similarly, issues have arisen regarding how to link environmental conservation with required lingual diversity conservation policies, what indicators are appropriate for this, and how to orient agencies like the National Foundation for Development of Indigenous Nationalities towards the conservation of nature-related traditional knowledge, skills and practices and intellectual property rights. Other issues to be resolved include: negative perception towards conservation by those thinking of conservation as limited to protection; lack of ensured participation of different ethnic groups in conservation results; indigenous peoples' and local communities' intellectual property rights not established; lack of proactive participation of the

public in conservation due to lack of knowledge on the long-term impacts of conservation results; and lack of access to and equitable sharing of benefits of conservation.

2.5.18 Social Inclusion

Policy provisions of inclusion

The Interim Constitution of Nepal (2007) guarantees that "The State shall not discriminate against citizens on grounds of religion, race, caste, tribe, sex, origin, language or ideological conviction or any of these." However, the Constitution has not prohibited positive discrimination against women, Dalits, indigenous peoples, Madhesi or farmers, labourers or economically, socially or culturally disadvantaged groups excluded in the past.

Issues of inclusion have also been addressed in different policies and strategies of development and nature conservation sectors. In accordance with the Constitution, provisions have been made to address issues of inclusion while formulating different sectoral policies and strategies.

Forest, herb, agriculture, irrigation and land-use policies have mentioned social inclusion to some extent, transport, hydro power, rangeland, climate change and tourism policy include minimal mention of social inclusion, and other policies mention it only insignificantly (Annex 8).

Since the Tenth Plan, in almost all GoN policies, plans, and strategies there has been a clear commitment by the government to address the issues of gender and social inclusion. To reduce poverty of women and other disadvantaged groups through employment, the Tenth Plan had placed emphasis on forest conservation. The Interim Constitution of Nepal (2007) has granted the right to economically, socially or educationally backward women, Dalits, indigenous peoples, Madhesi community, oppressed class, poor farmers and labourers to participate in all organs of the State structure on the basis of proportional inclusion. The major parts of the provisions of select nature conservation-related strategies are presented in Annex 9.

Gender equity

a) The gender inclusion policy of the forest sector has ensured the participation of at least 50 per cent women in the Community Forest Users' Committee.

- b) The agricultural policy has envisaged enhancing the participation of at least 50 per cent women in the agricultural extension programme.
- c) The National Biodiversity Strategy and Action Plan has emphasised three major areas: (i) all governmental and non-governmental organisations to formulate and implement a gender-sensitive policy; (ii) equitable participation of all sectors in formulation and implementation of conservation policy and programme; and (iii) equitable access of men and women to bio-resources and benefits.
- d) Provisions have been made in the land management sector to provide registration fee exemption to women at the rates of 25 per cent in municipalities, 30 per cent in VDCs and up to 40 per cent in remote areas while purchasing land.
- e) While making a joint land ownership certificate by adding a woman's name along with a man's name, only Rs 100 is charged as revenue.
- f) There is a provision of the participation of 33 per cent women in the Rural Drinking Water Users' Committee.
- g) There is a provision of a minimum of 10 per cent to be allocated to women in the plans of local bodies.
- h) If an industry is registered only in the name of a woman, she shall be provided registration fee exemption of 35 per cent.
- i) The Industrial Policy (2010) contains a provision to provide 20 per cent fee exemption to women, applicable for registration of industrial intellectual property patents, designs and trademarks in the industry registered in the name of a woman.
- j) The Thirteenth Plan has adopted a strategy to expand the gender budget system by institutionalising it, give priority to those programmes that enhance access, ownership and control of women over resources and means, make financial arrangements for women so that they can create self-employment opportunities by operating businesses and other income-generating activities.

Participation of indigenous peoples, Dalits and other backward sections

a) Nepal is a State party to the Universal Declaration of Human Rights, Declaration of Civil and Political Rights, Convention on the Elimination of All Forms of Racial Discrimination, International Labour Organisation Convention

- No. 169 and other international instruments.
- b) Continuity has been given to the strategy to remove obstacles to the total use of social and cultural rights of indigenous peoples adopted by past periodic plans
 - c) The Agricultural Policy (2061 BS) has adopted a policy of securing food and reducing poverty of present and future generations by conserving food and agricultural genetic resources, commodities, local knowledge, and skills, using and equitably sharing benefits arising from such resources and vesting the rights of traditional and local knowledge, skills, innovations, technology, use and practices in concerned farmers
 - d) The Agricultural Strategy aims to ensure the participation of indigenous peoples, Dalits and other less developed populations in programme planning, implementation and monitoring, as well as establish a mechanism for inclusion and distribute dividend of agricultural benefits to all.
 - e) The Biodiversity Strategy and Action Plan (2014) has a target of achieving participation of at least 33 per cent of women and men, including less developed populations, in all-level planning and implementation, by achieving equitable access of these people to bio-resources and benefit sharing.
 - f) Encouraging indigenous peoples, Dalits and disadvantage groups to participate in forest management; promoting the participation of forest-dependent Chepang, Raute, Kusunda and other ethnic groups in community-based forest management planning and implementation; promoting the participation of indigenous peoples in the decision-making process and dividend distribution in watershed plans and programmes; and increasing the enrolment rate of indigenous peoples, Dalits and other backward sections in forestry educational institutes has been adopted in the draft Forest Strategy.
 - g) Of the total capital budget, except for a grant with condition, local bodies have made a provision to allocate at least 15 per cent to those projects from which economically and socially underdeveloped groups (indigenous peoples, Dalits, persons with disabilities, Madhesis, Muslims, senior citizens and disadvantage groups) have direct benefits.
 - h) The Industrial Policy has made a provision to exempt an industry 40 per cent of income tax in the year in which it has given direct employment to 50 per cent native Dalits or persons with disabilities.
 - i) The Thirteenth Plan has a strategy to respect traditional occupations (such as handicrafts, cottage industries, fishing, hunting) of indigenous peoples, Dalits and other less developed groups and making financial and technical support available for the development, conservation and promotion of these occupations.
 - j) There is a tourism policy for implementing such tourism promotion programmes in remote and potential tourist areas of Nepal that support less developed groups, including women, indigenous peoples, Dalits and Madhesis.

Geographical inclusion

There is a government policy of developing geographical areas in an equitable manner; protecting and promoting people who are excluded in different ways including geographically; enhancing access of these people to policy-making processes; and creating employment in disadvantage communities, including those in the Karnali zone.

According to the concept of inclusive development, this Framework shall have a facilitating role in including all target groups and sections in sharing development outputs, creating an environment capable of contributing to the economic development process, carrying out development activities based on geographical feasibility and operating all policies and activities determined by different sectoral strategies.

Economic inclusion

The Interim Constitution of Nepal (2007) adopted a clear policy: "The State shall make arrangements for the protection of, sustainable uses of, and the equitable distribution of benefits derived from, the flora and fauna and biological diversity." However, the sharing of development outputs does not appear to be equitable. Poverty is 42.3 per cent in the Himalayan region, 23.4 per cent in the Terai and 24.3 per cent in the mountainous region⁵⁶. The Gini index, which reflects the degree of inequality in the country, is 0.353 in urban and 0.311 in rural areas of Nepal and 0.328 per cent in the country as a whole⁵⁷.

Status of compliance with policy provisions of inclusion

Although there has always been direct involvement of people in Nepal's natural resource management and conservation sectors, gender equality and social inclusion seem to be very minimal. For example, although the Forest Policy contains a provision to make at least 50 per cent women participate in committees and sub-committees; the provision does not seem to have been translated into practice. It is important to emphasise the importance of the role that women have played in biodiversity conservation and management. Despite compliance with different national and international commitments and efforts formulated to address the issues of gender and social inclusion, it has not been possible to fully integrate gender issues in conservation programmes due to low literacy and lack of skills in women, patriarchal society and culture, and lack of role of women in decision-making processes. Similarly, there is a lack of coordination between acts, policies, regulations, guidelines and policies specified by programmes drafted by different ministries and departments based on gender equality, inclusion, environment conservation for livelihoods, sustainable development and social or economic development.

Current and emerging issues: Issues to be addressed include: how to integrate and mainstream gender equity and social inclusion; how to bring about changes in people's behaviour and practices affected by social traditions or patriarchal perceptions; how to ensure the poor's access to financial resources; and how to implement required policies and specific programmes for gender equity and inclusion. Lack of equitable access to conservation benefits from gender perspectives; gender budgets not yet included in as priorities; lack of coordination to enhance the participation of local bodies, the poor, Dalits, women, ethnic groups and excluded communities; and non-compliance with the basics of gender streaming are additional issues to be addressed.

2.5.19 Nature Conservation-related Legal Provisions

Achievements to date: The most important achievement in law and institutionalised sectors is the fundamental right of every person to live in

a healthy environment, conferred by the Interim Constitution of Nepal. Similarly, another important achievement under the State policy is conservation of forests, plants and biodiversity, their sustainable use and equitable sharing of benefits arising from the use of these resources.

The National Park and Wildlife Conservation Act (1973, Fourth Amendment) includes a provision to involve local communities in buffer zone management and utilise 30 to 50 per cent of the income earned from national parks and reserves for community development. Similarly, management of conservation areas by local communities and a provision to prevent relocation of human settlements from such areas are other achievements. For example, the Kanchenjunga Conservation Area is currently under community management.

Formulation and implementation of the Environment Conservation Act should be considered another achievement. Mandatory initial environmental examination or environmental impact assessment for specified projects, schemes, factories, industries and other development activities that may have a significant adverse impact on the environment is another achievement. Similarly, the inclusion of new provisions included in the Aquatic Animal Conservation Act through an amendment is another notable achievement.

In addition, the Environment Friendly Local Governance Framework (2070 BS), a provision of establishing Environment Friendly Local Governance Coordination Committees from central to VDC levels and decentralization of conservation activities from central to local levels are new achievements.

Some weaknesses of existing legal provisions: Environmental or nature conservation is a pre-condition to enjoy such rights by citizens. Though the Constitution has not prescribed fundamental duties, provisions have been made to establish the State's responsibility, guiding principles and policies "The State shall make necessary provisions to keep the environment clean. The State shall give priority to avoidance of adverse effects of physical development activities on the environment and to special conservation of the environment and rare wildlife by raising public awareness on environmental cleanliness. The State shall also

make provisions for the conservation of forests, plants and biodiversity, their sustainable use and equitable sharing of benefits arising from these resources.” However, significant progress has not been possible in these provisions. Although one of the Three-Year Interim Plan’s (2008/11) objectives for the environment, science and technology sectors was to promote sustainable development by garnering public participation in the campaign to prevent urban pollution, clean up rural areas and ensure human rights to live in a clean environment, the issue of ensuring this right has not been given priority. The Constitution must clearly establish provisions to allocate responsibilities and rights related to nature conservation, sustainable use and equitable sharing of benefits arising from nature conservation⁵⁸.

Although communities depend on nature for forage, fire-wood and herbs for livelihood; land, forest area or cultivable land for residential purposes, nutrients and ecosystem services, laws are not aimed at regulating the exploitation of nature for development activities. Although 80 per cent of the population still depends on biomass for fuel required for cooking and electricity, the influence of individuals and the State on the conservation of natural resources is minimal.

Initiatives have not yet succeeded in conserving and promoting the traditional knowledge, skills and practices of indigenous people and local communities and using them scientifically in medicinal and agricultural products in a coordinated way. Although the Ministry of Agricultural Development has made provisions regarding the conservation of the knowledge, skills and practices of farmers and farmers’ rights in the Agro-biodiversity Policy (2007), these provisions have not yet obtained legal rights.

Land fragmentation, in addition to the construction of industries, residence, transport and other physical structures on fertile and cultivable agricultural land, is a serious land-use issue in Nepal. To regulate it to some extent, land-use related provisions were included in the Land Act (1964) through an amendment in 2001. However, these provisions have not been implemented and land fragmentation and the process of establishing industries and construction of residences, transportation infrastructure and other physical structures on valuable agricultural land

have continued. This trend may have a significant adverse impact on the status of food sovereignty over the next two to three decades.

Addressing current issues: The main aspect of mitigation law is to promote the principle of precaution in human health, nature conservation and ecosystem management; in other words, if there is scientific uncertainty, the law should manage potential risks on human health, nature and ecosystems. The environmental impact assessment related law may help to adopt precaution, but the environmental impact assessment process is currently confined to formalities. In reality, the law should pay attention to scientific uncertainty, prevent serious threats in the status of scientific uncertainty and promote precaution. As formulation of law is the duty of law makers, they are also custodians for nature conservation. Law makers should ensure that natural resources are sustainably used from economic, social and environmental perspectives. Similarly, law makers should ensure that there is stability in law from economic, social and environmental perspectives. The law should be able to address issues like destruction of species and herbs and extinction of fish and other aquatic animals.

Law should coordinate between different organisational structures and cooperate with them. Uniform understanding and inter-relations between sectors should be promoted by including clear jurisdiction, coordination, respecting the objective of one sector by another, preventing and controlling potentially adverse effects of activities of one sector on activities of another sector in the law. It is necessary that clear provisions regarding good governance and human safety be included in law to enhance work performance and accountability in nature conservation.

Lack of law: There is a lack of conservation law in some sectors. For example, as a State party to the Convention of Biodiversity (CBD) and the International Treaty on Plant Genetic Resources for Food and Agriculture 2001 (ITPGRFA), Nepal should have formulated some laws regarding these issues, but it has not. Similarly, laws related to access to genetic resources and benefit sharing; implementation of the National Biodiversity Safety Framework; and intellectual property rights of traditional knowledge, innovations and practices of indigenous peoples and local communities have

not yet been formulated. Similarly, in policies related to some sectors like road, industry, construction of local structures, there is no mention of biodiversity or nature conservation.

2.6 Nature-sensitive Indicators and Periodic Targets in Development Efforts

Conservation output-based indicators: Nature sensitivity has not been analysed by identifying the factors that ensure nature sensitivity in development efforts. As stipulated by the Environment Conservation Act (2053), while formulating development programmes, if the implementation of projects that require carrying out of IEE or EIA will cause negative impact on the environment, the project should not be implemented, as far as possible, in the areas where it will have such impact; if the project must be implemented, mitigation measures should be determined and incorporated in the environment management plan and applied during implementation and compensation paid in lieu of impact. With regard to the projects that do not fall within the scope of IEE and EIA that are implemented at the district level, environmental management plans that include environmental and social security measures in accordance with the provision of the Social and Environmental Security Framework and budget for its implementation should be prepared and implemented. If such measures have been adopted as stipulated by this provision, no negative environmental impact is said to have taken place.

Programmes limited to a single sector cannot achieve development targets on their own, and, additionally, it is not possible to evaluate the positive or negative impact on nature conservation while achieving such development targets. Hence, it would be ideal to carry out nature sensitivity evaluations and make necessary budget allotments at the time of such programme formulation, and it would be appropriate to carry out nature conservation evaluations by monitoring the overall indicators of nature conservation.

Analyses of the indicators of sectoral development and conservation identified by sectoral strategies show that most of the indicators are concerned with development and only a few with conservation. Even the indicators concerned with conservation results are related to the conservation process, and only a few are result-based. Aggregate indicators of sectoral strategies, conservation process indicators and conservation results indicators are provided as examples in Table 2. Considering the need to maintain a balance between development and nature conservation for sustainable development, nature conservation-related indicators need to be incorporated in the work performance indicators of most of the strategies. Such additional indicators should directly signify conservation results, be included, in the case of strategies that are at draft stage, by the time of their adoption and, in the case of strategies that are in implementation, at the time of their periodic review.

Table 2: Output-based indicators adopted by different strategies

Strategies/master plans	Total indicators of work performance (number)	Conservation process indicators (number)	Conservation result indicators (number)
National Biodiversity Strategy and Action Plan (2014-2020)	77	62	15
Draft Agriculture Development Strategy (2014)	150	31	12
Draft Forest Sector Strategy for Nepal (2014)	34	22	7
Water Resource Strategy (2002)	67	15	4
National Seed Vision (2014)	79	13	5
National Strategy for Disaster Management (2009)	91	3	2
Draft National Tourism Strategic Plan (2013)	59	11	4
New Physical Infrastructure-Foundation for the New Nepal (2007)	31	5	3
National Monitoring and Evaluation Guidelines (2013, National Planning Commission)	82	8	8

Periodic targets in the nature-sensitivity indicators: Although not defined as nature sensitivity indicators as described above, periodic targets have been set in a few indicators that are generally nature-sensitive. For example, targets such as protecting forests in 40 per cent of the country's land area; increasing the tiger population two-fold between the year 2010 and the year 2022⁵⁹; increasing the populations of rhinoceros and water buffalo by at least 50 per cent between 2013 and 2025; decreasing the degradation of the Terai forests from the current 0.44 per cent per year to 0.05 per cent per year ; maintaining air quality at 230 µgm/m³ TSP for 24 hours; and reclaiming 1.6 million hectares of degraded land out of the total 3.2 million over the next twenty years are some of the periodic targets specified in the overall conservation indicators. Such targets have been specified in the indicators identified by the sectoral strategies. It is mentioned that such targets are to be realised by the end of the periodic plan or by the middle or end of the strategy. This National Strategic Framework is to monitor these indicators and periodic targets and, for this reason, does not propose any new sectoral indicators.

2.7 Expected results and risks in achievement of results of the existing sectoral plans and strategies

Although strategies have been formulated to measure conservation results through various ways, the indicators of measurement of conservation results are found to be of two types:

First: Those that indicate direct conservation. Examples: the total land area covered by the forest will be 40 per cent; tiger population will have increased from 155 in 2010 to 310 in 2022; and 1.6 million hectares of degraded land will be reclaimed in the next twenty years.

Second: Those that do not directly indicate conservation but are indispensable bases for conservation. Examples: Forest Council will have been constituted and will fully come into operation; and by 2015, a National Biodiversity Fund will have been established and will be fully functional.

Indicators of results monitoring have been determined based on the results adopted by the strategy concerned. Hence, although the target of achieving some indicators has been set by the strategy, it seems this indicator is outside the management of the agency implementing the strategy concerned and the role of external agencies seems to override its role. It would be very difficult to achieve such results. To facilitate this, a high-level council, coordination committee and steering committee have been constituted. However, the failure of such high-level agencies to hold their meetings for various reasons seems to have had an adverse impact on the results that the sectoral strategy seeks to achieve.

A few examples in this regard are presented in Table 3; in addition, Annex 10 presents a few major risks noted.

Strategies and policies	Expected results	Risks foreseen in achievement of results	Precaution to be adopted
National Biodiversity and Action Plan (2014-2020)	Article 15 of the CBD requires the State Parties to draft and enforce an Act on access to, and use of, genetic resources and sharing their benefits. In accordance with this provision, the existing legal gap shall be filled-up by formulating rules and laws on, among others, access to genetic resources and sharing of benefits, a wildlife domestication act, control of invasive species and Intellectual Property Rights, by 2016.	As the government's priorities are on constitution writing, holding elections to local bodies and restoration of peace, these laws may not be drafted by 2016.	The Biodiversity Coordination Committee will pay necessary attention to formulation of these laws and the Commission will monitor its progress
Climate Change Policy (2011)	Develop and scale up agricultural technologies that reduce methane emissions	This task falls under the jurisdiction of the Ministry of Agricultural Development (MoAD) and not under the jurisdiction of the Ministry of Science, Technology and Environment (MoSTE). However, the Draft Agriculture Development Policy does not seem to cover it.	This task falls under the jurisdiction of the Ministry of Agricultural Development (MoAD) and not under the jurisdiction of the Ministry of Science, Technology and Environment

2.8 Conclusions of the Consultations with Stakeholders

To formulate this Framework, approximately 1500 stakeholders were consulted by using different tools. Major conclusions drawn from a series of consultations are as follows (for detailed information, see Annex 4):

Reasons for deforestation: Lack of laws and weak implementation of existing laws; lack of coordination, high prices and market demands for forest products like herbs; climate change; and lack of sustainable land-use policy are the major reasons of forest deforestation.

Impact of the encroachment of natural resources: As a result of deforestation, problems like landslides; increased flood hazards; drying of water sources; loss of biodiversity; adverse impacts on ecosystems; decreased capacity in carbon sequestration; the deepening of streams due to over quarrying of sand, gravel and boulders from the river; erosion of upper fertile soil; declining agricultural productivity due to lack of irrigation; and increased frequency of floods have been noticed.

Impact on conservation of physical infrastructure development: Problems such as conversion of land near agricultural roads into residential purposes; loss of agricultural production as a result of degraded soil due to increased use of chemical fertilisers facilitated by the construction of roads; loss of biodiversity due to adverse impacts on the natural habitats of forest flora and fauna, wetlands and rangelands, increased air and water pollution due to uncontrolled urbanisation and industrialisation have been experienced.

Factors to be considered at the local level: A number of factors should be considered at the local level, including: raising awareness of local groups, especially mothers' groups, for nature conservation; enhanced security, as poaching is likely to increase after conservation activities are carried out; carry out indispensable development activities, like the construction of roads, while avoiding adverse impacts on agricultural land and forests; establish separate conservation and commercial production areas, as emphasis on the conservation of local species affects the commercialisation of products; and involving farmers in the conservation of indigenous varieties/

breeds to be paid conservation subsidies as these varieties/breeds produce low yield.

Land-use change at the VDC level: Changes in land-use have begun to take place at the village level. The number of farmers keeping their land fallow because of the lack of agriculture labour is increasing, much of land is occupied by houses due to population growth, the price of land has increased due to urbanisation, and selling land for residential purposes is more economically advantageous than farming.

Prioritisation of the factors of mainstreaming: To mainstream nature conservation, it is appropriate to give priority to laws, plans, policies, organisational capacity, investment in conservation, organisational arrangements and human resources.

Coordination in conservation: Coordination may be maintained and harmonisation achieved through specifying responsibilities clearly, conducting effective joint monitoring & evaluation, documenting and disseminating best practices, and instituting legal reforms in inconsistent laws.

Organisational capacity building: To integrate nature conservation into development, it is necessary to build the capacity of the Ministry of Science, Technology and Environment, hold the environmental assessment team more responsible, strengthen the monitoring mechanism and revise environmental laws.

Organisational arrangements for the implementation of the Framework: For the implementation of the Nature Conservation National Strategic Framework, it is appropriate to form a separate Council with authority within the National Planning Commission.

Information flow regarding conservation strategy: The public should be well oriented on conservation strategies after they are formulated. Such documents should be prepared in intelligible Nepali and be made easily available.

2.9 Strengths, weaknesses, opportunities and threats of nature-responsive development efforts

Based on the review of available documents and consultations with conservation-related experts of

different sectors, policy-makers and implementers, the strengths, weaknesses, opportunities and

threats of nature conservation are presented in Table 4 (details are provided in Annex 11)

Table 4: Strengths, weaknesses, opportunities and threats	
<p>Major strengths</p> <ul style="list-style-type: none"> – Existence of organisations with responsibilities specified for conservation – Formation of a network of organisations involved in nature conservation – Presence of enabling national organisational arrangements – Protected areas identified; existence of major laws and policies – A conservation model already established – Increasing availability of human resources with nature conservation knowledge – Nepal is a party to different multilateral environmental treaties, conventions and agreements – Existence of appropriate environmental conditions for different natural resources 	<p>Major weaknesses</p> <ul style="list-style-type: none"> – Weak coordination – Ambiguities in, and duplication of, responsibilities – Weak implementation; weak legal provisions for the implementation of policies – Lack of an Agriculture Act – Availability of skilled manpower limited in industries based on natural resources – Excessive dependence on natural resources for livelihoods – Increasing air, water and soil pollution; uncontrolled use of pesticides – Weak conservation structures (e.g. gene bank, herbarium, and air conditioned store)
<p>Major opportunities</p> <ul style="list-style-type: none"> – Availability of different climates, ecosystems and heritage sites – Presence of habitats for important species like tiger, rhinoceros, snow leopard, musk deer, red panda, alligator and yarsagumba – Availability of carbon stock – Presence of two natural heritage sites, eight world heritage sites and nine significant wetlands – International commitments of support for sustainable development – Those who are back in Nepal after working abroad have introduced conservation-related technology 	<p>Major threats</p> <ul style="list-style-type: none"> – Violation of law and regulations related to conservation – Ambiguities of some legal provisions – Lack of coordination between different agencies – Exploitation of natural resources – Increasing natural disasters caused by climate change – Adverse impacts on ecosystems caused by industrialisation and urbanisation – Adverse impacts on human health caused by increasing use of pesticides – Need for some conservation-related acts, including Agriculture Act and Biodiversity Act

CHAPTER 3

INTEGRATION OF NATURE CONSERVATION INTO DEVELOPMENT EFFORTS

3.1 Areas that were paid special attention while formulating the National Strategic Framework

Areas that were paid special attention while formulating the National Strategic Framework, as well as legal and organisational arrangements of strategic pillars and their current status, are as follows:

Trade off between development and nature conservation:

The construction of physical infrastructure and operation of industries is not possible without using natural resources. Strong infrastructure contributes to sustainable development, whereas industrial development reduces the dependence of people on natural resources such as forests, agricultural land and water, which, in turn, promotes natural resource conservation. Therefore, a justifiable trade off is required in such a way that development contributes to nature conservation and nature conservation contributes to development. This trade off should also include losses and gains to achieve balanced development and nature conservation. For example, the Mechi-Mahakali, an important and necessary electrical railway, is extending through Chitwan and the Chitwan National Park. In such a situation, a construction trade off had to be done, avoiding hindrance to the National Park by said railway by increasing some construction expenditures.

Geographical–regional diversity: As presented in Annex 12, Nepal abounds in physiographic diversity. Nepal's physiography extends from 60 m above sea level to the highest peak in the world, Mount Everest (8,848 m). It is the elevation range and complicated physiographic structure from which the natural biodiversity of the country is derived and on which it depends.

As land steepness and texture, impact of rain, soil erosion, flora and fauna species, and economic activities of people differ according to this geographical diversity, it is very important

to consider these aspects while determining strategies and programmes.

Ethnic and cultural diversity: Inhabited by 125 ethnic groups, Nepal is a multi-ethnic and multicultural country. The predominance and cultural development of some indigenous peoples (e.g. Limbu, Rai, Tamang, Gurung and Magar) can be linked to the watersheds of different rivers. Most of the ethnic groups are directly dependent on natural resources for their livelihoods and cash income and their cultural activities are intimately linked to nature (Annex 13). Therefore, taking all this as well as International Labour Organisation Convention No. 169 into account, it is necessary to ensure the participation of these ethnic groups in conservation activities in those areas.

Status of resource management and changes in perception:

In Nepal, family roles in resource management have undergone recent changes. Some time ago, women were considered as resource users and now, as men seek employment abroad, women are recognised as resource managers. The traditional perception that women should not plough land has also changed. Therefore, it is necessary that the Nature Conservation Strategic Framework also cover the impact of shifted gender roles on participation in natural resource planning, implementation and monitoring.



Climate change and natural disaster management: Nepal is in the fourth place in the world from the viewpoint of climate change risks. Therefore, issues of adaptation should be addressed along with conservation programmes in agriculture, forest, infrastructure and human health sectors. Nepal is in the eleventh most vulnerable country to earthquakes. Due to its location on the fault line of two tectonic plates, comprehensive planning across sectors is required to enhance Nepal's disaster risk reduction (DRR) and disaster risk management (DRM) capacity. These include enhancing seed and grain storage; improving health sector emergency response; educating the population on DRM; enforcing building codes and retrofitting substandard structures; and establishing an emergency communication system^h. Furthermore, settlements should be constructed and expanded and land should be managed in an appropriate way⁶⁶. Importantly, lessons learned from the recent, devastating April 2015 earthquake should be institutionalised going forward. Similarly, Nepal is the 30th most vulnerable country to water-induced risks⁶⁷. Therefore, it is necessary to build the flood adaptation capacity of people, integrate nature conservation into post-disaster infrastructure construction and link it to green development.

Poverty reduction and natural resource conservation: As natural resources are the bases of the livelihoods of the majority of rural poor, the poor bear the brunt of the lack of these resources. This fact illustrates that poverty reduction and natural resource conservation are interrelated. Therefore, it is indispensable to provide the poor with livelihood alternatives for nature conservation.

Small farmers, lack of labour, and mechanisation: Factors that directly affect the conservation and use of natural resources include high rates of fragmentation of agricultural land and demographic changes. Following the migration of rural youths in search of off-farm and overseas employment and as most of the local-level development activities also take place during the farming period, the availability of agricultural labour has decreased. An alternative measure to the lack of agricultural labour could be the mechanisation of agriculture. In Nepal, however, mechanisation has been difficult because of low family income

and small holding and fragmented terraced plots. As a result, the practices of leaving marginal land fallow in mountainous and hilly regions are on the rise. This has eventually increased the scope of practising conservation-friendly land-use methods (e.g. perennial cash crops, agro-forestry) on private land. In addition, the feasibility of co-operative and leasehold farming has increased through the promotion of a land bank, mechanisation based on small-scale conservation and land consolidation.

Promotion of good governance: Participation, transparency, accountability, righteousness and rule of law in natural resources conservation and management are other areas of importance. Policy formulation, implementation and all other activities and decisions involved in central to local levels should be transparent, accountable and participatory. In addition, the rule of law should be respected and complied with. If it is followed, there may be a possibility of equitable access of women, indigenous peoples, Dalits, poor and other backward classes to natural resources and distribution of benefits arising from the use of such resources.

Community participation: Nature can be conserved and used sustainably only if there is participation of all stakeholders in nature conservation activities in general and of local women, men, ethnic groups and Dalits in particular. Nature conservation can be sustainable only if livelihoods are ensured and local participation is effective.

Valuing and accounting ecosystem goods and services: For conservation-friendly economic development, it is essential to value and account for ecosystem goods and services in the national economy by maintaining a balance between development and nature conservation. If it happens so, valuing and accounting for ecosystem goods and services will be important feedback to bring about balance between development and conservation during the formulation of development policy. In Nepal to date, however, services provided by such ecosystems have not been identified, their value has not been determined, and their contributions to national development have not been assessed. As a result, proper investment in conservation has not been possible because of the devaluation of such services.

^h National Strategy for Disaster Risk Management in Nepal (2008)

The development of conservation-friendly infrastructure: To develop physical infrastructure such as roads, hydropower, irrigation canals, and industry, enhance their effectiveness and make them nature conservation-friendly, it is necessary that the concept of conservation-friendly physical infrastructure be promoted. It is also necessary that environmental benefits and costs be reviewed during the physical infrastructure design phase and physical infrastructure be made environment and development-friendly through effective implementation of the review of environmental impact of physical infrastructure that is in operation and by fairly reviewing the effects on nature conservation through a third party.

Addressing transboundary issues: In nature conservation, it is very important to address biodiversity, water and air-related transboundary issues.

- a) Wild animals such as snow leopard, elephant, rhinoceros, wild yak, and migratory birds travel over rather large areas. Therefore, transboundary support is necessary to prevent illegal transboundary trade of wild animals and their organs.
- b) The water quality of rivers originating in the Himalayan region can be improved through transboundary support and partnership.
- c) Examples of global warming have clearly been seen in neighbouring countries due to carbon emissions as a result of industrial development. Studies have shown that this activity has contributed to the origin of new glacial rivers and driven other glacial rivers to the verge of risk. For this, too, transboundary support is required.

Demographic changes: While preparing this Framework, attention was also paid to changes taking place in population growth, migration, urbanisation and population structure. To manage changes seen in land-use because of urbanisation and housing development, it is necessary that a Land-use Policy is implemented effectively and a land-use plan be formulated and implemented. Similarly, the decreasing rate of communities directly depending on forests and agriculture and changes seen in dependence on natural resources should also be taken into account.

3.2 Approach to Integrating Nature Conservation into Development Efforts

As human health and prosperity depend on the sustainable use of nature and natural resources, co-ordinating efforts are required for the wise use of such resources. Building a dam on a river for electricity generation changes the flow of water, adversely affects aquatic animals that depend on the river, harms invaluable agricultural land and the forest area, and affects land arc. However, electricity generation leads to positive results like low emission of green gases due to reduction in the use of fossil fuels and decrease in air pollution to be caused by industries and means of transport. Although the excavation of mines and transportation of minerals to the consumption site causes harm to agricultural land and the forest area, deforestation significantly decreases due to the use of materials like brick, cement, and rods in construction activities. Therefore, owing to these and other similar reasons, balance should be maintained between nature conservation and development.

This National Strategic Framework has made the following five strategic pillars its base based on lessons learned from the implementation of the National Conservation Strategy (1988), major achievements attained in conservation and current issues, analysis of the strengths, weaknesses, opportunities and threats of conservation, areas to be paid special attention during Framework formulation, and a reasonable balance to be maintained in development and conservation.

- a) Mainstreaming nature sensitivity in development efforts
- b) Harmonisation between sectoral strategies
- c) Coordination between agencies concerned
- d) Valuing and accounting ecosystem goods and services
- e) Accountability in results of conservation

3.3. Strategic Pillars – Provisions and Status

As the purpose of this National Strategic Framework is to facilitate the implementation of nature conservation and other sectoral strategies, it has to be ensured that nature conservation activities are integrated into development efforts. The strategic pillars identified by this Framework, legal and organisational provisions related to these pillars and implementation status of these provisions is as follows:

3.3.1 Mainstreaming Nature Conservation

Mainstreaming nature conservation in development efforts means nature conservation-related concerns should be incorporated in development plans, programmes and activities. In this case, mainstreaming is based on generally accepted prevailing ideas, principles and norms and values.

a) Existing provision

Mainstreaming in tasks of high-level agencies:

The Government of Nepal (Allocation of Business) Regulations (2012) has not assigned the responsibility of nature conservation to all ministries (Annex 14). According to the principle of mainstreaming, all responsible ministries should be given the responsibility of such conservation, and a responsible unit should be specified.

More than 20 strategies have been formulated since the National Conservation Strategy (1988) came into force. However, nature conservation mainstreaming has not become an integral part in some sectoral strategies.

Provision for environmental assessment:

Currently, the Environment Protection Act (1997) and the Environment Protection Regulations (1997) are the main documents for mainstreaming nature sensitivity. As specified by the Environment Protection Act and the Environment Protection Regulations, potential impacts of a project on the environment should be assessed during project formulation. According to this provision, to avoid adverse/negative impacts of the project on the environment, the project shall be implemented in a place that will not adversely affect the environment, and if there is no alternative of such a place, measures shall be determined to mitigate negative impacts, include them in environmental management plans and apply them along with project implementation.

In the case of other district-level projects that do not fall within the scope of initial environmental examination and the environmental impact assessment, there is a provision to prepare an environmental management plan with environmental and social security measures and budget in accordance with provisions mentioned in the outline of social and environmental security, and implement it.

The Environment - Friendly Local Governance Framework (2013) enforced by the Ministry of Federal Affairs and Local Development has made a provision for district, municipal and VDC-level Environment Friendly Local Governance Coordination Committees. In addition, a provision has also been made to discuss whether or not environmental issues have been addressed in a project during public and social hearings.

Investment in conservation: Prevailing legal provisions for investment in conservation are as follows:

- a) The National Parks and Wildlife Conservation Act (1973) (Fourth Amendment) has made provisions to involve local communities in buffer zone management and provide 30 to 50 per cent of the income earned by the national park and reserve for community development
- b) The community forest shall spend 25 per cent of its income on forest development
- c) Invest a certain portion of 10 per cent of the revenue received by the DDC from forest products in the forest sector and forest conservation
- d) Invest a certain portion of 50 per cent of the amount raised by the DDC as royalty from mines in the same mine area and forest conservation
- e) Invest a certain portion of 10 per cent of the amount received by the government as royalty from DDCs, which have constructed and operated power houses
- f) Organisations developing electricity shall submit one per cent of their net profit to the Government of Nepal and to use this amount in forest and watershed conservation
- g) 30 per cent of the amount received from tourists as trekking and national park and wildlife reserve entrance fees as well as royalty; 30 per cent of royalty and fees to be received by the Government of Nepal from mountaineering; and a certain portion of 30 per cent of the amount to be received as district development area entrance fees to be returned back to the same area.

Establishment of a special fund for environment conservation:

The Environment, Energy and Climate Change Section Operation Guidance (2013) mentions that the District Development Committee shall establish a special

fund for environment conservation. A certain percentage of money from income received after the implementation of projects with investments of the District Development Committee and Environment, Energy and Climate Change Sections; the amount of money specified by the DDC out of money received by the DDC from sales, tax and service fees of natural resources (e.g. stones, gravels, sand, timber, fire wood) directly related to energy, environment and climate change); and a certain percentage of money received by the DDC as electricity royalty shall be deposited in this fund. The fund shall be operated in accordance with the regulations approved by the District Council. After establishing the special fund for environment conservation in the district, funds related to energy and district sanitation shall also be included in this special fund. This shall be a separate provision for conservation-related programmes in the district.

b) Current status

Compliance with environmental assessment in practice: In case of projects that require initial environmental examination (IEE) and environmental impact assessment (EIA), in the course of implementation of approved IEE and EIA, due attention is not routinely paid to suggestions made for mitigation of adverse impacts and regular monitoring has not been possible to ensure effective implementation of those suggestions⁶⁸.

Local bodies should have implemented projects along with an environmental management plan, but such a plan does not seem to have been implemented. For example, although there are provisions for the use of human labour while



constructing rural roads, avoiding the use of excavators and arranging water drain on the edge of roads, these provisions have not been complied with. The main reasons for non-compliance include lack of attention to compliance with acts and regulations, lack of technical capacity to formulate an environmental management plan, and lack of monitoring and knowledge at the local level.

Issues not covered by environmental impact assessment provisions: Although there are provisions related to 'environmental impact review' while implementing agricultural development programmes, the practical aspects of the implementation and monitoring of these provisions seems to be weak. For example, because farmers produce in a small area, and even if a pocket area is expanded, they do not fall within the environmental impact review standards. However, certain pockets, like commercial production of potato, tomato, broiler chicken, and hybrid varieties seem to come within these standards. For this situation, no provision has been made so far. In addition, it has been challenging to make environmental assessments effective in small programmes to be conducted in remote villages.

Impacts noticed as a result of non-compliance with legal and policy provisions: Fast expansion of settlements, migration and increasing demands for forest land for the construction of infrastructure have resulted in felling of forest trees; excessive extraction of sand and gravel from sensitive areas like Churia (Siwalik), rivers and river banks; and encroachment of wetlands. In addition, adverse effects have also been noticed in conservation of watersheds.

Construction of rural and urban roads and urbanisation have also resulted in a decrease in



agricultural land, a decrease in and drying of water sources, and deforestation. Similarly, as a result of the construction of infrastructure on productive land, farming has expanded on marginal and dry land. Owing to such degradation of fertile agricultural land, losses in production and food insecurity have been noticed.

Losses have been noticed to occur in faunal and floral diversity because of the destruction, degradation and fragmentation of habitats, conflict between human beings and wildlife, invasion of alien species, excessive collection of forest products, and forest fires. Similarly, the conservation of local species has declined as a result of the use of hybrid varieties in agriculture.

Owing to climate change, the risk of natural hazards like floods, landslides, and avalanches has increased and has also affected the conservation of natural resources. Fair participation among the poor, women, Dalits and indigenous peoples in nature conservation, sustainable use and decision-making processes of equitable distribution of benefits has not been possible.

Status of investment in conservation: Although there is a provision for reinvesting a portion of the revenue received from the use of natural resources in various sectors, this has not been noticed in some sectors. For example, there are provisions for investment of a portion of the revenue received by DDC from the forests in the forest sector and forest conservation, involvement of local communities in buffer zone management according to the fourth amendment to the National Parks and Wildlife Conservation Act, and allocation of 30–50 per cent of the income earned by national parks and reserves to community development. However, investment has not been made according to these provisions.

It has been difficult to precisely assess the investment in conservation because there is no separate budget head for conservation except in some sectors. For example, when sharing the capital grant received annually by local bodies (VDC, municipality, DDC) from the Ministry of Local Development, it must also be earmarked for economic, social and infrastructure development programmes. Although there are provisions for investment in forests, environment conservation, biodiversity, parks and greenery areas, climate

change and renewable energy from the budget allocated according to Section B of Clause 11 (1) of the Resource Mobilisation and Management Procedure of Local Bodies, environmental conservation, biodiversity and climate change receive very low priority. If the user's group sells the Saal (*Shorea robusta*) and Khair (*Acacia catechu*) timber harvested by it from the national forests transferred by the Government of Nepal as community forests for commercial purposes, the user's group shall deposit 15 per cent of the amount it earns to the GoN's consolidated fund as a forest product fee. There is also a provision that the amount of money thus received by the community should be spent on the conservation of forests and environment, promotion of forests and local development-related activities.

3.3.2 Sectoral Harmonisation

Harmonisation refers to bringing about uniformity in the policy, law, strategy, programme, process, method, definition, measurement, description and characteristics of different sectors by addressing dissimilarities, and understanding the situation in these areas.

For development efforts to be nature sensitive, there should not be duplication of and inconsistency in responsibility of different sectors, policies should be stable, limited resources and means should be used efficiently, and subsidies given to one sector should have no adverse impact on another sector.

Duplication of responsibility: Duplication of responsibility has been noticed between different sectoral agencies and local bodies. For example, there is a contradiction between the Forest Act and the Local Self Governance Act (LSGA) regarding forest conservation and the use of income thereof; the LSGA mentions that local-level forests belong to local bodies, whereas the Forest Act mentions that these forests belong to the Government of Nepal. Owing to these contradictions, revenue from the forest has become an issue of dispute. Similarly, the Rangeland Policy (2012) has entrusted the District Livestock Service Office a major role in pasture management, whereas the Forest Act (1993) has given the responsibility of rangeland management to the District Forest Office, from a legal point of view.

As a result of duplication of responsibility, grazing in the rangeland has continued in an uncontrolled

way. Therefore, to avoid duplication of a specific programme, joint planning is imperative. However, thematic programmes to be submitted to the District Council for approval are prepared by thematic groups and while preparing such a programme, the guidance of thematic ministries and departments is complied with. As a result, to address shared issues of different sectors, joint planning has not taken place in a coordinated way.

Ambiguities in responsibility: It also appears that agencies responsible for resource conservation and management have not clearly been specified. For example, in the Terai, the District Irrigation Office, District Forest Office and District Development Committee have claimed their ownership over trees of several species that users' committees have planted on the banks of various canals constructed for irrigation.

Transhumance grazing in the Himalayan region is an old practice of animal husbandry. However, after handing over community forest management to communities, grazing is not allowed in some community forests. Policy disharmony between community forests and livestock promotion has created disputes and conflicts in grazing. Similarly, as the government has ownership over rangelands and local communities have collectively been grazing their livestock in these rangelands as local users, confusion in rangeland management still exists.

There is no uniformity in decentralisation of the responsibility of sectoral agencies. For example, extension of only agriculture and livestock services and only primary health in the health sector has been devolved. As a result, there is no equal status in local-level planning and implementation decision processes, too. Similarly, the presence of line agencies of the Ministry of Agriculture Development at the community level and absence of line agencies of the Ministry of Irrigation at the district level creates disharmony between these two agencies during programme planning and implementation.

Policy inconsistency and contradictory jurisdiction: As there is inconsistency between some sectoral laws as mentioned in Annex 15, it is not clear who is to be responsible for nature conservation in the operation of development activities. For example, the Mines and Minerals Act (1985) has made a provision that mines and

minerals belong to the government, no matter where they are located, whereas according to Clause 58 (D) and (E) of the Local Self Governance Act (2055), the amount of money received from the sale of dry timber, firewood, twigs, splinters, roots, grass, and straw, is deposited in the Village Fund. Similarly, Clause 215 (2) and 218 of the same Act has made a provision for DDCs to impose taxes on resin, herbs, stones, gravels, sand, animal bones, skin, and horns and Clause 218 of the same Act has also granted DDCs the right to sell river-related materials like sand, gravels, stones and soil. However, timber, firewood, and grass available in the forest area and all kinds of goods obtained from plants, wildlife and their residues and goods like stone, gravel, sand and soil have been defined as forest products in Clause 2 (C) of the Forest Act (1993). In accordance with Clause 22 of the same Act, in case of government-managed forests, the government has ownership over such resources and the District Forest Officer represents the government. In accordance with Clause 25 (1) of the same Act, in the case of community forests, community forest users' groups (CFUGs) have ownership over the above-mentioned goods. In this way, it has not been possible to solve inconsistent provisions in the Local Self Governance Act (1999) and Forest Act (1993).

Subsidies in one sector have adverse impact on another sector: Giving priority to one sector tends to cause adverse impacts in another sector. For example, after increasing the minimum standards of environmental impact assessments in electricity generation, the rate of deforestation has increased. Furthermore, delegating authority to users' groups to design and operate a rural infrastructure construction projects up to Rs 6 million has not fostered environment-friendly rural infrastructure because of the lack of capacity of the users' groups. Similarly, providing subsidies on improved seeds and species has driven local varieties and species to the verge of extinction. Furthermore, providing subsidies on chemical fertilisers in rural areas has decreased the use of organic manure.

3.3.3 Coordination between Agencies Concerned and Facilitation

It is necessary to achieve working collaboration, maintain mutual relationships and bring about harmony between agencies and organisations working in the development and conservation

sectors. For such coordination, there are different central- and district-level coordination committees. In addition, there is an extant practice of maintaining coordination between central agencies during policy making and planning, whereas such coordination is maintained by the DDC at the district level.

Organisational arrangements: Nature conservation is directly or indirectly related to different sectoral agencies and their activities. Coordination committees that are concerned with nature conservation have been formed at the central and district levels. There are more than twentyⁱ such central-level committees and over 10 district-level committees^j.

Compliance with organisational provisions: Despite favourable provisions made in law and regulations, there is a trend of sectoral entities complying only with their own mandates and not respecting the legal provisions of another sector, not trying to mitigate the adverse effects on nature while complying with the mandate of own sector, and believing that nature conservation activities are the mandate of only the Ministry of Forests and Soil Conservation and the Ministry of Science, Technology and Environment. In addition, the tradition of keeping organisational structures inactive has adversely affected the achievements and efforts made in the nature conservation sector.

To achieve shared objectives, a single coordination mechanism covering all sectors is required. However, existing sectoral strategies seem to be progressing with a separate concept at different levels rather than building the capacity of existing mechanisms and strengthening them. With a view to achieving shared objectives, it is necessary to maintain coordination or collaboration between different sectoral agencies by accepting each other's co-existence.

Coordination procedure: Although there has been dialogue and coordination between different thematic and sectoral agencies and local bodies during policy, plan and programme formulation, integrated planning, review of positive and negative impacts of programmes on nature conservation and identification of areas to be improved have not been adequate due to different priorities. Although there various organisational mechanisms exist, their roles and effectiveness are weak. Therefore, development and conservation activities have been fragmented and conservation efforts are becoming more risky and challenging.

To integrate nature conservation into development at different levels apart from the central level, it is necessary to coordinate, communicate and collaborate by determining the priority of sectoral programmes and shared targets between different agencies, reviewing impacts and identifying areas to be improved, at planning and implementation phases. However, such coordination has not been possible. For example, although agriculture extension and irrigation activities are complementary to the productivity growth of agricultural crops, joint planning between these agencies has not widely taken place. To address multifaceted issues of concern like energy, an integrated plan should have been formulated jointly by discussing with forest, water resource, agriculture and energy supplying agencies.

Organisational structure and effectiveness

a) Local level: Some bodies like the Environment Conservation Council, Climate Change Council, National Biodiversity Coordination Committee and Forest Sector Coordination Committee formed at the central level are related to nature. These structures have been formed based on the concerned policies and strategies.

The following conclusions have been drawn while

ⁱ Environment Conservation Committee, Climate Change Council, National Tiger Conservation Committee, National Biodiversity Coordination Committee, Forest Sector Coordination Committee, National Wetland Committee, National Wildlife Crime Control Coordination Committee, National Forest Encroachment Control Committee, Central Forest Encroachment Control Mechanism, Environment Conservation Fund, National Trust for Nature Conservation, National Agriculture Development Coordination Committee, National Seed Committee, National Dairy Development Board, Tea and Coffee Development Board, Central Environment Local Governance Committee, Environment Friendly Local Governance 2070 Central Implementation Coordination Committee, Road Board, Physical Infrastructure Project Coordination Committee, Tourism Board, Waste Management Council, Land-use Council, National Foundation for Development of Indigenous Nationalities, National Dalits' Commission, National Women's' Commission, Committee for Uplift of Backward Classes, etc

^j Environment Friendly Governance District Coordination Committee, District Forest Sector Coordination Committee, District Water Resource Committee, District Land Price Fixation Committee, Land Compensation Determination Committee, Plant Quarantine Committee, Pesticide Committee, District Forest Encroachment Control and Management Task Force, District Drinking Water and Sanitation Committee, District Agricultural Development Coordination Committee

discussing the effectiveness of such councils and committees with thematic groups:

1. As there is a need for high-level coordination between different agencies, policy formulation and revision, and law enactment in the Nature Conservation National Strategic Framework, a council chaired by Vice Chairperson shall be appropriate to implement such National Framework.
2. Experience has it that such councils could not meet regularly and the National Planning Commission (NPC) had to monitor the implementation of different sectoral strategies. For such circumstances, the Steering Committee chaired by the member secretary of the NPC has to be made as effective as it was during the formulation of the Strategic Framework.

b) Local level: The Environment Friendly Local Governance Framework (2013) has envisaged the establishment of the Environment Friendly Coordination Committees at the district, municipality and VDC levels that are directly related to environment and nature conservation. Committees such as the Agriculture Development Coordination Committee, Forest Sector Coordination Committee, Drinking Water and Sanitation Coordination Committee that have been formed at the district level are related to nature conservation. Although it is stated that the DDC Chairperson should chair all these Committees, membership and representation in the Committees differ from one another. Thus, in a district-level discussion, it was concluded that the Environment Friendly Coordination Committee, under the District Development Committee, is appropriate and effective for monitoring whether or not nature conservation has been integrated into district-level sectoral development in accordance with the concept of the Nature Conservation National Strategic Framework, and provide guidance accordingly.

3.3.4 Valuing and Accounting Ecosystem Goods and Services

An ecosystem refers to the inter-relationship between organic and inorganic factors for continuous flow of energy and chemical substances within a certain limit. There are 118 types of ecosystems in Nepal. There are four

broad categories of benefits from an ecosystem. These benefits include supporting services such as nutrient recycling and soil formation processes; provisioning services like production of food grain, cloth, energy, and clean water; regulating services such as preservation of air quality; regulation of water, climate, diseases and crop pollination; and cultural services like recreational, religious, spiritual, educational, and natural aesthetics. Owing to the approach of reviewing contributions of ecosystem goods like timber and fuel wood only to the national economy, overall ecosystem contributions have been devaluated. Because of this, ecosystem services have not been evaluated in the investment in physical infrastructure.

Although the Environment Protection Act (1997) and the Environment Protection Regulations (1997) have made provisions for environmental protection and pollution control, ecosystem services have been excessively exploited and degraded in the absence of harmonisation due to different sectoral priorities.

To mainstream ecosystem services during financial assessment of physical infrastructure, project cost analysis and investment assessment, economic policies associated with thematic sectors are generally weak. While operating physical infrastructure without paying due attention to ecosystem sensitivity, there will be an adverse impact on nature conservation, and there is no policy or legal provision to compensate for ecosystem services that have been lost. However, ecosystem services have contributed to ensuring the sustainability of physical infrastructure. Therefore, it is necessary that valuation and accounting for ecosystem services in the national economy are carried out for conservation-friendly economic development by maintaining a balance between development and nature conservation. However, ecosystem services have not been identified, their value has not been determined and their contributions to development have not yet been assessed in Nepal. As a result, proper investment in conservation has not been possible because of the devaluation of such services. Therefore, the importance of conservation may be explained to policy-makers, provided that an approach to economic value review of nature is adopted.

3.3.5 Accountability in Conservation Results

Mainstreaming nature conservation into sectoral strategies shall be a shared responsibility of all concerned. As responsibility, accountability and credit in achieving results are also being shared; there may be an adverse impact if all sectors do not accept ownership. Therefore, to enhance the responsibility of agency concerned to ensure effective results of nature conservation, it is indispensable for a central agency to facilitate.

Legal arrangements: Sectoral ministries concerned shall be accountable to spending allocated budget and achieving development targets for development programmes. There are provisions according to which the Ministry of Finance shall delegate its authority to the ministry concerned to spend budget and this concerned ministry shall also be responsible and accountable for achieving results. Similarly, provisions are also clear regarding who is to be accountable to authority delegated by the ministry concerned to other organisations and other provisions. For example, the Water Resource Act (1992) and the Water Resource Regulations (1993) have made provision for requiring permits to use water sources. Examples of the responsibilities and accountabilities mentioned in some acts and regulations are presented in Annex 16. Though there is a Disaster Risk Management Strategy, disaster risks have not been addressed in an integrated way in the context of accountability because of lack of law.

There is no mention in any thematic and sectoral strategy regarding how to give due credit to those who contribute to the compliance of initial environmental examinations and environmental impact assessments, and conservation. Therefore,

a tradition shall be established to give credit to those who are involved in conservation activities by promoting accountability in conservation.

Status of compliance: As there are no details of nature conservation while delegating budget expenditure-related authority to the ministry concerned, no one has been held responsible for current and future excessive exploitation and degradation of natural resources in the course of fulfilling the sectoral development targets. Because budget expenditures are only approved for formulated programmes, no budget is spent on conservation if nature conservation programmes are not determined during programme planning. Furthermore, as such programmes are designed based on the jurisdiction of concerned agencies; agencies with no nature conservation agenda generally do not determine nature conservation-related programmes.

Although there are provisions in law, accountability to, and recognition of, conservation results is very weak. A given sector's accountability to conservation results is not clear. For example, the government has committed to maintaining 40 per cent of forest-covered areas – but 16,500 hectares of forest have been destroyed between 2001 and 2010⁶⁹. Despite the presence of several coordination mechanisms, there is no effective implementation of such mechanisms, which seems to be associated with lack of accountability. Duplication of responsibility has caused exploitation of natural resources at the local level. As a result, there is less accountability in conservation. Although pasture is the jurisdiction of the Ministry of Agricultural Development and the Ministry of Forests and Soil Conservation, lack of clarity regarding which Ministry should govern pasture management is an example of an accountability issue.

CHAPTER 4

NATURE CONSERVATION NATIONAL STRATEGIC FRAMEWORK

4.1 Background

Based on review of the achievements of the National Conservation Strategy (1988), in-depth review of relevant references, results obtained from consultations with stakeholders of all levels and suggestions received from thematic groups concerned, a total of 13 approach papers on forest, biodiversity, agriculture, physical infrastructure, water resource and disaster management, climate change and energy, tourism, land regional plan, health, environmental education, society, nature and indigenous peoples, gender and social inclusion and law and organisational arrangements have been prepared (Annex 17). This Framework has been prepared based on these approach papers, suggestions obtained from the Steering Committee, review of references and consultations held at different levels.

Development, use and promotion of nature-based solutions, sustainable use of natural and cultural heritage, harmonisation between development and conservation for sustainable development, collaboration and partnership, traditional knowledge, respect for skills and culture, compliance with national and international commitments, guarantees for good governance, promotion of positive external impacts, integrity in ecosystems, investment in development based on the value of ecosystems, current plan formulation and implementation processes based on thematic and sectoral strategies for sectoral development and issues such as inclusive and equitable participation have been adopted as guiding principles in this strategic Framework.

4.2 Vision

A prosperous, inclusive and just Nepal that values and conserves nature for sustainable development.

4.3 Mission

To provide guidance in ensuring nature responsiveness for sustainable development.

4.4 Goal

To contribute to achieving sustainable development by integrating nature conservation in all development efforts.

4.5 Purpose

To develop nature conservation and sustainable development as complementary to each other.

This purpose shall be achieved through the achievement of the results of the five strategic pillars.

4.6 Strategic Pillars

Five strategic pillars, mentioned in Chapter 3.2, are the main bases of the implementation of this Framework. Activities for integrating nature conservation into all development efforts have been covered according to these five strategic pillars. These pillars shall help in achieving sustainable development by facilitating nature conservation integration into development efforts. Results and their monitoring indicators to be achieved while implementing this Framework in accordance with these five strategic pillars shall be as follows:

4.6.1 Mainstreaming Nature Conservation into Development Efforts

Procedure: For mainstreaming nature conservation into development efforts, weaknesses observed in mainstreaming shall be addressed by analysing current policies, plans, directives, laws, guidance, organisational structure, human resources (number and capacity) and investments in conservation. As it is a dynamic process, these different aspects shall be revised by conducting periodic reviews.

Expected results: Nature conservation mainstreamed in all sectoral policies and strategies to be drafted and nature conservation-related current and emerging issues included by reviewing strategies that are in implementation.

Priority programmes based on the review studies of coordination between agencies concerned and the conclusion drawn from stepwise consultations are given in Table 6.

4.6.2 Harmonisation between Sectoral Strategies

Procedure: To maintain harmonisation, uniformity should be enforced within an agency/strategy or existing differences between other agencies and strategies, incoherent and mutually contradictory provisions. In addition, the trend of inefficient use of resources and escape from responsibility because of responsibility duplication shall be avoided, subsidies of one sector that have a perverse impact on another sector shall be eradicated and harmonisation between positive and negative externalities shall be maintained.

Expected results: Integrating nature conservation activities into development shall be effective and efficient because of joint formulation of policies, strategies, programmes, and collaboration in conservation with clear allocation of responsibilities.

Priority programmes based on the review studies of harmonisation between strategies and the conclusion drawn from stepwise consultations are given in Table 6.

4.6.3 Coordination between Agencies concerned

Procedure: Coordination shall be maintained between different agencies or organisations within the scope of complementary, supplementary, pre-conditions, synergy, and joint action. In addition, coordination shall be enhanced by performing review of the coordination mechanism based on the effectiveness of local-level Coordination Committees.

Expected results: Agencies coordinating complementary, supplementary, pre-conditions, synergy and joint action roles shall consider the target expected by all sectoral agencies as a shared target of all agencies/organisations

Priority programmes based on the review studies of coordination between agencies concerned and

the conclusion drawn from stepwise consultations are given in Table 6.

4.6.4 Valuing and Accounting Ecosystem Goods and Services

Procedure: The following tools shall be used regarding benefits from valuing and accounting ecosystem goods and services:

- a) While making any decisions regarding conservation of biodiversity and ecosystems at the high level and expressing commitments in the strengthening of policies, the concept of the economics of ecosystems and biodiversity (TEEB) can be implemented. The essence of TEEB is that biodiversity and ecosystems are being destroyed because of the lack of recognition and undermining the contributions of biodiversity/nature in the welfare of human beings^{70,71,72}.
- b) Raise awareness of all ecosystem service users about the importance of ecosystem services.
- c) Introduce payment for ecosystem services where possible^k.
- d) Provide a framework for decisions to be made for resources and their utility value and different alternatives⁷³.

Valuing and accounting ecosystem goods and services can also be carried out by using the following methods⁷⁴ :

1. Avoided cost: Cost to be paid in the absence of this or that service. For example, cost for rainwater storage in a watershed is saved, as there is already water storage in the watershed.
2. Replacement cost: Cost required for a human-created system made to replace a natural system. For example, cost involved in purifying water of the Bagmati River is much more than benefits from the river while using it for drainage.
3. Factor income: Direct growth in income through services. For example, growth in agricultural income from increased fruit and rape seed production because of better pollination by bees.

^k To promote investment in conservation, maintain harmonisation between the preference of upstream and downstream stakeholders and maintain balance between development and conservation, payment for ecosystem services (PES) has appeared as an emerging and promising strategy. The Ministry of Forests and Soil Conservation is formulating a policy to make PES clearer.

4. Travel cost: Cost involved in availing services. For example, expenditure made by visitors while visiting the Bat Cave in Pokhara is the price of service.
5. Hedonic pricing: Cost to be paid from hedonic point of view along with other factors concerned. For example, the land of an area with water facility, school for children and open playground, costs more.
6. Contingent valuation: The value of services is also derived from the value of conditions of envisioned alternatives. For example, the price that visitors are ready to pay if they are allowed to visit national parks.

Expected results: While assessing the results of efforts of conservation and making decisions of investment in conservation, apart from direct revenue income from conservation, establish and mainstream clear guidance and a procedure for valuing and accounting ecosystem goods and services.

Priority programmes based on the review studies of valuing and accounting ecosystem goods and services and the conclusion drawn from stepwise consultations are given in Table 6.

4.6.5 Accountability of sectoral agencies in conservation results

Procedure: In order to hold sectoral ministries more accountable for achieving expected results in nature conservation, maintain harmonisation between different sectoral laws and policies, and promote mutual support and understanding between sectoral ministries, the National Planning Commission shall play a coordinating role. Based on the five strategic pillars of this Framework, regular monitoring of the NPC will be conducted

and agency concerned shall be guided for required improvements.

Expected results: Accountability in conservation results ensured with improvements in work performance.

Priority programmes based on the review studies of accountability of sectoral agencies in conservation results and the conclusions drawn from stepwise consultations are given in Table 6.

4.7 Brief Log Frame of the Framework

A brief log frame of the Framework is presented in Table 5. It was difficult to include goal-level indicators in this log frame. The impact of the goal to be achieved from the implementation of this Framework is the sustainable development of different sectors and cross-sectors identified by this Framework. Based on the principle that nature conservation should also be integrated into development in order to achieve sustainable development of those sectors in a balanced way, a plan for the inclusion of conservation indicators is included in the action plan of this Framework by reviewing whether or not a particular sectoral agency has inadequate indicators or does not have indicators at all. This Framework is not intended to monitor all of the indicators of sectoral agencies, nor is it possible to do so. Representative indicators presented in Table 11 are the indicators of the achievement of the goal of this Framework. In addition, as the indicators of the achievement are based on the assessment of provisions in a checklist, a detailed checklist is presented in Annex 18. In case of the results of the five strategic pillars, indicators have been prepared based on programmes required to bring this Framework in implementation.

Table 5: Brief log frame of Nature Conservation National Strategic Framework for Sustainable Development Period of Framework: 2015-2030			
Narrative summary	Indicators	Means of verification	Assumptions
Goal: To contribute to achieving sustainable development by integrating nature conservation in all development efforts	As per Table 11	Mid-term and final surveys of the Strategy	<ul style="list-style-type: none"> State policy shall give priority to integration of nature conservation into the new Constitution to be drafted There shall be reasonable changes in the Framework Implementation Council, the Framework Implementation Committee and other structures after the restructuring of the State
Purpose: To develop nature conservation and sustainable development as complementary to each other	All policies, strategies, plans, programmes and projects have passed nature sensitivity test (assessment as per Annex 18)	Sensitivity test report	<ul style="list-style-type: none"> Development and nature conservation integration-related report shall be submitted at Legislature-Parliament every two years for information and discussion
Strategic pillar 1: Mainstreaming nature conservation in development efforts	a) Status of indispensability of nature conservation integration into development efforts in formal and informal course curriculum and inclusion of material on procedure	Formal and informal education curricula	<ul style="list-style-type: none"> This Framework shall be a nature conservation mainstreaming-related document for the Natural Resource Committee of Legislature-Parliament Environmental standards shall be determined in all relevant development plans Liaison Unit shall be established and focal person shall be designated in all relevant thematic and sectoral agencies
	b) Preparation and implementation of agreed guidelines on mainstreaming nature conservation	Annual and Periodic Planning Guidelines and Implementation	
	c) Inclusion and status implementation of nature conservation mainstreaming procedure in annual and periodic planning guidelines	Guidelines of the National Planning Commission	
	d) Status of the availability and use of standards for mainstreaming nature conservation	Strategy and working policy of sectoral agencies	
	e) Status of the establishment of nature conservation-related budget code	Annual budget of thematic and sectoral agencies	
	f) Budget arrangements (per cent) for nature conservation		
Strategic pillar 2: Harmonisation between sectoral strategies	a) Procedure maintaining harmonisation between sectoral strategies in development efforts and nature conservation integration prepared	Annual and Periodic Planning Guidelines and Implementation	
	b) Procedure for maintaining harmonisation mentioned in Annual and Periodic Planning Guidelines	Guidelines of the National Planning Commission	<ul style="list-style-type: none"> Thematic and sectoral agencies shall maintain harmonisation in issues like policy inconsistency, existing process differences, contradictory legal provisions
	c) Inclusion of harmonisation maintenance procedure in Annual and Periodic Planning and Programming Guidelines of sectoral agencies and status of implementation	Material published by sectoral agencies	
	d) Number of harmonisation-related issues addressed	Progress reports of sectoral agencies	
	e) Number of harmonisation-related issues in the process of being addressed		

<p>Strategic pillar 3: Coordination with relevant agencies and facilitation</p> <p>Output: All sectoral strategies coordinating complementary, supplementary, pre-conditions, synergy and joint action roles shall accept the target expected by all sectoral agencies as a shared target of all agencies/organisations</p>	a) Preparation of procedure agreed on coordination between sectoral policies and strategies in development and nature conservation integration and status of implementation	Different decisions of the Coordination Council and the Coordination Committee	<ul style="list-style-type: none"> The government shall allocate business of thematic and sectoral ministries and include nature conservation in their responsibilities
	b) Identification of complementary, supplementary, pre-conditions, synergy and joint action roles of agencies and status of implementation	Different decisions of the Coordination Council and the Coordination Committee	
	c) Procedure of maintaining coordination between sectoral policies and strategies mentioned in Annual and Periodic Planning Guidelines and status of implementation	Procedure and guidance document	
	d) Issues of maintaining coordination between sectoral agencies and procedures mentioned in annual and periodic plans and programmes of sectoral agencies and status of implementation	Material published by sectoral agencies	
	e) Status of fulfilling the responsibility of coordination for integrating nature conservation into programme planning and implementation	Material published by sectoral agencies	
<p>Strategic pillar 4: Valuing and accounting ecosystem goods and services</p> <p>Output: Apart from direct revenue income from conservation while assessing achievements of conservation efforts and deciding investments in conservation, procedure for valuing and accounting ecosystem goods and services and clear guidance established and mainstreamed.</p>	a) Status of identification of ecosystem goods and services, valuing and accounting procedure formulation and use	Guidance on Valuing and Accounting Ecosystem Goods and Services published by the Ministry of Finance	<ul style="list-style-type: none"> There shall be meaningful participation of the private sector in the development and implementation of valuing and accounting ecosystem goods and services system
	b) Inclusion of the procedure of valuing and accounting ecosystem goods and services in annual and periodic planning guidelines and status of implementation	Different plans, programme and project documents	
	c) Status of the implementation of valuing and accounting ecosystem goods and services in development investment proposals	Project document	
	d) Status of the use of valuing and accounting ecosystem goods and services in the national accounting system	Financial report	
<p>Strategic pillar 5: Accountability of sectoral agencies to conservation results</p> <p>Output: Accountability in conservation results ensured with reforms in work performance</p>	a) Inclusion in the annual and periodic planning guidelines of the areas identified for facing the challenges, addressing the issues, and minimisation of risks related with assumptions envisaged by the sectoral policies and strategies; and status of its implementation	Monitoring reports of the National Planning Commission and thematic and thematic sectoral agencies	The government shall give priority to responsibility and recognition in results of conservation
	b) Inclusion of the subject of nature conservation in the regular monitoring process and indicators of the national Planning Commission; and status of its implementation		
	c) Inclusion of the recommendations on the five pillars of this Strategic Framework and ways forward in the monitoring reports of the National Planning Commission; and status of its implementation		
	d) Inclusion of nature conservation accountability measures in the implementation of the development programmes of the sectoral agencies		

Table 5: Brief log frame of Nature Conservation National Strategic Framework for Sustainable Development Period of Framework: 2015-2030

Narrative summary	Indicators	Means of verification	Assumptions
<p>Activity</p> <ol style="list-style-type: none"> Expenditure on preliminary activities pursuant to Section 5.3 to bring this Frame in implementation by the National Planning Commission Facilitation expenditure on the implementation of programmes to be given priority by thematic and sectoral agencies pursuant to Table 6 	Investment	<p>For Framework implementation, Rs 800 million for 16 years pursuant to Annex 20 for conducting activities, capacity building, facilitation and production of dissemination material</p>	

4.8 Programmes that need to be given priority for integrating nature conservation into development efforts

The programmes that need to be given priority by the concerned agencies for integrating nature conservation into development efforts through the findings of review and phase-wise consultations are presented in Table 6. These programmes will be formulated and implemented in line with the policies and strategies of sectoral agencies. Such programmes to be conducted by sectoral agencies

have been ranked as 'high', 'medium' and 'low' to show their relationships with the strategic pillars. Furthermore, the agencies responsible for implementing them are presented as principal responsible agencies and supporting agencies. These agencies will apportion responsibilities among the divisions, departments, regional and district-level agencies, and these agencies will formulate necessary activities within these programmes on an annual basis and implement them.

Table 6: Programmes that need to be given priority by the agencies concerned for nature conservation integration into development efforts											
Sectoral activities					Related strategic pillars					Responsibilities	
					Mainstreaming	Harmonization	Coordination and facilitation	Ecosystem services valuing and accounting	Accountability	Principal agencies	Supporting agencies
1. Forest											
Policy reform											
1)	Make arrangement for a decision-making system by analysing environmental services and social costs and benefits while deciding changes in forest land use	H	M	L	H		H		Ministry of Forests and Soil Conservation (MoFSC)	NPC	
2)	Discourage the trend of settling displaced and landless people in the forest area	H	H	H					MoFSC	MoF, NPC, MoLRM	
3)	Promote and sustainably use herb-based green enterprises	H			H				MoFALD, MoAD, private sector, community-based forest groups (CBFGs)		
4)	Promote good governance practices in forest management	H					M		MoFSC	MoFALD	
5)	Arrange to fix the revenue system applicable to timber and non-timber forest products on a demand basis			H			M		MoFSC	MoCS, MoF	
6)	Conduct strategic environmental review while formulating and revising sectoral policies and strategies	H	H	H					MoFSC	NPC, related ministries such as MoAD, MoFALD, Molr, MoEn etc	
7)	Maintain consistency between forest-related acts and other sectoral agencies' acts, rules and responsibilities		H	M		M			MoFSC	MoFALD, MoLJPA, MoAD, Molr, MoEn, etc	
8)	Attract investment of the private sector for forest management	H		H					MoFSC	Mol, MoF, private sector	
9)	Formulate soil and watershed conservation policy								MoFSC	MoEn, Molr, MoFALD	
Programme/implementation											
10)	Effectively use suggestions of environmental impact assessment	H	M	L	H				Ministry related to plans, private sector, MoFSC	MoSTE	
11)	Improve and rehabilitate the degraded forest area				H		M		MoFSC	MoFALD, CBFGs, private sector	
12)	Sustainably supply forest products and sustainably use forest resources by adopting scientific forest management tools	H		M					MoFSC	MoCS, private sector, CBFGs	

13)	Promote, continue and build the capacity of community-based management of forests, pasturelands and wetlands				H	H	MoFSC	MoAD, MoFALD
14)	Reduce conflict between human and wildlife						MoFSC	Local bodies, CBFGs
15)	Manage open grazing and promote the community-based management system				H	H	MoFSC	MoAD, CBFGs
16)	Bring the illegal enterprises being operated in the Churia within the ambit of the law							
17)	Carry out upgrading, registration and integrated management of watersheds				H	H	MoFSC	MoAD, local bodies
18)	Garner local communities' participation in soil and watershed conservation and sustainably manage soil				H	H	MoFSC	MoFALD, MoAD, Molr, MoEn etc
19)	Enhance ownership and accountability of local communities by coordinating in soil and watershed conservation				M	H	MoFSC	MoFALD
20)	Conserve the upper layer of land				M	M	MoFSC	MoAD
21)	Identify and manage wetlands of national and international importance				H	H	MoFSC	MoFALD, Molr, MoAD, MoEn, MoCTCA, etc
22)	Conserve and sustainably use wetlands					M	MoFSC	MoFALD, Molr, MoAD, MoEn, MoCTCA, etc
23)	Conserve and manage soil and water in an integrated way				H	H	MoFSC	WEC, MoAD, Molr
	Monitoring/regulation							
24)	Ensure effective implementation and monitoring of the provision of ploughing back a part of the profit earned through use and sale of forest resources in the forest sector itself.	H				H	MoFSC	NPC, MoFALD, private sector, CBFGs
25)	While handing over the land of the forest area for other purposes, strictly implement and monitor the provision of planting trees in other areas, covering the area equal to the forest area and ensuring the same number and combination of trees species.	H			M	H	MoFSC	CBFGs, private sector
26)	Regulate the encroachment of forests, unauthorised collection and excavation of forest resources by effectively enforcing laws	H				H	MoFSC	MoFALD, MoHA, CBFGs
27)	Monitor valuing and accounting of ecosystem services obtained from forest conservation and development					H	MoFSC	Private sector, CBFGs, conservation partners
28)	Take legal action against illegal enterprises being operated in Churia and the forest area, and regulate the illegal export of stones, gravels and sand, and open grazing.	H				H	MoFSC	MoHA, local bodies, CBFGs
	Awareness raising /capacity building						MoFSC	

29)	Build capacity at local and district levels for effective implementation of forest-related rules and laws	H			M			MoFSC	MoLJPA, NPC
30)	Increase the number of skilled human resources with practical knowledge in government and non-government agencies	H			M			MoFSC	NPC, Ministry of General Administration (MoGA), private sector, conservation partners
31)	Raise awareness of civil society and local people regarding Churia area conservation, pasture and grassland management	H						MoFSC	MoAD, private sector, conservation partners
2	Biodiversity and ecosystem								
	Policy reform								
1)	As there has been a trend of damaging natural greenery during road construction, make arrangement for declaring green belts at the border of such roads							Ministry of Federal Affairs and Local Development (MoFALD), Ministry of Physical Infrastructure and Transport (MoPIT)	MoFSC, MoPIT, MoHA
2)	While implementing urbanization and settlement expansion programmes, ensure that they have no negative impact on the habitat of specific species of flora and fauna	H			M			MoPIT	MoFSC, NPC
3)	Protect traditional crops and livestock and their varieties and breeds from being extinct by gradually transforming food grant given in remote areas into local food grain production							MoFALD	MoAD, MoCS, NGOs concerned
4)	Increase responsibility toward conservation by formulating joint plans and bringing harmony in the priorities of line agencies and VDCSS							MoFALD	NGOs concerned
5)	Identify and establish the conservation area of endangered species							MoFSC	MoFALD, MoAD
6)	Make community-managed forests in the mid hills, which are underrepresented in terms of conservation area, especially in corridors with greater diversity, more conservation oriented							MoFSC	FECOFUN, CBFGs
7)	Adopt the concept of a uniform and sound ecosystem for nature conservation with transboundary and regional support by addressing transboundary issues							MoFSC	NPC, MoAD
	Programme/implementation								
8)	Document traditional knowledge and skills on biodiversity conservation	H						MoFSC	MoCTCA, Agriculture and Forestry University
9)	Study and identify properties of species listed as endangered	H			M			MoFSC	MoAD, Universities

10)	Document contributions made by indigenous traditional knowledge, skills and practices to biodiversity and sustainable agriculture	H			M				MoFSC	MoWCSW, MoAD, Universities
11)	Develop a specific plan of conservation of flagship species	H							MoFSC	National Trust for Nature Conservation (NTNC), World Wildlife Fund (WWF)
12)	Give priority to the conservation of varieties and breeds to be conserved in the Gene Bank		M		H				MoAD	LI-BIRD, NGOs concerned, private sector
13)	Promote a Community Seed Bank	H			H				MoAD	MoFSC
14)	Biodiversity strategy should also contribute to the conservation of microorganisms and species				H				MoFSC	MoAD, MoSTE, MoI, MoIrr, MoEn
15)	Give priority to ensuring biological corridors for unhindered movement between major habitats (both terrestrial and aquatic)				H		M		MoFSC	MoFALD, MoAD
16)	Ensure unhindered movement of aquatic animals in at least three rivers that are important from conservation point of view		H		H		M		MoFSC	MoFALD, MoEn, NTNC, WWF
17)	Promote agro forest, private forest and unconventional energy sources in order to reduce pressure on natural habitats				H				MoFSC	MoAD, MoEn, MoSTE, NGOs concerned, private sector
18)	Establish a National Biodiversity Information Management System and strengthen a National Clearing House Mechanism	M					H		MoFSC	MoF, MoAD, donor agencies
19)	Document and register major biological and cultural heritages	H						M	MoFSC	MoAD, MoCTCA, Universities
20)	Document locally available species	H						M	MoFSC	MoAD
21)	Conserve beneficial insects and insectivorous birds	H					H		MoFSC	MoAD, Bird Conservation Nepal (BCN), NGOs concerned
22)	Identify and conserve ecosystems						H		MoFSC	MoAD, MoSTE, NGOs concerned
23)	Regulate habitat loss caused by forest encroachment						H		MoFSC	MoSTE, MoFALD
24)	Effectively implement strategies like the Biodiversity Strategy and Action Plan (2014-2020), the Agriculture Development Strategy 2014		M		H				MoFSC, MoAD	NPC, all ministries and agencies
25)	Translate the system of ecosystem services valuing and accounting into practice while deciding about investment in conservation	H					H		MoF	All ministries
26)	Take the control of widely spread invasive species like <i>Parthenium</i> forward as a national programme	H					H	L	MoFSC	NPC, MoAD
27)	Coordinate between research and policy and promote policy research		H		M				MoFSC	NPC, NARC, Universities
28)	Resolve conflict between human and wildlife		H		H			H	MoFSC	NPC, MoHA
	Monitoring/regulation									

29)	Monitor and regulate the use of insecticides and other pesticides		H	M		H	MoAD	NPC
30)	Reduce the use of chemical fertilizers and pesticides and their impact on aquatic animals		H			H	MoAD	MoFALD, MoHP
31)	Regulate genetically modified organisms and enhance knowledge about them		M	M		H	MoAD	MoFSC
	Awareness raising /capacity building							
32)	Enhance knowledge about biodiversity through surveys and research	H		M			NARC, Department of Forest Research and Survey (DoFRS), Universities	MoF, other agencies concerned
33)	Include nature conservation and environmental education in all levels of education	H		M			Ministry of Education (MoE)	Universities
34)	Institutionally strengthen the quarantine programme and build the capacity of human resources	H		M			MoAD, Department of Livestock Services (DLS)	MoF, MoFSC
35)	Conservation of species like honeybee, which supports on pollination system and ecosystem services, their habitat conservation and implementing awareness building programmes	H		H	H	M	MoAD, DLS	Universities, training centers
3.	Agriculture sector							
	Policy reform							
1)	Incorporate the agriculture-related policy provisions in the climate policy and other policies into the current agriculture policy.	H		M			MoAD	NPC, MoSTE
2)	Establish an Agro biodiversity and Nature Conservation Unit in the Department of Agriculture, Department of Livestock Services and Nepal Agriculture Research Council (NARC) and assign district-level human resources responsibility regarding this	H		M			MoAD	NPC, MoGA, MoF
3)	Arrange for environmental examination ^L of commercial agriculture pocket areas	H		M	H	L	MoAD	MoSTE, NPC
4)	Gradually reduce the food grain transportation subsidy being provided in mountain and remote mountainous areas and change the transportation subsidy budget into production subsidy		H	M		M	MoAD	MoCS, local bodies
5)	Address factors that cause loss to soil fertility of agriculture land as a result of soil degradation and landslide			M	H		MoAD	MoLRM, MoFSC
6)	Arrange for disseminating imported seeds, breeds and technology only after testing them for at least one year	H		M		L	MoAD	MoCS, Seed Entrepreneurs' Association of Nepal (SEAN)

^L As farmers cultivate in small areas individually while expanding the agricultural production pocket area, they do not fall within the standards of this environmental impact review. However, certain pockets seem to fall under these standards such as potato, broiler chicken, and commercial pockets of hybrids.

7)	Encourage organic farming and environment-friendly Agriculture systems	H		M	L		MoAD	MoSTE, Agriculture Enterprise Centre (AEC), farmers' cooperatives
8)	Govern the feminisation of the agriculture sector and scarcity of labour, encourage mechanization for the commercialization of agriculture	H		M		M	MoAD	MoSTE, MoI, NARC
9)	Introduce a provision that the tiller cannot claim tillers' right when a land is given to others for cultivation to ensure that land does not remain fallow	H		H			MoAD	MoLRM, local bodies
	Programme/implementation							
10)	Expand the use of improved varieties and breeds that have been developed from the use of local agriculture genetic resources in short and long terms	H		H		M	MoAD	MoSTE, private sector, farmers' cooperatives, NGOs concerned
11)	Manage wildlife (monkey, rabbit, boar and porcupine) that have become harmful as a result of damage to their habitats	H		H		M	MoAD	MoFSC, MoHA., community forests
12)	Discourage uncontrolled farming systems characterized by a lack of crop rotation and use of excessive digging and ploughing and reduce dependence on, and use of, imbalance chemical fertilizers and pesticides	H		H			MoAD	MoSTE, I/NGOs, farmers' cooperatives
13)	Arrange the supply of organically produced food as per demand	H		H			MoAD	MoCS, AEC
14)	Manage decreasing agriculture land and soil fertility and increase soil fertility	H		M			MoAD	MoI, MoCS, NARC, Agriculture and Forestry University, private entrepreneurs
15)	Address the impact of climate change on agriculture	M		H			MoAD	MoSTE, NGOs concerned
16)	Manage pasture land sustainably		H	M			MoAD	MoFSC, dairy cooperatives, livestock raising groups
17)	Develop and expand a Community Seed Bank		H	H			MoAD	MoFALD, LI-BIRD, seed producers' cooperatives
	Monitoring/regulation							
18)	Regulate the use of hybrid and improved varieties and breeds that have been disseminated in an unauthorized way			L	H	H	MoAD	MoI, MoCS, agriculture entrepreneurs, farmers' cooperatives
19)	Strictly regulate the use of insecticides and other pesticides			L	H	H	MoAD	MoI, MoCS, private sector, civil society
20)	Regulate inedible things in food grains and the residue of excessive and unauthorized use of antibiotics being used in livestock feed and health			L	H	H	MoAD	MoI, MoHP, users' cooperatives, Federation of Nepalese Chambers of Commerce and Industry (FNCCI)
21)	Monitor/regulate initial environmental examination and environmental impact assessment					M	MoAD	MoSTE, MoFALD, MoPIT, civil society

	Awareness raising/capacity building												
22)	Raise people's awareness regarding the use of GMO varieties and breeds and their potential negative impact												MoHP, MoSTE, users' cooperatives
23)	Raise people's awareness about the contributions of local agriculture genetic resources to sustainable agriculture production, climate adaptation and ecosystem services	H											MoSTE, farmers' cooperatives, civil society
24)	Raise awareness in communities/farms about the preparation and method of using organic and farm yard manure	H											MoSTE, NGOs concerned, farmers' cooperatives, farmers' groups
25)	Strengthen and build the capacity of agriculture human resources in the areas of conservation knowledge	H											MoLRM, NPC
26)	Implement awareness raising programmes to promote organic farming and Neglected Underutilised Species (NUS) commercialisation for agro-diversity conservation and provide priority to agro-tourism	H											MoFALD, NPC
4.	Development of physical structure and environment												
	Policy reform												
1)	Declare some watershed areas as UNESCO geoparks as per UNESCO recommendations	M											MoE, local bodies, NTNC, MoFSC, civil society
2)	While constructing physical infrastructures, conserve those natural resources that have no alternatives (for example, the proposed railway that passes through the Chitwan National Park)	H											MoFSC, MoSTE, civil society, transport entrepreneurs
3)	While constructing roads, build slopes in such a way that landslides can be prevented and make provision for compulsory compliance with the suggestions offered by engineers and geologists, as well as those mentioned in the environmental impact assessment	H											MoSTE, NGOs, local bodies
4)	Give priority to environment-friendly transport development (plant trees, protect soil, not to pollute and build tunnels in unstable slopes)	H											MoFALD, MoSTE, local bodies
5)	Encourage those motor vehicles that use alternative energy (especially in urban areas)	H											
6)	Develop and construct residences that consume less energy in an effective way	H											MoEn, local bodies
7)	While constructing large physical infrastructures, prepare a plan by mentioning required construction materials, sites for excavation, water sources, solid waste management areas, etc	H											MoI, MoEn, MoIrr, Ministry of Urban Development (MoUD), Construction Entrepreneurs' Association

8)	Introduce a provision for extracting sand and gravels in rivers only from a specified pond-like structure of certain standards				H				M	MoFALD	MoI, DDCs, VDCs, municipalities
9)	Review the labour use policy in the construction of rural roads	H			L				M	MoFALD	MoPIT, NPC
10)	To enhance the coordination of agriculture and irrigation sub-division offices, introduce a provision for establishing at least one irrigation sub-division office in every district	H			L					MoI	MoAD
11)	Introduce a provision for paying for pollution management by pollutants themselves	H			M				M	Municipalities	MoSTE, local bodies
12)	Make electricity transmission lines passing through the forest area higher than average trees in order not to cut trees in the forest		H		H					MoEn	MoFSC, MoSTE
	Programme/implementation										
13)	While constructing a dam in a river, arrange a fishladder for up and down movement of aquatic species from the dam		H		M		M			MoPIT, MoEn	MoSTE, Nepal Electricity Authority, DDCs, VDCs, municipalities
14)	Develop and implement standards for drainage, land fill sites, open areas, underground water recharge, etc in urban areas		H		M				M	MoUD	MoSTE, MoUD, Underground Water Development Board (UWDB)
15)	Cause to comply with environment assessment activities by sanctioning budget in time for the construction of physical structures				H				M	MoPIT	MoF, local bodies
16)	For the management of pollution caused by the use of fossil fuel like carbon- emitting petroleum products and coal, introduce a provision to impose tax on the price of such fuel and invest this tax revenue in the management of air pollution			H	M				M	MoF	MoSTE, local bodies
17)	Prepare environmental assessment-related documents of all projects in Nepal, make them available to all the VDCs, municipalities and DDCs concerned, and arrange to post them in the website			H	M				M	All ministries	MoSTE, local bodies
18)	Coordinate between the local government and the divisional offices of road, irrigation and water supply				H				M	All ministries	Local bodies
19)	Comply with construction standards in systematic urbanization and settlement expansion plans (especially for earthquake disaster management while constructing high buildings)						M			MoPIT	Department of Mines and Geology (DoMG), Municipalities
20)	Promote green belts while constructing roads (including those built on the bank of canals)			H	M					MoPIT	MoFALD, MoFSC
	Monitoring/regulation										

21)	Control the encroachment of temples, mosques, monasteries, river banks, inns, houses of pilgrims, etc in the course of urbanization				H	H	MoPIT	MoFALD, district offices, DDCs, VDCs, municipalities, Guthi Corporation
22)	Ascertain that solid waste in urban areas, especially disposed from hospitals, is properly managed, and monitor it			M	H	MoHP	MoSTE, DDCs, municipalities, district office	
23)	Strictly enforce the provision of environmental assessment	M			H	All ministries	MoSTE, local bodies, NGOs, civil society	
24)	Ensure that there is flow of at least 10 per cent of water in the rivers with embankment even during the main dry season	M			H	MoEn	MoFALD, MoSTE, local bodies, NGOs	
25)	While developing infrastructure ensure that there is no loss of natural and cultural heritages of national importance			M	H	MoPIT	MoSTE, MoCTCA, Department of Archaeology	
26)	Make provision requiring the contractor constructing the road to monitor any obstructions in the natural water course for a certain period of time			H	H	MoPIT	MoFALD, local bodies	
27)	Monitor the implementation of the provision of planting trees if existing trees are felled in the process of development interventions			M	H	MoFALD	MoPIT, MoSTE	
	Awareness raising/capacity building							
28)	In order to address the adverse impact of development interventions to be carried out at the local level, raise awareness and build capacity at the local level	H		M	M	MoPIT	MoFALD, NGOs	
5.	Water resource and disaster risk management							
	Policy reform							
1)	Manage green belts along the bank of rivers or near natural watersheds	H		H	H	MoEn	MoSTE, local bodies	
2)	Conserve the riparian habitat of flora and fauna located along the bank of rivers or near natural watersheds		H	H	H	MoEn	MoFSC, MoSTE, local bodies	
3)	Classify rivers or specified area or length of the river into (i) for hydropower generation, (ii) for tourism promotion, (iii) for aquatic biodiversity conservation, and (iv) for multi-purpose use			H	H	Water and Energy Commission (WEC)	MoEn, MoIr, MoAD, MoFSC, MoFALD, MoUD, MoCTCA, Rafting Association (RA), River Conservation Trust (RCT)	
4)	Introduce provision for maintaining the upstream areas of the Himalayan rivers in their original natural conditions without any disruption for certain length. (For this purpose, identify such rivers and areas.)	H			H	WEC	MoFALD, MoCTCA, RCT	
5)	Introduce provision for allotting shares at concessional rate in order to mobilize people's participation in hydropower projects and thus build a sense of ownership among the local people		H	M		MoEn	WEC, MoFALD	

6)	Make provision for alternative energy to reduce dependence of poor, disadvantaged and excluded communities on the forest		M	H			MoEn	MoWCSW, MoFALD
7)	Introduce provision for integration of conservation into development by reviewing the risk of different natural disasters and paying attention to nature conservation	H	M	H			Ministry of Home Affairs (MoHA), MoFALD, MoPIT, MoFSC	MoSTE, MoWCSW, MoUD, civil society concerned, community organizations
	Programme/implementation							
8)	Implement plans being based on underground water recharge system research	H		H			MoEn, Molr	MoAD, WEC
9)	Rehabilitate those old ponds that are being sedimented	H		M			MoEn	Molr, MoFALD
10)	As disaster risks and nature conservation are excessively interrelated, mainstream the issues of disaster risk in nature conservation	H		H			MoHA	MoSTE, MoAD, MoWCSW, civil society concerned, community organizations
11)	Implement underground water recharge plan	H		H			MoEn	MoSTE, MoFSC, MoAD, MoFALD
12)	Introduce provision for making puddles in the forest area for wildlife and birds			H			MoFSC	MoSTE, MoFALD
13)	Harvest rain water and use it at household and community levels						MoEn	
14)	Design and implement programmes on water resource utility and management for water resource management and development	H		H			MoEn, Molr, MoAD, Department of Water Induced Disaster Prevention (DoWIDP)	MoFSC, MoFALD, MoCTCA, RA, RCT
15)	Implement rain water harvest plan	H		M		M	MoEn	MoFALD
16)	Conduct national-level studies and research on risky glacier lakes			H		H	MoEn	WEC, MoSTE
17)	Make policy provision on people's awareness, warning system and risk reduction regarding the risky glacier lakes	H		H			MoEn	WEC, MoSTE
	Monitoring/regulation							
18)	While formulating a underground water irrigation plan, monitor underground water level, the quantity and quality of water that can be drawn, open areas required for recharge, potential sources of pollution and inclusion of plan of measures adopted for reducing negative impact					H	Molr	MoEn, MoSTE, MoFALD
19)	Monitor the compliance with proper standards in solid waste management of the industrial area			M		H	MoEn, Mol	MoSTE, MoFALD
20)	Monitor the pollution in water reservoirs caused by agriculture and industries			M		H	MoEn	MoSTE, MoFALD
21)	Regulate encroachment in water reservoirs		M			H	MoEn	MoSTE, MoFALD

	Awareness raising/capacity building																	
22)	Raise awareness about watershed conservation	H			M					MoEn				MoFSC				
23)	Reduce the possibility of landslides as a result of the collection of rain water in ponds in the hill area	H		M						MoEn				MoFALD, MoHA				
6.	Energy																	
	Policy reform																	
1)	Emphasis on the development of bio energy technologies that do not emit CO ₂	H			M					MoSTE				MoFSC, DDCs, VDCs, municipalities, development partners				
2)	Make provision for additional subsidy in the use of improved cooking stoves	H			M					MoSTE				Local bodies				
3)	Promote the use of bio-gas	H			M					MoSTE				Local bodies, development partners				
4)	Disburse loan for rural energy	M		H						MoSTE				MoEn, DDCs, VDCs, municipalities, development partners				
5)	Review the practice of exempting hydro-energy projects from environmental examination			H						MoEn				MoSTE, NPC				
	Programme/implementation																	
6)	Effectively implement the Water Resource Act	H								MoSTE	M			DDCs, VDCs, municipalities, private sector				
7)	Integrate energy into sectoral plans	H				M				MoSTE				MoEn, DDCs, VDCs, municipalities				
8)	Link home-installed renewable energy to the national grid and use benefits thereof																	
9)	Link renewable energy with rural processing industries					H				MoSTE				MoEn, DDCs, VDCs, municipalities				
10)	Include the accounting of, and investment in, indirect benefits from the use of renewable energy in the decision-making process					M				MoSTE				MoEn, DDCs, VDCs, municipalities				
	Monitoring/regulation																	
11)	While constructing a dam for hydropower, monitor the construction of a fish ladder							H		MoSTE				All ministries, hydropower company				
12)	Monitor the compliance with legal provision for releasing at least 10 per cent of water after constructing a dam in a river	M				M				MoSTE				MoFALD, MoEn, MoFSC, hydropower company				
13)	Monitor the use of underground water, recharge and drainage in large housing projects in the urban area					M				MoSTE				MoUD, local bodies				
	Awareness raising/capacity building																	
14)	Build the capacity of Energy Section at DDCs	H				M				MoSTE				MoFSC, local bodies				
15)	Conduct awareness-raising programmes on the use of renewable energy	H				M				MoSTE				MoEn, local bodies, development partners				

7.	Tourism									
	Policy reform									
1)	Formulate a separate policy on building large star-rated hotels in parks and buffer zones	H			M				MoFSC	MoCTCA, Hotel Association Nepal (HAN)
2)	In order to attract tourists, promote home stay tourism by converting existing houses into traditional ones instead of building new houses	H							MoCTCA	MoFALD, MoAD, Nepal Tourism Board (NTB)
3)	Review the policy on construction of motor roads in trekking routes	H		M	M				MoCTCA	MoPIT, Trekking Agents' Association Nepal (TAAN), Nepal Mountaineering Association (NMA)
4)	As a result of growth in tourism industry, adopt a policy of not allowing building of large hotels with the use of cement in parks and protected areas	H				M			MoCTCA	MoFSC, MoPIT, HAN
5)	Encourage and promote the use of renewable energy in tourism industry				H		M			
	Programme/implementation									
6)	While evaluating the nature sensitivity of tourism promotion programmes, mention measures for pollution reduction in the planning guidelines	H					L		MoCTCA	NPC, MoFALD
7)	Manage motor roads and tourist trails in such a way that they remain distinct from each other	H		M					MoPIT	MoCTCA, TAAN
8)	Conduct awareness-raising programmes on the importance of nature conservation for tourism development at district and community levels	H					L		MoCTCA	Ministry of Information and Communication (MoIC), NTB
9)	Document local heritages						H		MoCTCA	MoE
10)	Implement Tourism Master Plan	H			M				MoCTCA	MoFALD, MoFSC
	Monitoring/regulation									
11)	Ensure re-investment of a portion of the revenue from tourism in the tourism development of the same area and monitor it.	M					H		MoCTCA	MoFALD
12)	Monitor the harmony of tourism with customs, cultures and livelihood base of women, Dalits and indigenous nationalities in tourist and natural/cultural resource conservation programmes			M	M		H		MoCTCA	MoWCSW, MoFSC
13)	Regulate harassment of wildlife by tourists during their observation of the same						H	M	MoCTCA	Tour operators
14)	Regulate, reduce and monitor negative impact of tourists on regular behaviour of wildlife						H	M	MoCTCA	MoFSC

15)	Awareness raising/capacity building Mobilize participation of communities and develop their capacity at the community level	H			H		M	MoCTCA	Local bodies, private sector, tourism entrepreneurs
8.	Land and regional plan								
	Policy reform								
1)	Formulate and implement land use laws	H			M			Ministry of Land Reform and Management (MoLRM)	MoFALD
2)	Promote mines as an industry instead of piecemeal contracts	H			M			MoFALD	MoLRM
3)	Conduct a <i>chaklabandi</i> (land pooling) programme to prevent agriculture land from being fragmented	H			M			MoLRM	MoFALD, MoAD
4)	Earmark a specific area for industries	H				M		MoLRM	MoI, FNCCI, Federation of Nepal Cottage and Small Industries (FNCSI), Association of Chambers of Commerce (ACC)
5)	The Industrial Policy should specify the types of land in which industrial estates are to be established.	H				M		MoI	MoLRM, FNCCI, FNCSI, ACC
6)	Focus agriculture mechanization research on small and marginalised farmers' problems in mountainous rural areas	H			H			MoAD	MoLRM
7)	Formulate local-level land use plans and enforce them	H			H			MoLRM	NPC
8)	Integrate provisions of the land use policy into the local planning process	H			M			MoLRM	NPC, MoFALD
9)	Adopt the planning policy of nature conservation along with development being based on the norms and values of community-based organizations	H			H			MoLRM	NPC, MoFALD
10)	Ensure local resource tenureship of the people by addressing the issues of community-based informal organizations	H			H			MoLRM	NPC, MoFALD
11)	Connect nature conservation to livelihood issues and ensure that conservation activities do not have a negative impact on livelihood	H			M		H	MoLRM	NPC, MoAD, MoFSC, MoFALD
	Programme/implementation								
12)	Enforce national land use policy for monitoring the construction of roads and other routes that pass through cultivated areas and national parks	H			H		H	MoLRM	MoPIT
13)	Effectively collect, process and manage land information	H			H		H	MoLRM	MoPIT, Central Bureau of Statistics (CBS), local bodies

14)	Effectively implement the Land-use Policy	H	M	M			MoLRM	MoFALD
15)	Apply land-use classification		H	H			MoLRM	MoFALD
16)	Plan integrated use of water resources	H		H			MoEn	MoFALD, MoI, Water Users' Association (WUA)
17)	Develop integrated land use plan	M		M			MoLRM	
	Monitoring/regulation							
18)	Monitor degraded agriculture land						MoLRM	MoAD
19)	Manage the expansion of residential areas and urbanization						MoUD	MoLRM, MoFALD
9.	Health							
	Policy reform							
1)	Review the geographic and ecosystem area subsidy and the environmental health policy						MoHP	MoSTE
2)	Make provision for parks in potential/appropriate open spaces	M	M	H	H	H	Municipalities, MoPIT	NPC, MoUD, MoFALD, local NGOs, community organizations
3)	Make provision to pay in lieu maintaining water hygiene	H	H	H	H	H	MoEn	NPC, MoFALD, local NGOs, civil society
4)	Widely disseminate knowledge and skills to be adopted for the safe use of pesticides in agriculture and give priority to the use of organic pesticides	H	H	H	M		MoAD	MoHP, MoFALD, local NGOs, schools, civil society
5)	Give priority to means of transport like bicycle, rickshaw by making special provisions on roads and ban on the plying of vehicles in the core area of the city	H	H	H	M	H	MoSTE	NPC, MoHP, MoFALD, MoI, Clean Energy Nepal (CEN), civil society
6)	Reduce air pollution by promoting public transport and means of transport that emit low carbon	H	H	H	M	H	MoSTE	MoI, MoHP, CEN
	Programme/implementation							
7)	Effectively implement the environmental health programme						MoHP	MoSTE
8)	Make provision for sufficient public toilets in all areas	H	H	M	H	H	MoFALD	MoCTCA, TAAN, local NGOs, schools, community, civil society
9)	Immediately have the amended Livestock Drug Act passed by Parliament and implement it	H	M				MoAD	NPC, civil society, NGOs
10)	Manage landless people residing in open spaces	M	M	M		M	MoFALD	MoLRM
11)	Make provision for emergency service in all hospitals	H	H	H	H	H	MoHP	MoHA, MoI, MoFALD

12)	Manage the disaster of climate-responsive diseases, including malaria, Japanese encephalitis, dengue and black fever transmitted by ever growing vectors as a result of climate change, and diseases caused by excessive cold or heat	H				H					MoHP	MoSTE, MoFALD, MoHA, local NGOs, schools, civil society
13)	Manage solid waste disposed from health service centres in accordance with the Health Guidelines	H	H	H	H	M	H				MoHP	MoFALD, MoSTE, Nepal Quality and Measurement Department (NQMD), local NGOs
14)	Conduct a programme that reduces household smoke	H	H	H	H	M	H				MoSTE	MoFALD, MoSTE, local NGOs, community organizations
	Monitoring/regulation											
15)	Monitor and reduce potential health problems caused by imported and translocated flora and fauna	M					H				MoAD, MoFSC	MoHP, MoSTE, MoFALD, I/NGOs concerned
16)	Improve urban food security			H			H				MoFALD	MoHP, MoSTE, MoFALD, I/NGOs concerned
17)	Monitor and reduce potential health problems of livestock and human beings caused by the loss of ecosystem					M	H				MoAD, MoFSC	MoHP, MoSTE, MoFALD, I/NGOs concerned
18)	Strictly monitor slaughter houses and meat			M			H				MoAD	MoHP, MoSTE, MoFALD, I/NGOs concerned
19)	Conduct surveillance of drinking water quality improvement and monitoring			M			H				MoEn	MoHP, MoSTE, MoFALD, I/NGOs concerned
20)	Monitor the effect of the use of pesticides on human health			M			H				MoAD	MoHP, MoSTE, MoFALD, I/NGOs concerned
21)	Conduct surveillance and control open defecation			M			H				MoFALD	MoHP, MoSTE, MoFALD, I/NGOs concerned
22)	Conduct surveillance and control the grazing of cattle at the source of water	M					H				MoFSC	MoHP, MoSTE, MoFALD, I/NGOs concerned
23)	Monitor hospital and industrial slurry management	M		M			H				MoFALD	MoHP, MoSTE, MoI (NQMD)
24)	Monitor and regulate agro-pesticide producers, distributors and agro vets	H		M			H				MoAD	MoFALD, MoHP
25)	Monitor the use of pesticides in food crops, vegetables and fruit	H		M			H				MoFSC	MoFALD, MoHP
26)	Monitor the environmental impact assessment of health service providers						H				MoHP	MoFALD, MoSTE, MoI (NQMD)
	Awareness raising/capacity building											
27)	Raise awareness about public health benefits from nature conservation	H		L							MoSTE	MoHP, MoAD, MoFALD

28)	Raise awareness and education among producers and users	H								MoAD	MoHP, MoAD, MoHA, MoSTE, MoFALD, I/NGOs concerned, civil society
29)	Raise public awareness about the impact of pesticide-applied food crops on human health	H	H	H	H	H				MoHP, MoAD	MoFALD, I/NGOs concerned, civil society
10.	Climate change										
	Policy reform										
1)	While formulating development plans, adopt climate adaptation and impact reduction processes	H		M						MoSTE	MoHA, MoAD, local bodies, NGOs
2)	Promote ecosystem-based adaptation at the community level	H			M					MoSTE	Local bodies, NGOs
3)	Promote technology and processes (renewable energy, REDD+, CDM) that reduce greenhouse gas	H			M					MoSTE	Local bodies, NGOs
4)	Encourage and promote green technology										
5)	Make provision for strategic environmental assessment		M	M	H					MoSTE	NPC
6)	Make provision to make the district-level Agro-forest and Environment Committee functional	H								MoSTE	
7)	Make provision to assess the contribution of local genetic resources to climate change adaptation in the investment process			M	H					MoSTE	MoAD, MoFSC, local bodies
	Programme/implementation										
8)	All development programmes to assess climate change risks	H		M						All ministries	NPC
9)	Conduct awareness-raising and practicable programmes in all levels (from centre to community) to incorporate climate change and measures of reduction of its negative impact into planning and implementation	H		M						MoSTE	MoFALD, development partners
10)	Conduct and promote a piloting programme for payment for ecosystem services	M			H					MoSTE	MoFSC, development partners
11)	Link value-adding small rural processing industries with renewable energy programmes			H	M					MoSTE	MoEn, Mol, development partners
12)	Implement the Environment-friendly Local Governance Framework 2070	H		M						MoFALD	MoSTE, local bodies
13)	Conduct research on climate change adaptation	H		M						MoSTE	MoFSC, MoAD, MoCTCA, TAAN, NMA
14)	Effectively implement the Climate Change Policy	H		M						MoSTE	MoFSC, MoAD, MoCTCA, development partners

	Monitoring/regulation												
15)	Establish tools for monitoring the impact of climate change on flora and fauna and monitor it		L						H	MoSTE			MoAD, MoCTCA, MoFALD
16)	Effectively monitor the issues of conservation		L						H	MoSTE			MoFSC, MoAD, MoCTCA, MoFALD
11.	Urbanization												
	Policy reform												
1)	Promote rural-urban partnership in order to create employment in villages and reduce the trend of retaining land fallow	H								Ministry of Urban Development (MoUD)			MoLRM
2)	Arrange emergency open spaces		M	H						MoUD			Municipalities
3)	Arrange fire extinguisher in required number and capacity			H									
4)	Arrange public parks (including drinking water and toilet)		M	H						MoUD			Municipalities
5)	Arrange routes and adequate spaces for emergency access to public buildings, especially school, college and hospital while constructing them	H		H					H	MoE			MoPIT, local bodies, private sector, NGOs
6)	Arrange toilets in public places	H							M	MoUD			Municipalities, VDCs
7)	Make provision to encourages urban agriculture and urban forest			H						MoUD			Municipalities, MoAD, MoFSC
8)	Make provision to encourage and promote the development of green economy in the rural area			H						MoUD			Municipalities, MoAD, MoFSC
	Programme/implementation												
9)	Develop urban infrastructure as per standards									MoUD			MoPIT, municipalities
10)	Develop environment-friendly open spaces and parks in the rural area									MoUD			MoSTE, municipalities
11)	Arrange large public transports that emit low carbon	H		M						MoUD			MoPIT, MoSTE
12)	Manage solid waste									MoUD			MoSTE, municipalities
13)	Manage rapid migration in the urban area									MoUD			MoPIT, MoLRM
14)	Monitor the situation of urban infrastructure and reduce adverse impact on the environment									MoUD			MoSTE, municipalities
	Monitoring/regulation												
15)	Regulate haphazard urbanization	H							H	MoUD			MoPIT, municipalities
16)	Regulate haphazard road construction and expansion of electricity transmission lines	H							H	MoUD			MoPIT, MoEn, municipalities
17)	Monitor urban solid waste management									MoUD			MoSTE, municipalities

18)	Regulate solid and liquid pollutants that enter into rivers and reservoirs	H																	MoSTE, municipalities, VDCs
	Awareness raising/capacity building																		
19)	Build capacity for emergency management																		MoSTE, municipalities
12.	Industrialization																		
	Policy reform																		
1)	Link nature conservation with science, technology and innovation-based industry development	H				H													Ministry of Industry (MoI), MoSTE
2)	Establish industry only after declaring a special economic estate and preparing a nature-friendly structure	M				H													MoF, MoPIT, MoSTE, FNCCI, FNCSI, ACC
3)	Impose/levy additional taxes on industries using fossil energy in lieu of causing carbon emission and invest the taxes thus raised in carbon accumulation.	M				M													MoEn, MoF, Alternative Energy Centre
4)	Promote green industry	H				M													MoEn, MoFSC, MoAD, Alternative Energy Centre
5)	Promote renewable and clean energy in order to reduce the use of fossil energy in industries	H				H													Alternative Energy Centre, FNCCI, FNCSI, ACC
6)	Arrange an environment-friendly industrial estate					H													MoSTE, FNCCI, FNCSI, ACC
7)	Apply the provision of initial environmental examination (IEE) and environmental impact assessment (EIA) also to industries that have been established before the provision of IEE and EIA came into force	H				H													MoI, NGOs, FNCCI, FNCSI, ACC
8)	Make provision requiring the private sector to spend a portion of its net profit on nature conservation					H													MoI, FNCCI, FNCSI, ACC
9)	Incorporate nature conservation into the social responsibility of industrial entrepreneurship	H				H													FNCCI, FNCSI, ACC
	Programme/implementation																		
10)	Ensure hospital and industrial solid waste management (processing)	H				M													MoSTE
11)	Formulate Industrial Entrepreneurship Act and Regulations	H																	
12)	Formulate Intellectual Property Rights Policy and implement it	H				M													MoI, FNCCI, FNCSI, ACC
	Monitoring/regulation																		

13)	Monitor the far-reaching effects of industry establishment on human health and reduce them				M	H	MoI	MoHP, FNCCI, FNCSI, ACC
14)	Monitor compliance with environmental standards		M		M	H	MoSTE	MoPIT, MoFALD
15)	Monitor the sustainability of raw material supply		M		M	H	MoSTE	MoCS, MoI, FNCCI, FNCSI, ACC
16)	Monitor the impact of industrial dust and smoke on the environment		M		M	H	MoSTE	MoI, FNCCI, FNCSI, ACC
17)	Strictly control the disposing of industrial solid waste and slurry in rivers, lakes and ponds		M		M	H	MoSTE	MoFALD, FNCCI, FNCSI, ACC
13.	Environment and pollution							
	Policy reform							
1)	Raise awareness about environmental standards	H					MoSTE	All ministries
2)	Impose tax on polluters	H	M			H	MoFALD	MoF
3)	Make provision for conducting at the local level also environmental assessment of programmes allocated directly to VDCs by the centre and approving them only after that		M	H			MoFALD	MoSTE
4)	To make the environment assessment process more effective, enhance involvement of the ministries concerned		H				MoSTE	NPC
5)	In the case of programmes directly allocated to the VDC by the centre, make provision for disbursing payment only after approval by the VDC	H	M				MoFALD	NPC, MoF
	Programme/implementation							
6)	Mandatorily hold public hearing on findings of the environmental assessment of all types of projects	M	H				MoSTE	All ministries
7)	Conduct result-oriented programmes by enhancing access to climate funding	M	H				MoSTE	All ministries
	Monitoring/regulation							
8)	Monitor the environmental assessment of local development programmes	M				H	MoSTE	Local bodies
9)	Strictly monitor the implementation of environment-related provisions					H	MoSTE	Local bodies
10)	In respect of projects that have not carried out environmental examination, regulate the process of directly formulating from the centre	M				H	MoSTE	NPC, MoF
11)	Regulate and monitor feasibility studies and environmental assessments in the construction of roads	M				H	MoSTE	Local bodies, MoFALD

12)	Regulate the increasing trend of the disposing of waste in rivers and ponds																			Local bodies, district offices	
13)	Monitor water pollution to be caused by the use of chemical fertilizers and pesticides in agriculture crops																			MoSTE	NAST, NARC, local bodies
14)	Effectively monitor the implementation of reduction measures of adverse impact suggested by environmental assessment																			MoSTE	Local bodies, district offices
	Awareness raising/capacity building																				
15)	Raise public awareness regarding environment conservation																			MoSTE	Local bodies
	14. Environmental education																				
	Policy reform																				
1)	For sustainable development, include nature conservation as moral education in all curricula of formal education																			MoE	MoSTE
2)	Make provision for mandatory inclusion of environment conservation in higher education of all technical education																			MoE	MoSTE, universities, training centres etc
3)	Ensure that public hearing is held in a public place through prior informing																			MoSTE	All ministries, MoFALD, local bodies
	Programme/implementation																				
4)	Extensively orient stakeholders by preparing education material on participatory conservation																			MoE	NPC, MoFALD, MoSTE
5)	Revise training programmes in the informal education sector, too by incorporating the subject on nature conservation integration																			MoE	All ministries, Nepal Administrative Staff College (NASC)
6)	Include nature/environmental education in farmer-level training programmes																			MoE	MoAD
7)	Include environmental education in all levels of the education system and strengthen it																			MoE	MoSTE, NPC
8)	Design a separate curriculum of environmental education for the local level and apply it																			MoE	All ministries, NPC
9)	Make environmental education and training programme practical																			MoE	NPC
10)	Make easily available environment conservation-related policies, rules, documents, etc to VDCs																			MoE	MoAD, MoFSC
11)	Orient on environmental standards and conservation programmes																			MoE	NPC, all ministries
12)	Include an independent monitor in a joint monitoring team																			MoSTE	NPC, local bodies
13)	Make conservation training skill oriented																			MoE	All ministries
	Awareness raising/capacity building																				

14)	Raise awareness about the adverse impact of chemical fertilizers and pesticides on agriculture land, water sources and human health	H	M				MoE	MoAD, MoEn, MoHP
15)	Raise awareness about demands for nature conservation-related programmes and budget at the local level	H	M				MoFALD	MoSTE, MoFSC
16)	Raise awareness about the knowledge of nature/payment for ecosystem services	H		M			MoE	MoFSC, MoAD, MoEn
17)	Increase environment-related practical knowledge as per curriculum at the school	H	M				MoE	MoSTE, local bodies
18)	To increase environmental education and awareness, arrange conservation mechanisms and skilled human resources	M	M				MoE	MoSTE, NPC
19)	Increase knowledge on the promotion of cultural heritages	M		M			MoE	Ministry of Information and Communication (MoIC), print and audio-visual media
15.	Nature conservation and poverty reduction							
	Policy reform							
1)	Maintain a balance in rural development and nature conservation	H	H			H	MoF	MoFALD
2)	Continue and promote the interrelations of natural resources like land, water and forest for agriculture	H				H	MoFSC	MoAD
3)	Make provision for obtaining maximum benefits from the opportunity of positive impact on livelihood of the poor as a result of the implementation of nature conservation programmes		H			H	MoSTE	MoFSC, MoAD, MoEn
4)	Arrange a nature conservation focal person in every agency	H	M				MoSTE	All ministries
5)	Ensure that settlement expansion does not affect cultural conservation		M			H	MoSTE	MoUD, MoCTCA
6)	Make local bodies more responsible for heritage conservation		H			M	MoSTE	MoFALD, MoCTCA
	Programme/implementation							
7)	Address rural livelihood issues	H				H	MoFALD	MoFSC, MoAD, local bodies, MoHA
8)	Make provision for controlling loss/damage from wildlife and reasonable compensation for such loss	H				H	MoFALD	MoFSC, local bodies, MoAD, MoHA
9)	Orient on the past and current state of cultural heritages	H				H	MoFALD	MoCTCA
10)	Document heritages in order to protect them from being extinct and encroached	H				H	MoCTCA	MoE
11)	Formulate effective policy and necessary guidelines in order to operate a coordination mechanism	H				M	MoE	NPC

12)	Mobilise organisations in participatory conservation activities											MoFSC, MoAD, MoEn, MoSTE
	Monitoring/regulation											
13)	Regulate the adverse impact created as a result of conservation programmes		M							H	All ministries	
14)	Monitor the loss of conservation-related traditional knowledge as a result of scientific conservation tools			M						H	All ministries	
15)	Monitor the extinction of our originality as a result of modernization			M						H	All ministries	
16)	Regulate the destruction of graveyards as a result of excavation of sand, gravels and stones in rivers and surrounding streams			M						H	MoFALD	
17)	Control encroachment in archaeological sites			M						H	MoCTCA	MoHA, local bodies
	Awareness raising/capacity building											
18)	Increase knowledge on heritage conservation				H						MoCTCA	MoE, local bodies
19)	Raise awareness not to destroy natural ponds, graveyards and inns while constructing physical infrastructure				H						MoCTCA	MoFALD, NGOs, civil society
20)	Increase knowledge and public awareness on the promotion of natural heritages				H						MoCTCA	Local bodies, NGOs
16.	Society and indigenous nationalities											
	Policy reform											
1)	Make provision to ensure community's prior rights to local resources and means										Ministry of Women, Children and Social Welfare (MoWCWSW)	Nepal Federation of Indigenous Nationalities (NEFIN), NGOS
2)	Increase youths' inclination towards culture			M							Ministry of Youth and Sports (MoYS)	Local bodies, NGOs
3)	Ensure access of the disadvantaged group to conservation outputs				M						MoWCWSW	MoFSC, MoAD, MoFALD
4)	Ensure equitable sharing of access to, and benefits from, conservation				M						MoWCWSW	MoFSC, MoAD, MoFALD
5)	Make provision for access to all kinds of herbs, ensuring use of herbs for indispensable purposes by some specific castes and local ethnic (for example, Guruwa, Amchi, Jhankri, Vaidya) groups in a sustainable manner										MoFSC	NPC, MoI, NEFIN, MoFALD
6)	Recognize the community rights to natural resources										MoFSC	MoFALD, local bodies, NGOS
	Programme/implementation											

7)	Ensure intellectual property rights of indigenous nationalities and local communities				H			MoWCSW	MoCTCA, local bodies, NEFIN
8)	Identify the disadvantaged, Dalit and indigenous peoples in area/location-specific protection programmes in a proper manner and increase opportunities and access for them, as well as advocate for it				H			MoWCSW	Local bodies, NEFIN
9)	To reduce negative perceptions towards conservation, conduct awareness-raising programmes by taking conservation as protection	H				M		MoFSC	MoFALD, local bodies, MoCTCA, MoFSC
10)	Increase access of indigenous nationalities to the conservation and promotion of natural resources like water, land, forest and mine							MoFSC, MoAD, MoEn, MoI	MoFALD, MoWCSW
11)	Document and promote traditional knowledge								
	Monitoring/regulation								
12)	Monitor the provision of releasing water downstream from the embankment in order to ensure livelihood of the river-dependent communities		H					MoEn	MoSTE, local bodies, civil society
13)	Ensure public participation in conservation					M		MoWCSW	MoFSC, MoAD, MoFALD
14)	To enhance participation, regulate intervention that has increased at the leadership level					M		MoWCSW	MoFSC, MoAD, MoFALD
17.	Gender and social inclusion								
	Policy reform								
1)	To prevent the adverse effect of physical infrastructure development on social traditions or reduce such effect, make legal and policy provisions					M		MoPIT	MoWCSW, MoCTCA
2)	Ensure equal and active participation of women, Dalits and indigenous nationalities by making legal provisions	H						MoWCSW	MoFALD, local bodies, Dalits' Association (DA), NGOs, Women's Association (WA), NEFIN
3)	As natural resource conservation and management is associated with the language, culture, script, traditional knowledge and skills of indigenous nationalities, integrate their conservation and promotion	H						MoWCSW	MoFSC, MoFALD, local bodies, NGOs, NEFIN
4)	Incorporate the Community Forest Development Guidelines' stipulation of mandatory spending of at least 35 per cent of the revenue in livelihood improvements of disadvantaged members of the group in the Act itself	H						MoWCSW	MoFSC, MoLJPA, FECOFUN

5)	Ensure that women, Dalits and Indigenous nationalities use forest resources they have been using traditionally	H				M	MoWCSW	MoFALD, local bodies, DA, NGOs, WA, NEFIN
6)	Prepare message materials of gender and social inclusion in nature conservation compatible with the literacy/educational level of the group concerned	H	M				MoWCSW	MoE, MoFSC, MoAD, MoEn, MoFALD
7)	Make special provision for enhancing meaningful participation of women and other disadvantaged groups in nature conservation-related decision-making processes	M	M				MoWCSW	MoFALD, MoFSC, MoAD
	Programme/implementation							
8)	Address livelihood issues of women, Dalits, indigenous nationalities and local communities in the nature conservation programme	H				M	MoWCSW	MoFALD, local bodies, DA, NGOs, WA, NEFIN
9)	Enhance the participation of women, indigenous nationalities and local communities in natural and cultural resource conservation	M	M				MoWCSW	MoFALD, MoFSC, MoCTCA
10)	Develop and disseminate environmental education material through the local media	H	M				MoWCSW	MoFALD, MoSTE
11)	To determine livelihood programmes at the local level, involve women, Dalits and indigenous nationalities	M	M				MoWCSW	MoFSC, MoAD, local bodies, DA, NGOs, WA, NEFIN
12)	Sensitize authorities of all levels regarding gender and social inclusion in nature conservation	H	M				MoWCSW	MoFSC, MoAD, MoFALD, local bodies
13)	Ensure the message of provisions for gender and social inclusion among target groups	M				M	MoWCSW	All ministries
14)	Build the capacity of women and other disadvantaged groups regarding the payment for ecosystem services			H			MoWCSW	MoFSC, MoAD, local bodies, NGOs
	Monitoring/regulation							
15)	Mandatorily conduct gender audit of budget and programmes					H	All ministries	MoWCSW, local bodies, DA, NGOs, WA, NEFIN
16)	Make provision of meaningful participation in programmes, too as per policy					H	All ministries	MoWCSW, local bodies, DA, NGOs, WA, NEFIN
17)	Ensure equitable access to benefits from conservation	M	M				All ministries	MoWCSW, local bodies, DA, NGOs, WA, NEFIN
18)	Monitor coordination to enhance the participation of local bodies, poor, Dalits, women, indigenous nationalities and excluded communities					M	All ministries	MoWCSW, local bodies, DA, NGOs, WA, NEFIN
19)	Monitor compliance with gender mainstreaming criteria	M				H	All ministries	MoWCSW, local bodies, WA
	Awareness raising/capacity building							

20)	Build capacity in order to enhance the participation of poor, Dalits, women, indigenous nationalities and excluded communities	H						MoFSC	MoWCSW, local bodies, DA, NGOs, WA, NEFIN
21)	Ensure the awareness of women, Dalits and indigenous nationalities about ecosystem services valuing and accounting	H	M					MoFSC	MoWCSW, local bodies, DA, NGOs, WA, NEFIN
18.	Legislation and organisational arrangement								
	Policy reform								
1)	As required by this Framework, make policy provision for not approving development programmes that have not integrated/ incorporated nature conservation	H	M					National Planning Commission (NPC)	MoF
2)	The Constitution of Nepal to include nature conservation as a duty of every government agency, private sector, civil society organization and individual	H	M					Parliament	Council of Ministers
3)	Make provision for integrating development and conservation into functions, duties and powers of all ministries and sectoral laws	H		M				Council of Ministers	NPC
4)	Formulate a new law on nature conservation, sustainable use and equitable sharing of benefits	H		M				MoLJPA	MoLJPA
5)	Make legal provision for maintaining a balance in economic and social progress, environment conservation and development by clearly defining duties based on the principle 'increase and use' natural resources	H	H	M				MoLJPA	MoSTE, MoFSC
6)	Make legal provision requiring mandatory inclusion of budget for addressing the adverse impact on the environment in order for a proposal to be approved by the Ministry of Finance and the National Planning Commission.	H		M				MoLJPA	MoF
7)	Formulate an Agro Biodiversity Act	H		H				MoLJPA	MoAD, MoFSC
	Programme/implementation								
8)	Maintain harmony in policies and laws by removing existing inconsistencies, disharmony, contradictions and duplication		H	M				All ministries	MoFSC, MoFALD
9)	Model projects that maintain a balance between development and nature should be formulated and implemented through sectoral agencies		H	M				MoFSC	MoFALD
10)	In order to ensure transparent, effective and fair implementation of laws and policies, organizational structure, functions, duties, powers and responsibilities to be determined in the laws and policies at the time of constituting adequate and appropriate organizational structure	H		M				All ministries	MoLJPA

11)	In order to prevent and control the current or potential adverse effects on the environment, the respective sectors should make nature- or environment-related provisions included in acts like Water Resources Act, Mines and Minerals Act , Public Roads Act appropriate by amending them									All ministries	MoLJPA
12)	Ensure a provision of duty to conserve nature in the existing Acts	M								MoLJPA	MoSTE
13)	Make a clear provision for precautionary tools in the law	H								MoLJPA	NPC
14)	Formulate a comprehensive law regarding nature conservation, sustainable use and equitable sharing of benefits	H								MoLJPA	MoFALD, local bodies
15)	Make provision for achieving harmony / removing inconsistencies between the planning processes of the district and centre and uniformity in the programme formulation processes, with own priority, of sectoral agencies		H							MoLJPA	NPC
16)	Make a binding provision to engage or collaborate in conservation activities		H							MoLJPA	All ministries, NPC
17)	Make provision for a strategic environmental assessment of strategies, policies, plans and programmes	H								MoSTE	NPC
18)	While determining a development programme with the purpose of achieving a certain goal, ensure that the responsibility and role of different agencies or organizations are mentioned			H						MoFALD	NPC
19)	Make clear provision that ensures local communities' participation in the monitoring team			H					H	MoFALD	NPC
20)	Make provision for amendments to the Food Act so that the negative impact of new technologies developed in food production can be regulated	H		H						MoAD	MoLJPA
21)	Remove contradictions, inconsistencies and ambiguities in laws related to nature conservation		H							MoLJPA	MoFSC, MoAD, MoFALD
22)	Maintain harmony in sectoral policies, strategies and plans (especially forest, agriculture, physical infrastructure, water, energy and housing)		H							MoLJPA	MoFSC, MoAD, MoFALD, MoPIT
23)	The National Health Policy 2014 to be applied as soon as possible	H			M					MoHP	NPC
24)	Fully enforce the Environment-friendly Local Governance Framework 2070 as soon as possible	H			M					MoFALD	NPC
25)	Formulate laws on CBD, ITPGRFA, access to genetic resources and benefit sharing, implementation of the National Bio safety Framework (2007), Intellectual Property Rights for protecting traditional knowledge, innovations, and practices	H			M					MoFSC, MoAD	MoLJPA, MoCTCA

26)	Ensure from the very beginning that the matter of conservation is included in policies and laws	H		M				MoLJPA	All ministries
27)	Include discussions regarding natural resource-related laws in legal awareness programmes	H		H				MoLJPA	All ministries
28)	Formulate and apply guidelines to implement the method of valuing and accounting ecosystem goods and services	H						MoFSC	
29)	Introduce the system of imposing tax on polluters in lieu of pollution caused	H		M				MoF	MoLJPA
30)	Make provision for integration of nature conservation monitoring tools and indicators in development efforts	H		M			H	All ministries	
	Monitoring/regulation								
31)	Monitor the use of tools to be adopted for conservation while operating the crusher industry			M			H	MoFALD	MoI
32)	Monitor the participation of all stakeholders in public audit			M			H	MoFALD	MoF
	Awareness raising/capacity building								
33)	Enhance the capacity of enforcing [existing] legal provisions	H		M				MoAD	All ministries
	Note : H=High; M= Medium; L=Low								

4.9 Reduction of Risks

Expected assumptions from the implementation of this Framework shall be as presented in Table 5. In addition, risks likely to arise in the implementation of the Framework and measures to reduce them are as follows:

1. It has been experienced that there has been significant disobedience in the implementation of standards like environmental assessment, lingering in adoption of legal remedial procedure, weak implementation of compliance with legal provisions, etc. The National Planning Commission (NPC) from now on shall monitor such issues.
2. To integrate nature conservation in development into strategies being formulated in accordance with the concept of this National Strategic Framework, the NPC shall play a co-ordinating role.
3. The NPC shall take the initiative to integrate nature conservation into development during periodic evaluation of strategies in implementation after being approved. The period of periodic evaluation of such strategies is presented in Annex 19.
4. It seems that agencies with conflicting jurisdiction and duplication are not in a position to accept that their jurisdiction has narrowed down. Therefore, the NPC shall take the initiative to solve these problems by organising meetings of the high-level Coordination Council or Coordination Committee of such agencies.
5. Every agency believes that it has a major role to play and others have a subordinate role to play, and agencies with a subordinate role should coordinate with agencies with a major role. Therefore, the NPC shall take the initiative to clarify the role of agencies concerned through meetings of the high-level Coordination Council or Coordination Committee.
6. As the procedure for valuing and accounting for ecosystem goods and services is still in a trial phase in Nepal, it shall be included as part of project planning to translate it into practice.
7. The NPC shall monitor the responsibilities of all sectoral agencies by duly considering such factors in the implementation of this Framework.

CHAPTER 5

FRAMEWORK IMPLEMENTATION ARRANGEMENTS

5.1 Implementation Concept and Process

This Framework provides overall guidance, for the next 16 years, for the efficient integration of nature conservation activities in all development efforts. The concerned agencies shall implement action plans contained in thematic and sectoral strategies. Therefore, the Framework has no separate sectoral development and conservation targets and action plans. However, as this Framework has a role to play in guiding and facilitating the implementation of sectoral strategies, an implementation plan has been included to foster the Framework's implementation.

This Framework shall be implemented by adapting the following processes:

- a) The type of nature sensitivity to be adopted by development strategies as specified by this Framework shall be covered in periodic plans or during review of these plans. In addition, nature-sensitivity shall be reviewed while developing new sectoral development strategies or reviewing/revising sectoral development strategies.

- b) This Framework shall be implemented through periodic plans. For this, guidelines shall be provided in an approach paper to be prepared for the formulation of periodic plans, and, to ensure the incorporation of nature conservation in sectoral development programmes introduced through concerned agencies, such programmes shall be assessed based on nature-sensitivity.
- c) Periodic plans shall be implemented through annual plans. To this end, guidelines shall also be provided for the integration of nature conservation in development, as this should be addressed in the annual plans.

5.2 Organisational Structure

To implement this Framework, the following organisational structure has been arranged:

5.2.1 Implementation Coordination Council

Formation: For successful implementation of this Framework, high-level Nature Conservation National Strategic Framework Implementation Coordination Council comprising the following members shall be formed:

Position	Agency	Role
Hon. Vice Chairperson	National Planning Commission (NPC)	Chairperson
Hon. Member	Environment and Natural Resources, NPC	Vice Chairperson
Secretary	Office of the Prime Minister and Council of Ministers (Economic and Infrastructure Development)	Member
Secretary	Ministry of Finance (MoF)	Member
Secretary	Ministry of Industry (MoI)	Member
Secretary	Ministry of Energy (MoEn)	Member
Secretary	Ministry of Law, Justice and Parliamentary Affairs (MoLJPA)	Member
Secretary	Ministry of Agriculture Development (MoAD)	Member
Secretary	Ministry of Home Affairs (MoHA)	Member
Secretary	Water and Energy Commission (WEC)	Member
Secretary	Ministry of Land Reforms and Management (MoLRM)	Member
Secretary	Ministry of Physical Infrastructure and Transport (MoPIT)	Member
Secretary	Ministry of Women, Children and Social Welfare (MoWCSW)	Member
Secretary	Ministry of Forests and Soil Conservation (MoFSC)	Member
Secretary	Ministry of Science, Technology and Environment (MoSTE)	Member
Secretary	Ministry of Education (MoE)	Member
Secretary	Ministry of Federal Affairs and Local Development (MoFALD)	Member
Secretary	Ministry of Culture, Tourism and Civil Aviation (MoCTCA)	Member
Secretary	Ministry of Urban Development (MoUD)	Member

Secretary	Ministry of Irrigation (MoIrr)	Member
Secretary	Ministry of Information and Communication (MoIC)	Member
Secretary	Ministry of Health and Population (MoHP)	Member
Secretary	National Planning Commission Secretariat	Member
Vice Chancellor	Nepal Academy of Science and Technology (NAST)	Member
Professor (environment)	Kathmandu University (KU)	Member
Professor (environment)	Agriculture and Forestry University (AFU)	Member
Professor (environment)	Tribhuvan University (TU)	Member
Member Secretary	National Trust for Nature Conservation (NTNC)	Member
Executive Director	Alternative Energy Promotion Centre (AEPC)	Member
Chairperson	Association of DDCs in Nepal (ADDCN)	Member
Chairperson	Municipal Association of Nepal (MuAN)	Member
Chairperson	National Association of VDCs in Nepal (NAVIN)	Member
Chairperson	NGO Federation, Nepal (NFN)	Member
Chairperson	National Women Commission (NWC)	Member
Chairperson	Nepal Federation of Indigenous Nationalities (NEFIN)	Member
Chairperson	National Dalit Commission (NDC)	Member
Chairperson	Federation of Nepalese Chambers of Commerce and Industries (FNCCI)	Member
Chairperson	Federation of Nepal Cottage and Small Industries (FNCSI)	Member
Chairperson	Construction Entrepreneurs Central Association (CECA)	Member
Vice Chairperson	National Foundation for Development of Indigenous Nationalities (NFDIN)	Member
Senior specialist	To be nominated by the government from among civil society, NGOs, individuals, etc who have contributed to conservation and development.	Member(3 persons)
Joint Secretary	National Planning Commission Secretariat	Member Secretary

In addition to the above members, the Coordination Council may also invite other individuals, as required, to participate in Council meetings.

The Coordination Council may form different thematic groups within the Council and also constitute an informal core group comprising four members concerned with nature conservation, including a member secretary, from among Council members, to decide issues to be presented at the Council prior to a meeting.

Responsibilities: The responsibilities of the Council shall be as follows:

- Make development efforts nature-sensitive for sustainable development
- Guide in policy-making and implementation for the integration of nature conservation into all development efforts
- Guide all ministries concerned to mainstream the issues of nature conservation in their agencies' strategies as specified by this Framework
- Take the initiative to arrange financial resources for the mainstreaming of nature conservation

- Ensure equitable sharing of benefits from nature conservation
- Ensure the participation of thematic ministries and agencies, non-governmental organisations and the private sector in implementation
- Help in formulating laws and regulations recommended by the National Strategic Framework Implementation Coordination Committee
- Make the necessary provisions for the representation of Provinces in the Implementation Council and the Committee after the State has been restructured
- Arrange Provincial Councils as required after the State has been restructured
- Do additional work as and when required

The Secretariat of this Council shall be in the National Planning Commission and its meeting shall be held at least once a year.

5.2.2 Implementation Coordination Committee

Formation: With the objective of ensuring the implementation of decisions and guidance of the Coordination Council, a Nature Conservation

Table 8: Nature Conservation National Strategic Framework Implementation Coordination Committee		
Member Secretary	National Planning Commission (NPC)	Chairperson
Joint Secretary	Office of the Prime Minister and Council of Ministers (Economic and Infrastructure Development)	Member
Joint Secretary	Ministry of Finance (MoF)	Member
Joint Secretary	Ministry of Industry (MoI)	Member
Joint Secretary	Ministry of Energy (MoEn)	Member
Joint Secretary	Ministry of Law, Justice and Parliamentary Affairs (MoLJPA)	Member
Joint Secretary	Ministry of Agriculture Development (MoAD)	Member
Joint Secretary	Ministry of Physical Infrastructure and Transport (MoPIT)	Member
Joint Secretary	Ministry of Women, Children and Social Welfare (MoWCWSW)	Member
Joint Secretary	Ministry of Forests and Soil Conservation (MoFSC)	Member
Joint Secretary	Ministry of Science, Technology and Environment (MoSTE)	Member
Joint Secretary	Ministry of Education (MoE)	Member
Joint Secretary	Ministry of Culture, Tourism and Civil Aviation (MoCTCA)	Member
Joint Secretary	Ministry of Federal Affairs and Local Development (MoFALD)	Member
Joint Secretary	Ministry of Urban Development (MoUD)	Member
Joint Secretary	Ministry of Irrigation (MoIrr)	Member
Joint Secretary	Ministry of Health and Population (MoHP)	Member
Chairperson	Federation of Community Forest Users, Nepal	Member
Chairperson	Federation of Irrigation Users	Member
Chairperson	Federation of National Farmers' Groups	Member
Chairperson	Association of Nepal Hydropower	Member
Executive Director	Association of DDCs in Nepal (ADDCN)	Member
Joint Secretary	Agriculture and Rural Development Division, National Planning Commission Secretariat	Member Secretary

National Strategic Framework Implementation Coordination Committee comprising the following members shall be formed:

In addition to the above members, the Coordination Committee may also invite other individuals, as required, to participate in Committee meetings.

Responsibilities: The responsibilities of this Committee shall be as follows:

- Implement decisions and guidance of the Coordination Council
- Assist in organising Coordination Council meetings
- Ensure the implementation of the National Strategic Framework through all sectoral ministries, agencies, non-governmental organisations and the private sector
- Ensure the mainstreaming of nature sensitivity in sectoral development strategies as specified by the National Strategic Framework
- Ensure budget allocation and use in development programmes and projects for nature conservation
- Monitor the implementation, progress and

effectiveness of the National Strategic Framework

- Facilitate the implementation of all thematic and sectoral strategies and remove obstacles
- Monitor the implementation of sectoral strategies as per the five strategic pillars of the National Strategic Framework and guide, formulate policy and arrange financial resources for the integration of nature conservation into development
- Conduct additional work as and when required

The Secretariat of this Committee shall be in the National Planning Commission and its meeting shall be held at least twice a year (one before annual planning and the other after review)

5.2.3 Local-level Coordination Committee

Coordination of the implementation of this Framework shall be conducted by the Environment Friendly Local Governance District Coordination Committee formed at the district level under the Environment Friendly Local Governance Framework (2070 BS). Similarly, the Environment Friendly Local Governance Metropolis/Sub-

metropolis Coordination Committee and Environment Friendly Municipality and Village Coordination Committee shall ensure the implementation of this Framework in metropolis/sub metropolises and towns/villages respectively; the Environment Section/Unit shall implement the Framework. The responsibility of mainstreaming nature conservation shall also be fulfilled through these Committees.

5.2.4 Framework Implementation Support Unit

There shall be a Nature Conservation National Strategic Framework Implementation Support Unit in the Agriculture and Rural Development Division of the National Planning Commission. The NPC shall arrange this Unit during the implementation of the Framework.

Responsibilities: The responsibilities of this Support Unit shall be as follows:

- a) Work as a Secretariat of the Coordination Council and the Coordination Committee
- b) Conduct a Framework implementation support project for at least five years, using the Government of Nepal's own resources or donor support. The objective of this project shall be to enhance the capacity of the Framework Implementation Support Unit and provide it with required technical support.

- c) Raise awareness about the Framework and ensure its effective implementation
- d) Raise conservation-related awareness and build capacity
- e) Improve conservation-related organisational capacity of thematic agencies
- f) Establish, implement (from central to district levels) and oversee monitoring system and approach
- g) Coordinate with different organisational liaison units and individuals regarding conservation

5.2.5 Provision of a Liaison Unit and a Focal Person at Sectoral Ministry

The division/section/unit where the person representing the sectoral and other agencies concerned that has representatives in this Framework Implementation Coordination Council and/or Committee will be designated as this Framework Implementation Unit in that agency and, in consultation with that unit, the person concerned of that unit will be designated as a focal person.

5.3 Framework Implementation Plan

Based on priorities, the following short-term, medium-term and long-term programmes shall be implemented, using existing structure:

Table 9: Short-term implementation plan				
Short-term implementation plan (1-3 years)		Year		
Activities		First 2015	Second 2016	Third 2017
Institutional arrangements				
1.	Establish a Framework Support Unit			
2.	Form a Nature Conservation National Strategic Framework Implementation Coordination Council			
3.	Form a Nature Conservation National Strategic Framework Implementation Committee			
4.	Coordinate with Environment-Friendly Local Governance District Coordination Committee, Environment-Friendly Local Governance Metropolis/ Sub-metropolis Coordination Committee and Environment-Friendly Municipality/Village Coordination Committee			
5.	Carry out projects for capacity building of the framework implementation support and the Framework Support Unit			
Capacity building				
6.	Arrange human resources at the Support Unit			
7.	Build the capacity of human resources of the Support Unit			
8.	Prepare IEC about the Nature Conservation National Strategic Framework			
9.	Conduct orientation at central and district levels			
10.	In future plan implementation, based on the results of the monitoring of nature-sensitivity assessment, thematic ministries and agencies to prepare materials for future plan implementation guidance and include these materials in the guidance and approach paper			
11.	Orient on future planning guidance at central and district levels			
12.	Build institutional capacity of the Liaison Section of thematic ministries			
13.	Build nature conservation-related scientific, technical and innovative capacity of thematic ministries			
Nature conservation integration activities				
14.	Make a provision for nature conservation-related budget code			
15.	Arrange conservation-related budget			
16.	Thematic ministries and agencies to prepare materials for annual programming guidance and include these materials in the guidance			
17.	Prepare nature-sensitivity monitoring guidance for the implementation of annual programme			
18.	Coordinate with all agencies to maintain balance with development and conservation			
19.	Sectoral strategies to link future sustainable development goals with Aichi Biodiversity Targets, poverty alleviation targets, etc			
20.	Ensure that all projects and programmes are nature-sensitive by testing their sensitivity in accordance with Annex 2			

21.	Prepare guidance for nature-sensitivity review of current plans and nature-sensitivity monitoring			
22.	Assess nature sensitivity in future plan implementation			
23.	Ensure the mainstreaming of nature sensitivity in future plans by assessing nature sensitivity of future plans introduced by sectoral ministries and agencies			
	Facilitation of implementation			
24.	Facilitate the implementation of all thematic and sectoral strategies in order to include nature sensitivity issues and conservation programmes in all sectoral plans and programmes			
25.	Coordinate with the Ministry of Finance for allocation of required budget and technology arrangements in order to implement sectoral strategies			
	Monitoring and evaluation			
26.	Assess nature sensitivity of annual programmes introduced by sectoral ministries and agencies			
27.	Monitor the implementation of sectoral strategies in accordance with nature-sensitivity monitoring guidance			
28.	Review to ensure that the mainstreaming of nature sensitivity in sectoral development strategies that are being formulated has been considered and give feedback			
29.	Coordinate and monitor, as required, to ensure the implementation of all projects by conducting their detailed environmental assessment, identifying their possible adverse impacts on nature conservation and sustainable development and determining measures to reduce such impacts			
30.	Amend the existing National Monitoring and Evaluation Guidelines (2013) by adding new indicators to it			
31.	Evaluate annual and periodic progress reported by sectoral ministries and agencies from the prospective of nature sensitivity			

Medium-term Implementation Plan (4-8 years)

During this period, the following additional activities shall be conducted by giving continuity to short-term programmes:

- Monitor and evaluate nature sensitivity in the implementation of sectoral development strategies that are in implementation and prepare guidance for the mainstreaming of nature sensitivity in those strategies
- During periodic evaluation, ensure the mainstreaming of nature sensitivity by coordinating those sectoral development strategies that are in implementation
- Based on the results of the monitoring of the implementation of thematic strategies, revise the annual programme planning guidance and conduct orientation from central to district levels
- Evaluate the usefulness and effectiveness of the implementation of the Nature Conservation National Strategic Framework in the final year of periodic plans
- Based on the results of evaluation, revise the National Strategic Framework in a way that addresses current issues
- Assess the degree to which learning and suggestions received from monitoring and evaluation have been employed

Long-term Implementation Plan (9-16 years)

During this period, short- and medium-term programmes shall be given continuity.

Medium- and long-term implementation plans shall be formulated again in such a way that they are consistent with the government's periodic plans. Such consistency shall be harmonized at the time of governmental periodic planning.

5.4 Major Responsible Sectors, Agencies and their Role

Different agencies shall have a specific role to play in achieving objectives determined by this Framework. The National Planning Commission shall be responsible for monitoring the implementation of this Framework. Thematic and sectoral agencies shall be responsible for addressing nature conservation-related issues while formulating sectoral annual programmes as well as other programmes, whereas local

bodies shall be responsible for earmarking budget for nature conservation while preparing local development programmes and plans. The private sector shall mandatorily contribute to the regeneration of natural resources when those resources are used. The NGO sector shall enhance the nature conservation efficiency of governmental and non-governmental organisations, private sector, community organisations and users' groups involved in nature conservation. Local communities shall make local experience and knowledge available to make local development activities nature conservation oriented in development programme planning. Development partners shall mandatorily also arrange budget for nature conservation by ensuring whether or not nature conservation activities have been included during project design, and whether required budget has been earmarked for those activities. The detailed role of these sectoral agencies is presented in Table 10.

Organisation	Role
Sectoral agencies	<ul style="list-style-type: none"> a) Make nature conservation integration an integral part of public-private partnership programmes b) Every agency to prepare a nature-sensitivity assessment checklist c) Every concerned sector to include nature conservation-related activities while formulating its annual programme, other programmes and projects d) Mandatorily earmark nature conservation-related programmes and budget during the construction of large physical infrastructure like hydropower, roads and buildings and while urbanizing areas e) Mandatorily use standards, processes and nature conservation budget codes to be prepared by the National Planning Commission f) Design development programmes in such a way that they do not eliminate or conflict with sites that are important from a nature conservation point of view, biodiversity, temples, and goods and sites that reflect art and culture g) Every concerned ministry to inform its division, department, and regional and district offices and provide instruction on designing programmes accordingly h) For building capacity on nature conservation-friendly programme planning, provide training especially to office chiefs, planning officers and accountants i) Build nature conservation-related capacity of private entities in their relevant sectors
Local bodies	<ul style="list-style-type: none"> a) While designing local development programmes and projects, ensure that they are nature conservation-friendly in accordance with the form prepared by the National Planning Commission b) Earmark nature conservation-related activities and budget while working on development projects c) While designing and implementing development action plans (e.g. roads), adopt procedures that minimize adverse impacts on nature d) Design development programmes in such a way that they do not eradicate sites that are important from the nature conservation point of view, biodiversity, temples, and goods and sites that reflect art and culture

<p>Private sector</p>	<ul style="list-style-type: none"> a) Mandatorily include nature conservation-related activities and budget in industry/business development programmes b) Operate industries only in places that are not appropriate or important for nature conservation and relocate industries from places that are ecologically important c) Even industries that have been established before the provision of initial environmental examination (IEE) and environmental impact assessment (EIA) came into force to comply with the provision of IEE and EIA d) Mandatorily contribute to the regeneration of natural resources in situations in which those resources are used e) Industries not based on natural resources also contribute to the conservation of natural resources f) The private sector to spend a part of net benefit on nature conservation g) Include nature conservation as part of the social responsibility agendas of industries and businesses h) Such industries mandatorily use the form and budget code prepared by the National Planning Commission
<p>Non-governmental organisations</p>	<ul style="list-style-type: none"> a) Mandatorily arrange nature conservation activities and budget in projects and annual programmes b) While conducting development activities, adopt measures that reduce adverse impacts on nature c) While conducting development activities, protect biodiversity, art and culture d) Mandatorily use standards, processes and nature conservation budget code to be prepared by the National Planning Commission e) Enhance nature conservation working efficiency of governmental and non-governmental organisations, community organisations and users' groups involved in nature conservation f) Monitor whether or not nature conservation is integrated in public and private sector development activities
<p>Community organisations, users's groups and co-operatives</p>	<ul style="list-style-type: none"> a) Make local information available in order to make development programmes nature conservation oriented b) Adopt caution to avoid adverse impacts on nature by participating in development programmes c) Pay attention to making development programmes nature conservation oriented d) Make local experience and traditional knowledge available in order to promote nature conservation priorities in development programme planning e) Monitor whether or not nature conservation is integrated in public and private sector development activities
<p>Academic sector</p>	<ul style="list-style-type: none"> a) Collect data on natural resources through research b) Assist with maintaining balance between data-based conservation and development programmes c) Make science, technology and current curriculum-related knowledge available to the Government of Nepal and civil society d) Disseminate natural resource-related knowledge at national and international levels through different media e) Help policy makers formulate scientific policies by making science-based data available to them
<p>Development partners</p>	<ul style="list-style-type: none"> a) Ensure whether or not nature conservation activities have been included during project design and required budget has been earmarked for those activities. b) Mandatorily cause to arrange budget for nature conservation along with projects c) Mandatorily comply with the standards and process form to be prepared by the National Planning Commission d) Make financial arrangements in order to make human resource development programme of the sector or agency nature conservation-oriented

5.5 Inclusion in Conservation

This Framework shall facilitate and monitor the implementation of programmes of social inclusion mentioned in the implementation of sectoral policies and strategies. The Framework shall give priority to addressing natural resource conservation-related issues linked with the livelihoods of women, Dalits, indigenous peoples, Muslim and Madhesi communities, less developed classes and communities (target groups). The target areas of intervention especially include the formation of community-based groups and users' groups, implementation of awareness programmes, access to facilities to be granted by the state, and distribution of benefits arising from the implementation of programmes. The Framework shall achieve inclusion in conservation by adopting the following strategies:

- a) Ensure target groups' access to, and meaningful participation in, the concerned conservation area through positive discrimination
- b) Make policy and structural reforms in order to enhance access of the target group to natural resources
- c) Enhance social awareness and capacity in order to ensure prior rights of local communities and indigenous peoples to local resources
- d) Make appropriate arrangements to enhance access of indigenous peoples to natural resources like water, land, forest and mines and give priority to inclusive communities in conservation, promotion and use of natural resource heritage
- e) Emphasize the preservation, promotion and development of those languages that have traditional knowledge, skills and practices for the protection of biodiversity
- f) Coordinate with sectoral agencies to reduce adverse impacts on the target group as a result of impact on natural resources due to climate change
- g) Identify and amend legal and policy provisions that contradict the International Labour Organisation Convention 169
- h) Give priority to indigenous peoples in promoting herb and non-timber forest product-related enterprises and realize products of such enterprises in the market
- i) Arrange studies and research to preserve and promote languages, philosophy, cultures and heritage that are related to conservation

Thematic and sectoral agencies themselves shall be responsible for inclusion as aimed by thematic and sectoral policies and strategies. The National Planning Commission shall monitor the implementation of inclusion.

5.6 Public-Private Partnership in Conservation

An important aspect of inspiring private sector participation in nature conservation is the direct benefits derived from the conservation activities. However, since the benefits from nature conservation do not result in direct income but indirect income and are time-consuming, it has not yet been possible to attract private sector investments. Successful public-private efforts recently made in the conservation sector of Nepal include community-based forest management (community forestry, leasehold forestry, and collaborative forestry), small irrigation, rural drinking water, rural road, small hydropower, in-situ biodiversity conservation, and cultural heritage. This National Strategic Framework shall facilitate the implementation of the following public-private partnership policies and strategies envisioned by these successes and different strategies and plans:

A. Forest

1. Gradually enhance the role of the national private sector in forest management
2. Promote investment for the development and expansion of forest product- and forest heritage-based enterprises through public-community-private-cooperative sector partnership
3. Establish a flora and fauna breeding centre for commercial domestication of ordinary types of wildlife and farming of commercially important flora in a public-private partnership

B. Biodiversity

1. Enhance public-private partnerships in biodiversity conservation-related technology development and management and promote public-private partnership on biodiversity research and extension
2. Preserve cultural heritage via public-private partnerships
3. Conserve wetlands in partnership with the private sector

C. Agriculture

1. Adopt the concept of public-private partnership in the implementation of the agricultural

development programmes to increase contributions of the agricultural sector in economic transformation

2. Conduct 'one village, one product' and 'one district, one product' programmes in public-private partnerships
3. Promote public-private partnership in the construction of cold stores, market management, and processing
4. Produce hybrid seeds in the seed industry via public-private partnership
5. Enhance partnerships with the private sector in order not to use agricultural land for non-agricultural purposes
6. Encourage the private sector in certification and export of organic agricultural products.

D. Infrastructure

1. Attract foreign and native private investors in irrigation development in accordance with public infrastructure construction, operation and transfer-related provisions of the government
2. Promote public-private partnership in the development and operation of transportation infrastructure like railways, ropeways and waterways
3. Enhance the participation of the private sector in the construction of local, environment-friendly 'green' roads
4. Transportation systems like ropeways/cable cars, and waterways in areas that are important from the tourist point of view
5. Promote the concept of public-private partnership to attract private sector investors in the development and upgrading of airport infrastructure, development of technology and air service operation
6. The private sector to collaborate to adopt technology that mitigates the impacts of earthquakes on public physical infrastructure like hospital, school, college and departmental store

E. Environment

1. Coordinate and collaborate with donor agencies, non-governmental organisations, local bodies, community organisations and other agencies in environment and climate change activities
2. Garner public-private participation and regional support in formulation and implementation of ecosystem-based adaptation programmes
3. Conserve wetlands, refill underground water, construct ponds and manage them and conduct research in partnership with the private sector

F. Energy

1. Develop hydropower projects with the concept of public-private partnership
2. Increase investment of private and cooperative sectors in electricity, information and communication, rural energy, roads and other infrastructure development, and increase investment in these infrastructure areas by enhancing public-private-cooperative partnerships
3. Establish and operate 12 collection and processing centres – established as public-private partnerships – in order to collect and reuse batteries that have been used in the solar energy system
4. Collaborate with the private sector to promote alternative energy in order to reduce the rates of deforestation and degradation associated with the supply of rural energy

This Framework shall guide the implementation of these public-private partnership policies and strategies as well as conservation-friendly programme formulation and implementation

5.7 Need of Resources and Means

As this Framework guides sectoral agencies and facilitates effective implementation of sectoral strategies, no demand has been made for separate budget and other financial arrangements for the implementation of programmes and action plans envisioned by sectoral strategies. Programmes and action plans under such sectoral strategies shall have to be carried out within the budget ceiling determined by sectoral strategies.

Except for some sectoral development programmes like forest development activities, no provision for separate or additional financial arrangements has been made for nature conservation in various development programmes or for making such programmes conservation oriented. Therefore, while developing infrastructure, especially roads, buildings, industries, and factories, a provision of budget seems to have been made for reduction of the negative impacts on nature or rehabilitation of resources that have already been negatively affected. Considering this concept, some budget has been allotted for the implementation of this Framework, as well.

Budget required to implement this Framework (please see Section 5.2) includes expenditure

for information booklets to be prepared by the National Planning Commission; orientation to be conducted for information flow; technical support and training programmes for building the capacity of sectoral agencies; guidelines to be prepared for annual and periodic plan formulation; review and evaluation of programmes and progress of sectoral agencies from the perspective of nature sensitivity; monitoring of the implementation of sectoral strategies; preparation of guidelines to be adopted in review of sectoral strategies from the viewpoint of nature sensitivity; review and evaluation of periodically revised sectoral policies and strategies from the nature sensitivity point of view; and Framework implementation support. Similarly, other expenditures include costs for capacity building of the Support Unit and project implementation.

To facilitate the implementation of initial activities and programmes to be given priority by sectoral agencies in order to bring this National Strategic Framework into implementation, estimated budget for up to 16 years is Rs 80 million (Annex 20).

For the implementation of this National Strategic Framework, budget shall be allocated as a

national priority programme through the central budget system of the Government of Nepal. In addition, to conduct the required programmes and projects for mainstreaming nature conservation in all thematic and sectoral strategies, the Government of Nepal shall take the initiative to arrange funds by taking funds as per this National Strategic Framework and maintaining linkages with CBD, UNFCCC and Post-2015 Sustainable Development Goals. Similarly, in discussions and agreements, to be made with different development partners in accordance with global campaigns taking place on green economy, green infrastructures, renewable energy, etc, the Government of Nepal shall use this Framework as the basis.

For the action plans of sectoral agencies, a system of sectoral agency investment in conservation-related activities shall be developed and implemented by establishing a conservation-friendly budgeting and review system. Similarly, investment in conservation shall be increased and arrangements shall be made for its effective monitoring by reviewing the status of investment in conservation in line with existing policy and legal provisions of sectoral agencies.

CHAPTER 6

MONITORING, EVALUATION, INFORMATION MANAGEMENT AND USE

6.1 Objectives of Monitoring and Evaluation

Its objective is to make thematic and sectoral agencies responsible for integrating nature conservation in overall development efforts and ensuring that conservation results are achieved. Results arising from monitoring and evaluation shall make sectoral development and nature conservation integration activities more effective.

This Framework shall include national-level monitoring and evaluation. Qualitative and quantitative information and data of the indicators of such national-level monitoring and evaluation shall be obtained through the monitoring and evaluation of thematic and sectoral strategies.

6.2 Areas to be Monitored and Evaluated

This Framework includes three major areas of monitoring and evaluation.

a) Conservation-related results

Under this Framework, two types of results shall be monitored and evaluated.

a-1) Monitoring and evaluation of the results of development and nature conservation integration sought to be achieved under the goal, objectives and five strategic pillars of this Framework.

Results shall be monitored and evaluated by taking the base of indicators presented in Table 5.

a-2) Monitoring and evaluation of thematic and sectoral nature conservation-related results

Each respective, concerned strategy implementation agency shall have the task of monitoring and evaluating conservation-related performance indicators envisioned by every sectoral strategy. In such implementation, the role of the National Planning Commission shall be to ensure the integration of nature conservation into development.

Under this Framework, some thematic sector representative indicators presented in Table 11 shall be monitored and evaluated.

b) Status of the adoption of assumptions envisioned in achieving the results of nature conservation

Under this Framework, the following assumptions of three levels presented in Table 5 shall be monitored and evaluated:

- b-1) Assumptions for achieving goal
- b-2) Assumptions for achieving objectives
- b-3) Assumptions for achieving the results of strategic pillars

c) Reduction of foreseen risks in achieving the results of nature conservation

Under this Framework, two types of assumptions shall be monitored and evaluated.

- c-1) Monitoring and evaluation of the adoption of risk reduction measures presented in Section 4.7 foreseen for achieving results of nature conservation sought by this Framework.
- c-2) Monitoring and evaluation of the adoption of risk reduction measures presented in Section 2.8 foreseen for achieving results of nature conservation sought by thematic and sectoral strategies.

d) Framework implementation plan

The implementation of the Framework implementation plan presented in Section 5.3 shall also be monitored regularly. This monitoring shall ensure the integration of development and nature conservation into the implementation of all thematic and sectoral strategies.

6.3. Thematic and Sectoral Representative Indicators to be Monitored and Evaluated

6.3.1 National-level Representative Indicators and their Review

Based on the Government of Nepal (Allocation of Business) Regulations (2012), conservation indicators contained in thematic sectoral strategies and the National Monitoring and Evaluation Guidelines (2013) of this Commission, representative indicators have been selected to review conservation-related work carried out in

thematic areas. Based on the indicators presented in Table 11, contributions made by different sectors to nature conservation will be reviewed periodically. This Table presents sector-wise indicators and their data sources. The baseline, periodic targets and evaluation period will be as specified by the respective agencies in their sectoral strategies.

Detailed information about the status of the indicators that are to be monitored and evaluated by this Framework in FY 2069/70, the targets to be achieved and the year the targets are to be achieved will be collected or established during implementation of the Framework. Details of examples of such information to be collected by the agencies concerned are presented in Annex 21.

Table 11: Thematic and sectoral conservation-related representative indicators to be monitored and evaluated	
Thematic areas and indicators	Potential sources of information
Forest sector	
Forest conservation and management (disaggregated by mountain, hill and Terai)	
Area covered by forests	Ministry of Forests and Soil Conservation (MoFSC)
Area of forests managed sustainably or scientifically	MoFSC
Area of community-managed forests	MoFSC
Land and watershed conservation (disaggregated by mountain, hill and Terai)	
Watershed areas managed as per the integrated land conservation plan	MoFSC
Area of the forest managed under the pro-conservation forest management system in the Churia area	MoFSC
Wetland management (disaggregated by mountain, hill and Terai)	
Area of conserved and managed wetlands of national and international importance	MoFSC
Biodiversity	
Loss and degradation of forest, wetland and rangeland habitats	
Degradation rates of forest, wetland and rangeland habitats	MoFSC
Degradation rates of Churia and other land arc areas	MoFSC, Chure Tarai-Madhes Conservation Development Board
Extinction of species or their number decreased	MoFSC
Number of endangered species increased	MoFSC
Implementation of the National Biodiversity Strategy and Action Plan (2014)	
Inclusion of conservation action plan in other sector policies and strategies as per the National Biodiversity Strategy and the status of its implementation	National Planning Commission (NPC)
Conflict between human and wildlife	
Status of the number of conflicts between human and wildlife	MoFSC
Budget provision for conservation	
Budget allocated for conservation increased	Ministry of Finance (MoF)
Agriculture sector	
Productivity increased	
Productivity of major crops, livestock and fish increased	Ministry of Agricultural Development (MoAD)
Sustainable management of agriculture land and soil	
Rehabilitation of degraded agriculture land (disaggregated by mountain, hill and Terai)	
Ministry of Land Reform and Management (MoLRM)	
Conservation and sustainable use of agro-biodiversity	
Farming and production of local varieties/breeds	MoAD
Use of hybrid seeds (maize, rice and vegetables)	MoAD

Management of disease and insect of crops, livestock and fish	
Organic farming (production) increased (disaggregated by mountain, hill and Terai)	MoAD
Development of physical infrastructure	
Urbanization, industrialization and pollution management	
Number of projects that have adopted land use policy while formulating physical infrastructure plans	Ministry of Physical Infrastructure and Transport(MoPIT)
Status of natural sites and opens places in urban areas (area in per centage of rural area)	Ministry of Urban Development (MoUD)
Physical infrastructure works management	
Index of green roads increased	
Solid waste management	
Number of municipalities with appropriate landfill from engineering perspectives	MoUD
Mine and excavation management	
Excavation projects that have passed environmental auditing	Ministry of Industry (Mol) Ministry of Federal Affairs and Local Development (MoFALD)
Implementation of the provision of environmental auditing	
Status of non-action against those who have not complied with the provision of environmental auditing	MoPIT
Land management	
Use of agriculture land for non-agriculture purposes decreased	MoLRM
Status of assurance of local livelihood (poverty)	Ministry of Cooperatives and Poverty Alleviation (MoCPA)
Renewable energy	
Government budget allocation	MoSTE
	Ministry of Energy (MoEn)
Rate of energy generation from the use of clean and green technology	MoSTE
Water resource and disaster management	
Population with access to drinking water	MoEn
Area irrigated throughout the year	Ministry of Irrigation (Molr)
Community with provision established for making payment in lieu of ecosystem services to the upstream community that promotes water purity	MoEn
Per centage of minimum of water flow in the river maintained	MoSTE , MoEn
Status of inclusion of the ecosystem-based disaster management system in policies and programmes and implementation	Ministry of Home Affairs (MoHA), Ministry of Rural Development (MoRD), Molr
Climate change	
Sectoral strategies that have integrated and improved climate change adaptation and adverse impact mitigation concerns (mention sectors)	MoSTE, NPC
Area of forests managed in accordance with REDD+ strategy	MoSTE
Mobilization of climate fund for local adaptation	MoSTE, MoFALD
Health	
Number of people using clean toilet	Ministry of Health and Population (MoHP)
Number of households using improved cooking stove	MoHP
Population suffering from bacteria-induced diseases	MoHP
Poverty alleviation	

Population below poverty line	MoCPA
Rural population below poverty line	MoCPA
Society, nature and indigenous nationalities	
Harmony between projects and indigenous nationalities through independent and pre-informed consent, and reduction in conflict	Ministry of Women, Children and Social Welfare (MoWCSW)
Identification and documentation of physical and non-physical cultural heritages related to indigenous nationalities	MoWCSW
Number of men and women participants of indigenous nationalities in conservation programmes	MoWCSW
Gender and social inclusion	
Review of existing policies and legal frameworks related to gender and social inclusion of all sectors	MoWCSW
Women benefitting from payment for ecosystem services	MoWCSW
Representation of women, marginalized and socially excluded communities in governance and decision-making processes of natural resources, and in membership	MoWCSW
Law and organizational arrangement	
Work of nature conservation also to be added to allocation of business of some ministries (such as Ministry of Energy, Ministry of Irrigation, Ministry of Industry, Ministry of Physical Infrastructure and Transport, Ministry of Education) related to nature conservation in the Government of Nepal (Allocation of Business) Regulations (2012)	Ministry of Law, Justice, Constituent Assembly and Parliamentary Affairs (MoLJPA)
Achieving harmony in contradictions in different acts (Annex 15) related to nature conservation	MoLJPA
The Government of Nepal to accede the Convention on Conservation of Migratory Species of Wildlife Animals (1970) and ratify the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (2010), respectively	MoLJPA
Formulation and implementation of an agriculture act	MoLJPA

6.3.2 Sectoral Nature Conservation-related Local-level Indicators

To prepare national-level data of indicators, sectoral agencies shall determine local-level indicators to be monitored through their subordinate agencies. The sectoral agency shall also determine the responsibility of collecting data of those indicators and preparing reports.

6.4 Revision of the National Monitoring and Evaluation Guidelines (2013)

To ensure balance between development and nature conservation, some conservation-related indicators in the National Monitoring and Evaluation Guidelines (2013) of the National Planning Commission (NPC) are not sufficient. These Guidelines shall also be revised in such a way that they also become useful for the monitoring of this Framework by adding additional indicators presented in Annex 22. The NPC shall regularly monitor and evaluate the integration of nature conservation into development as per the monitoring and evaluation schedule of these Guidelines.

6.5 Monitoring and Evaluation Process

The results of goal, objectives and strategic pillars to be achieved by this Framework shall be monitored and evaluated as follows:

Goal: The attainment of the goal shall be monitored and evaluated by a third party.

Objectives: Thematic and sectoral agencies shall monitor and evaluate the attainment of objectives themselves as follows:

- a) As per evaluation form of Annex 18 determined for the attainment of objectives while thematic and sectoral agencies formulate every policy, strategy, periodic plan, programme and project
- b) As per evaluation form of Annex 18 determined for the attainment of objectives even after submitting the progress of the implementation of annual programmes, periodic plans and thematic and sectoral strategies

The evaluation results of documents evaluated in accordance with a) and b) shall be reviewed by an expert.

Outputs of strategic pillars: The results of strategic pillars shall be monitored and evaluated as per the regular monitoring and evaluation process of the National Planning Commission.

6.6 Monitoring and Evaluation Period

- a) The implementation of the Framework Implementation Plan shall be monitored and evaluated as per the regular monitoring and evaluation schedule of the National Planning Commission.
- b) First evaluation of this Framework shall be completed after three years (after the end of the short-term implementation plan) and then in the mid-term and final evaluation of the implementation of every periodic plan. Based on the results of this evaluation, this Framework shall be revised accordingly.

6.7 Monitoring and Evaluation Report

A monitoring and evaluation report on the implementation of this Framework shall be prepared based on the five strategic pillars of the Framework. Based on the results of monitoring and evaluation, the monitor and evaluator shall recommend clear directions regarding what thematic and sectoral agencies shall have to do to integrate development and nature conservation being based on which strategic pillar. The National Planning Commission, based on those recommendations, shall direct thematic and sectoral agencies concerned. The Framework Implementation Unit shall take necessary action on such monitoring reports and present details for policy decisions at a meeting of the Framework Implementation Coordination Committee for policy.

6.8 Information Management

A Development and Nature Conservation Integration Information Centre shall be established in the Framework Support Unit. The Centre shall collect and manage required information by coordinating with the Liaison Unit of thematic agency concerned and individuals. The Centre shall also collect and manage local-level information by co-ordinating with the local-level Environment Friendly Local Governance Coordination Committee.

6.9 Knowledge Management and Use

Sectoral agencies concerned shall be responsible for documentation, communication, replication and promotion of knowledge obtained from integration of nature conservation into sectoral development efforts. Replication and promotion of knowledge thus obtained by the sectoral agency shall be monitored through the Framework Implementation Support Unit. The Unit shall also ensure that replication and promotion of knowledge has been included in the Programme Planning Guidelines to include it in future plans and programmes. Based on the lessons learned from the implementation of this Framework, feedback shall be provided at the Framework Implementation Coordination Committee and the Coordination Council. Feedback shall also be included in the agenda of regular monitoring to be carried out by the National Planning Commission.

6.10 Revision of the Framework

This Framework shall be revised by reviewing it in the final year of the periodic plan. However, the Framework may also be revised by reviewing/evaluating it in the mid-term and other time as required.

References

Endnote number	Bibliography
1,5,6,8,32	NPC, 2014. The Thirteenth Plan (2012/13 – 2014/15). National Planning Commission Secretariat, GoN
2	WECS.2005. National Water Plan. Water and Energy Commission. Singh Durbar, Kathmandu
3,29	MOEST. 2008. Thematic Assessment Report on Land Degradation. Ministry of Environment, Science and Technology, GoN
4,10,28,62	ADS.2014. Agricultural Development Strategy 2014. MOAD, GoN
2,7,8,9,10	MOF.2014. Budget Speech 2014. Ministry of Finance. Singh Durbar, Kathmandu
11	NA.2010 (2067 BS). Brihat Nepali Sabdakosh. Nepal Academy, Kathmandu.
12	AM, 2014. Timeline of Environmental Movement and History – A Fierce Green Fire. American Masters. 15 April 2014
13,18	Sharma, E., N. Chetri and K. P. Oli.2010. Mountain Biodiversity Conservation and Management: A Paradigm Shift in Policies and Practices in the Hindu Kush-Himalayas. Ecol Res (2010) 25: 909–923
14	WECD, 1987. Our Common Future – Report of the World Commission on Environment and Development: Our Common Future
15	RDED.1992. Rio Declaration on Environment and Development. Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1992
16,70	WRI, 2005. Millennium Ecosystems Assessment. Ecosystems and Human Well-being: Biodiversity Synthesis. World Resources Institute (WRI), Washington, DC.
17	UNSD, 2014. Open Working Group Proposal for Sustainable Development Goals. UN Division for Sustainable Development. UN
19,59	NBSAP. 2014. National Biodiversity Strategy and Action plan 2014. Ministry of Forests and Soil Conservation, GoN
20,60	FSS.2014. Forestry Sector strategy for Nepal 2014 (Draft). Ministry of Forests and Soil Conservation, GoN
21	IUCN, 2013. Review of National Conservation Strategy (NCS 1988). International Union for Conservation of Nature, Nepal
22	Gautam, A. P., B. P. Kharel and D. Gauchan, 2013. Sectoral Review. Review of NCS 1988. IUCN Nepal
23,56,57	NPC, 2013. National Monitoring and Evaluation Guidelines. National Planning Commission, GoN
24,26	DNPWC. 2012. Annual Report 2011-2012. DNPWC, Kathmandu.
27	MOFSC.2014. Forestry Sector Strategy for Nepal (draft). Ministry of Forests and Soil Conservation, GoN
30	CBS. 2013. National Sample Census of Agriculture Nepal, 2011.12, Central Bureau of Statistics NPC, GoN
31	Bhattarai, T. N. 2014. Thematic Paper on Physical Infrastructure Development and Environment. IUCN Nepal
33	ICIMOD.2011a. Glacial Lakes and Glacial Lake Outburst Floods in Nepal. ICIMOD
34	WECS, 2010. Energy Sector Synopsis Report 2010. Water and Energy Commission Secretariat, Kathmandu, Nepal
35,46	IDS-Nepal, PAC and CGAP.2014. Economic Impact Assessment of Climate Change in Key Sectors in Nepal. Integrated Development Society Nepal, Practical Action Consulting and Global Climate Adaptation Partnership. IDS-Nepal, Baisnavi Marga, Tusal, Kathmandu
36	MOSTE, 2013. Subsidy Policy for Renewable Energy 2069 BS. Ministry of Science, Technology and Environment, Go
37	Namarmi. 2014. A paper presentation in a workshop 'Final Project Completion Meeting of Development of Academic Program on Energy System Planning and Analysis at Institute of Engineering, Tribhuvan University' on 9th October 2014 at Hotel Himalaya
38	MOF.2000. Economic Survey. Ministry of Finance, GoN
39	MOF. 2013. Economic Survey 2012-13. Ministry of Finance, GoN
40,49,51	MOF. 2014. Economic Survey 2013-14. Ministry of Finance, GoN

41	MOLRM. 2012. Land Use Policy 2012. Ministry of Land Reform and Management, Singh Durbar, Kathmandu
42	ADPC and CECI.2012. Mainstreaming Climate Change and Disaster Risk Management in Irrigation Development in Nepal. Asian Disaster Preparedness Centre (ADPC) Bangkok and Centre for International Studies and Cooperation (CECI) Nepal.
43	FAO, 2014. World Food Day – 10 Myths about Hunger. FAO
44	WHO. 2007. Bandana
45	Pradhan, B. K. 2014. Thematic Report on Health Sector. NCNSFSD. IUCN/NPC
47	Khanal. 2014. Climate Change and Energy Thematic Report. NSFNC, IUCN Nepal.
48	Muzzini, E. and G. Aparicio, 2013. Urban Growth and Spatial Transition in Nepal. The World Bank
50	DOIn. 2013. Industrial Statistics. Department of Industry. Kathmandu
52	Pandey, B...2014. Conservation Education/Education for Sustainable Development Thematic Report. NSFNC, IUCN Nepal
53	Khatri, B. P. 2003. Vedic Anusthan – Nityakarma Padyati. MRs Shanti Devi Khatri Published – Netakatiya Majhi Gaun -7, Bajhang, Nepal
54	ADA, 2007. ADA, 2007. Thematic Evaluation: The Relevance of Culture and Cultural Heritage in Austrian Development Cooperation and Cooperation with Eastern Europe Case Studies on Bhutan, Nepal, Guatemala, and Bosnia and Herzegovina Synthesis Report. Volume I. Austrian Development Agency
55,63	Lama, M. S. 2014. Communities and Indigenous Peoples. IUCN, Nepal
58	Belbase, N. and D. R. Khanal. 2014. Policy and Legal Provisions Thematic Paper. NSFNC, IUCN Nepal
61	CBS. 2014. Environmental Statistics of Nepal. Central Bureau of Statistics, NPC, GON
64	UNESCO. 2014. UNESCO's CCESD Program Support Mapping of Climate Change Education Actors in Nepal. 17.06.2014 - UNESCO Office in Kathmandu
65,67	UNDP, 2013. Program for People from Areas Vulnerable to Climate Change and Natural Disaster. UN Nepal Information Platform.
66	SDAN. 2003. Sustainable Development Agenda. National Planning Commission. Kathmandu
68	MOFALD. 2070 (2013 AD). Environment Friendly Local Governance Framework. Ministry of Federal Affairs and Local Development. Kathmandu
69	MOFSC. 2014a. Review of the Implementation of the Master Plan for Forestry Sector of Nepal, Ministry of Forests and Soil Conservation (MFSC), Kathmandu
71	Christie, M., Hanley, N., Warren, J., Murphy, K., Wright, R., and Hyde, T., 2006. Valuing the diversity of biodiversity. Ecological Economics, 58: 304–317.
72	Lele, S., Springate-Baginski, O., Lakerveld, R., Deb, D. And Dash, P., 2013. Ecosystem Services: Origins, Contributions, Pitfalls, and Alternatives. Conservation & Society, 11(4): 343-358. Available online at: http://www.conservationandsociety.org/article.asp?issn=0972-4923 .
73	ICIMOD, 2011. Protected Areas and Payment for Ecosystem Services A feasibility study in Shivapuri-Nagarjun National Park, Nepal. ICIMOD, Kathmandu
74	Farber, S. C., R. Costanza and M. A. Wilson. 2002. Economic and Ecological Concepts for Valuing Ecosystem Services. SPECIAL ISSUE: The Dynamics and Value of Ecosystem Services: Integrating. Economic and Ecological Perspectives. Ecological Economics 41 (2002) 375 – 392

Annexes

Annex 1: Millennium and Post-Millennium Development Goals

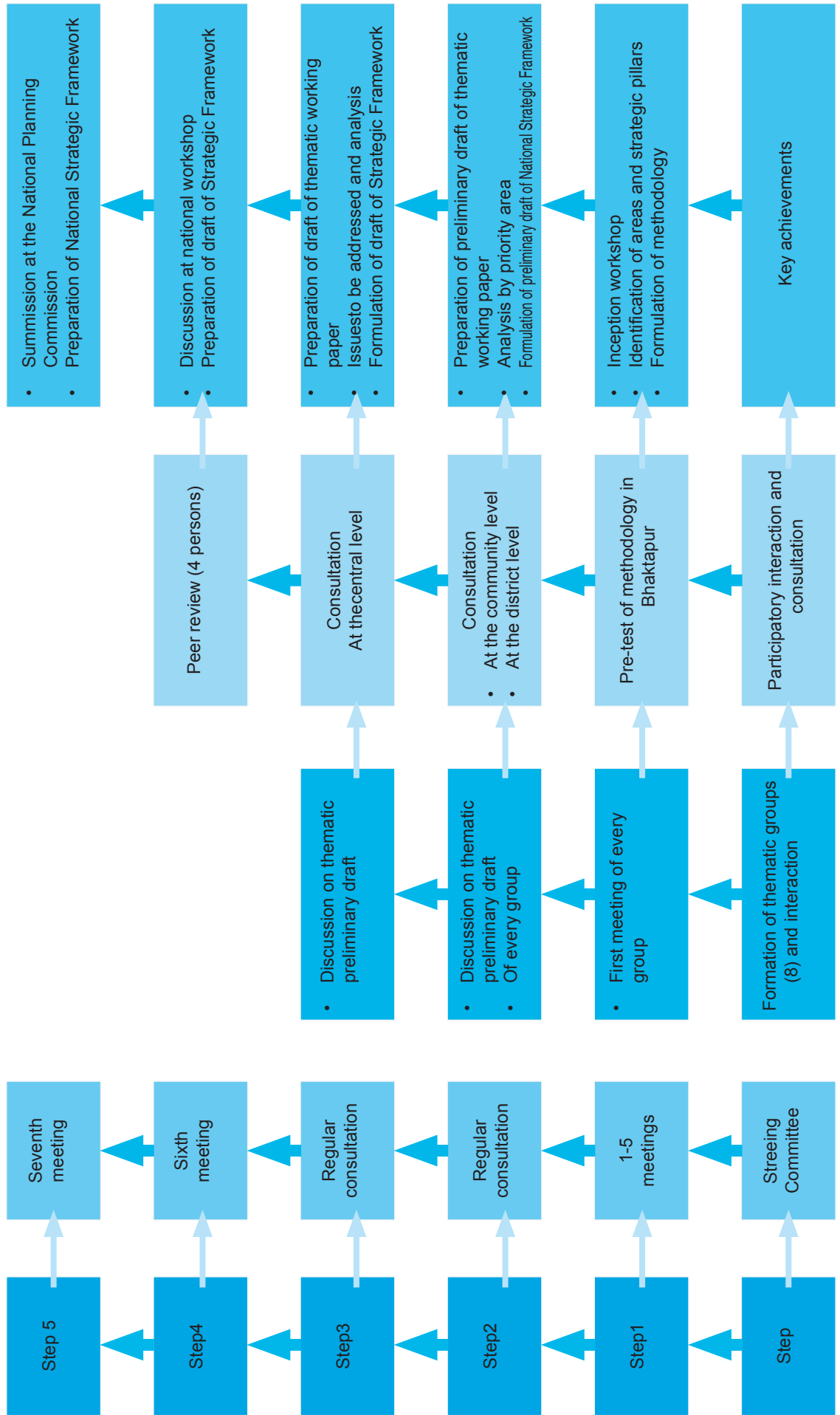
Millennium Development Goals

1. To eradicate poverty and hunger
2. To achieve universal primary education
3. To promote gender equality and empower women
4. To reduce child mortality
5. To improve maternal health
6. To combat HIV/AIDS, malaria, and other diseases
7. To ensure environmental sustainability
8. To develop a global partnership for development

Proposed sustainable Post-Millennium Development Goals

- Goal 1 End poverty in all its forms everywhere
- Goal 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- Goal 3 Ensure healthy lives and promote well-being for all at all ages
- Goal 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- Goal 5 Achieve gender equality and empower all women and girls
- Goal 6 Ensure availability and sustainable management of water and sanitation for all
- Goal 7 Ensure access to affordable, reliable, sustainable and modern energy for all
- Goal 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- Goal 9 Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation
- Goal 10 Reduce inequality within and among countries
- Goal 11 Make cities and human settlements inclusive, safe, resilient and sustainable
- Goal 12 Ensure sustainable consumption and production patterns
- Goal 13 Take urgent action to combat climate change and its impacts*
- Goal 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development
- Goal 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
- Goal 16 Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
- Goal 17 Strengthen the means of implementation and revitalize the global partnership for sustainable development

Annex 2: National Strategic Framework development process



Annex 3: Districts where interactions were held

Based on geographical details of districts where consultations were held:

- Mountain (7): Taplejung, Sankhuwasabha, Dolakha, Sindhupalchok, Manang, Jumla and Humla
- Hill (8) : Dhankuta, Okhaldhunga, Dhading, Kaski, Palpa, Surkhet, Salyan and Doti
- Terai (6): Morang, Mahottari, Kapilvastu, Nawalparasi, Banke and Kailali
- Churia (4): Udayapur, Sindhuli, Makwanpur and Dandeldhura
- Urbanisation (1): Bhaktapur

Based on regional-level details:

- Eastern (6): Taplejung, Sankhuwasabha, Dhankuta, Morang, Udyapur and Okhaldhunga
- Central (7): Dolakha, Sindhuli, Mahottari, Sindhupalchok, Bhaktapur, Dhading and Makwanpur
- Western (5): Manang, Kaski, Palpa, Kapilvastu and Nawalparasi

- Mid-Western (5): Jumla, Surkhet, Banke, Salyan and Humla
- Far-Western (3): Dandeldhura, Doti and Kailali

Based on interaction model details:

- Workshop and direct contact model: Dhankuta, Bhaktapur, Manang, Banke and Dandeldhura (5)
- FGD and direct contact model: Sankhuwasabha, Morang, Udyapur, Mahottari, Sindhupalchok, Dhading, Kaski, Palpa, Kailali (10)
- Discussion by using right-holders' networks: (Okhaldhunga, Dolakha, Salyan – FECOFUN), Surkhet (Farmers' Association), Sindhuli, Nawalparasi (Water Users' Association), Makwanpur, Doti (National Association of VDCs) (8)
- Discussion by using the media: Taplejung, Kapilvastu and Humla (3)

Annex 4: Findings of the perception analysis of direct interview conducted at different-level discussions

Annex 4.1: Perceptions of district-level stakeholders

The Nature Conservation National Strategic Framework formulation team held direct consultations with the stakeholders in 14 districts. These consultations were organised in the convenership of District Development Committees. The majority of participants in the consultations were involved in the development activities of local agencies. The others were district-level professionals, journalists, teachers, professors, social workers, and legal practitioners. In the course of the consultations, interactions were held with over 1500 individuals with a view to studying individual opinions on different themes of conservation; 326 people completed the questionnaires prepared by the team, and, out of these, 75 percent were men, 24 percent were women and 1 percent were others. Considering the fact that, according to the Thirteenth Plan, the proportion of women at the gazetted level of government service is 16.9 percent and considering the involvement of mostly government servants in this study, the female participation percentage seems to be justifiable. Similarly, involved in the study were about 23 percent indigenous peoples, 5 percent Dalits, 13 percent Madhesis and 59 percent others; out of them 17 percent were involved in agriculture, 8 percent in business, 41 percent in government services, 15 percent in private sector services, 6 percent in education, and 13 percent in other services. From the perspective of specialisation, 20 percent were in agriculture, 9 percent in forestry, 3 percent in planning, 10 percent in engineering, 6 percent in management, 8 percent in public administration, 8 percent in education, 3 percent in health, 6 percent in development, 4 percent in journalism, 3 percent in environment, and 20 percent in others. These statistics indicate that the study included representatives from an array of sectors.

Information related to the National Conservation Strategy (1988): One of the main reasons for the weakness of the National Conservation Strategy (1988) was that people did not have information about it and no measures were taken to make it available to people. When asked what they knew about the National Conservation Strategy, 48 percent of the respondents (total 326) were not

aware of it, 38 percent said that they had heard about it, 12 percent had read it, and 2 percent had seen it. Similarly, 9 percent of the respondents said that they knew something about the Strategy and 91 percent of the respondents reported that they did not know about it at all. It indicates that the public should be oriented well about conservation strategies after they are formulated. In addition, such strategies should be prepared in Nepali, should be intelligible to all and should be readily available.

Reasons for deforestation: While discussing important factors contributing to deforestation, all the respondents ranked the factors according to their perceptions of them. 57 percent of the participants gave first priority to weak implementation of provisions, 46 percent to lack of law and coordination, 45 percent to high-value herbs, 44 percent to climate change, 38 percent to population growth and 31 percent to lack of sustainable land-use policy.

Reasons of the exploitation of Churia: Sample respondents of the study cited lack of sustainable land-use policy, weak implementation of existing provisions, lack of coordination, population growth, impact of climate change, and lack of law as their first priority.

Major impact of the indiscriminate excavation of stones, sand and gravels in Churia: These include: deepening of streams resulting in the use of electricity-operated pumps to pull water for drinking and irrigation purposes because of the lack of gravitation force; loss of agricultural productivity due to erosion of upper fertile soil and unavailability of irrigation facility; and increasing trend of floods and landslides.

Nature conservation integration measures in development: Sample respondents ranked different measures according to their perceptions. Forty eight percent of the respondents gave first priority to the capacity building of the Ministry of Science, Technology and Environment, whereas 39 percent listed the need to hold the Environmental Assessment Team more responsible, 41 percent of the respondents identified the need to strengthen monitoring mechanisms and 41 percent of the

respondents listed revision of the environmental law as their first priority.

Reasons of fast urbanisation, industrialisation and settlement expansion on agricultural land: This is generally due to lack of law and sectoral coordination.

Annex 4.2: Perceptions of the community

Lessons learned: Conservation activities should begin from the village level, public awareness should be raised so that they can take ownership over conservation, alternative energy has reduced dependence on forests leading to forest protection, there is a need for a village-level Coordination Committee, and there should also be a village-level conservation policy.

Factors of land-use change at the village level: Conversion of land near agricultural roads into residential purposes, lack of land-use policy, degradation of soil quality as a result of the increased use of chemical fertilizers attributed to transportation facility after the construction of roads, loss of agricultural productivity, increasing number of farmers who keep their land fallow due to the unavailability of agricultural labour, agricultural land used for residential purposes because of population growth, and the fact that selling land for residential purposes is more lucrative than farming because industrialisation has increased the value of land.

Factors to be considered in conservation: Conservation activities become more successful if Mothers' Groups are made aware of conservation, security has to be paid more attention to as poaching is likely to increase once conservation activities begin, roads should be constructed avoiding adverse impacts on trekking tourism routes, conservation areas and commercial production areas should be separated while laying emphasis on the conservation of local species, indigenous varieties should be protected while expanding improved varieties, farmers who conserve indigenous varieties/breeds should be provided with conservation grants as they are low-yielding.

Factors to be considered in the conservation of cultural heritages: Restoration of temples, identification and recognition of one's culture, commercialisation of cultural products, conducting

orientation programmes that raise interest in communities, indiscriminate construction of roads, lack of interest in conservation as local communities do not get income arising from the conservation of the area concerned, loss of originality of culture because of the involvement of outsiders as awareness raisers on culture conservation, unavailability of local trainers, youths of new generation not paying adequate attention to old culture, increased disbelief in cultural norms and values at the local level.

Challenges in enhancing participation of the poor, women, Dalits and indigenous peoples in natural resource conservation, sustainable use and equitable distribution of benefits: Lack of awareness, lack of budget, political interference, no inclusion of poor classes, domination of the elite, lack of leading capacity, youths leaving the country for overseas employment, family problems when women try to participate and the issues both women and children face during the breastfeeding period.

Implementation and monitoring of environmental impact review-related arrangements in accordance with environmental provisions: Nothing has been completed except for mentioning environmental management plan during the formulation of a plan, there is no practice of monitoring.

Annex 4.3: Perceptions of stakeholders about mainstreaming, harmonisation and coordination

Perceptions of stakeholders about nature-sensitivity mainstreaming: Sixty-five percent of the sample respondents cited law in the mainstreaming of fundamental nature-sensitivity factors as their first priority, whereas 50, 49, 32, 31 and 29 percent of the respondents listed plan, policy, institutional capacity and investment in conservation, institutional arrangements and human resources, respectively, as their first priority. As the percentage of respondents giving factors second or lower priority was less than that of respondents giving factors giving first priority in the course of ranking, it was clear that all those factors should be considered in nature-sensitivity mainstreaming.

Perceptions about sectoral harmonisation in development efforts: When asked what should be done to ensure that there is no duplication

and inconsistency in responsibilities of different sectors in order for development efforts to be nature sensitive, such as policy stability, efficient use of limited resources, grant provided in one sector has no adverse effect on another sector etc, 50 and 26 percent of the sample respondents cited monitoring and evaluation and legal reforms, respectively, as their first priority. To achieve harmonisation, accountability, documentation of good practices and dissemination are not very effective; conversely, political will is impactful.

Perceptions about sectoral coordination in development efforts: When asked how sectoral coordination could be achieved in development efforts, 59 percent of the respondents gave first priority to effective joint monitoring and evaluation, whereas they gave second priority to the monitoring of accountability. Similarly, the respondents cited

the role of the High-level Coordination Committee as their third priority.

Annex 4.4: Perceptions of respondents about the implementation structure of the National Strategic Framework

As to the structure of this Nature Conservation National Strategic Framework, 81 percent of the sample respondents suggested a separate Council with authority within the National Planning Commission. As this Council will be a high-level institution and cannot hold its meetings very regularly, it was suggested at the meeting of Thematic Committees that the implementation of this National Strategic Framework could be effective if there was a Coordination Committee to support this structure.

Annex 5: Details of the steering committee and thematic committee

Annex 5.1: Steering committee

Name	Designation	Organisation	In the committee
Mr Sharada Prasad Trital	Member Secretary	National Planning Commission Secretariat	Chairperson
Dr Tirtha Raj Dhakal	Joint Secretary	National Planning Commission Secretariat	Member
Mr Gopi Nath Mainali	Joint Secretary	National Planning Commission Secretariat	Member
Dr Udaya Chandra Thakur	Joint Secretary	Ministry of Agricultural Development	Member
Mr Krishna Raj BC	Joint Secretary	Ministry of Land Reform and Management	Member
Mr Khag Raj Baral	Joint Secretary	Ministry of Science, Technology and Environment,	Member
Mr Baikuntha Aryal	Joint Secretary	Ministry of Finance	Member
Mr Gopi Krishna Khanal	Joint Secretary	Ministry of Federal Affairs and Local Development	Member
Mr Braja Kishor Yadav	Joint-Secretary	Ministry of Forests and Soil Conservation	Member
Mr Abadh Kishor Mishra	Joint-Secretary	Ministry of Urban Development	Member
Mr Deepak Bahadur Singh	Senior Programme Officer	Asian Development Bank	Member
Mr Ganesh Karki	Chairperson	FECOFUN	Member
Mr Manfred Sibaner	Programme Manager	GIZ	Member
Mr Dandu Sherpa	Vice Chairperson	NEFIN	Member
Mr Daya Sagar Shrestha	Executive Director	NGO Federation Nepal	Member
Mr Vijay Prasad Singh	Assistant Country Director	UNDP Nepal	Member
Mr Pushpa Lal Shakya	Joint Secretary	National Planning Commission Secretariat	Member-Secretary

Annex 5.2: Forestry group

Name	Designation	Organisation	In the group
Mr Braja Kishor Yadav	Joint Secretary	Environment Division, Ministry of Forests and Soil Conservation	Chairperson
Mr Subhash Sharma	Under Secretary	Environment Division, Ministry of Forests and Soil Conservation	Member
Mr Madan Raj Bhatta	Chief	Gene Bank, NARC	Member
Mr Ghan Shyam Shrestha	Executive Manager	Hotel Association Nepal	Member
Prof Abhaya Kumar Das	President	Nepal Foresters Association	Member
Mr Santosh Nepal	Director	WWF	Member
Mr Rom Raj Lamichhane	Under Secretary	Ministry of Forests and Soil Conservation	Member
Mr Mahesh Kharel	Programme Director	National Planning Commission Secretariat	Member
Ms Durga Banjade	Planning Officer	National Planning Commission	Member
Mr Tikaram Adhikari	Acting Director General	Department of National Parks and Wildlife	Member
Mr Gandhiv Kafle	Lecturer	Agriculture and Forest University	Member
Mr Bholu Bhattarai	Advisor	ACOFUN/National Advocacy Forum Nepal	Member
Mr Thakur Bhandari	Member	FECOFUN	Member
Mr Ishwori Prasad Paudel	Planning Officer	Department of Forests	Member
Mr Bodh Raj Subedi	Environment Officer	Ministry of Forests and Soil Conservation	Member
Mr Raghu Ram Parajuli	Assistant Planning Officer	Department of Botany	Member
Mr Gehendra Upadhyay	Under Secretary	Department of Soil Conservation and Watershed Management	Member
Mr Rajendra Dhungana	Assistant Environment Officer	Ministry of Forests and Soil Conservation	Member
Ms Madhu Ghimire	Under Secretary	Environment Division, Ministry of Forests and Soil Conservation	Member Secretary

Annex 5.3: Biodiversity and ecosystem group

Name	Designation	Organisation	In the thematic group
Mr Braja Kishor Yadav	Joint Secretary	Environment Division, Ministry of Forests and Soil Conservation	Chairperson
Mr Madan Raj Bhatta	Chief	Gene Bank, NARC	Member
Mr Manish Raj Pande	Senior Conservation Officer	National Trust for Nature Conservation	Member
Mr Rom Raj Lamichhane	Under Secretary	Ministry of Forests and Soil Conservation	Member
Mr Gopal Bhattarai	Under Secretary	Department of National Parks and Wildlife	Member
Mr Ghan Shyam Shrestha	Executive Manager	Hotel Association Nepal	Member
Mrs Durga Banjade	Planning Officer	National Planning Commission	Member
Mr Santosh Nepal	Director	WWF	Member
Mr Tikaram Adhikari	Acting Director General	Department of National Parks and Wildlife	Member
Mr Subhash Sharma	Under Secretary	Environment Division, Ministry of Forests and Soil Conservation	Member
Mr Shiv Raj Bhatta	Field Programme Director	WWF	Member
Mr Ang Chhiring Sherpa	President	Nepal Mountaineering Association	Member
Mr Bodh Raj Subedi	Environment Officer	Ministry of Forests and Soil Conservation	Member
Mrs Bishnu Devi Pande	Programme Officer	National Planning Commission Secretariat	Member
Mr Leela Bahadur Baniya	Senior Manager	Nepal Tourism Board	Member
Ms Madhu Ghimire	Under Secretary	Environment Division, Ministry of Forests and Soil Conservation	Member Secretary

Annex 5.4: Agriculture sector group

Name	Designation	Organisation	In the thematic group
Dr Udaya Chandra Jha	Joint Secretary	Food Security and Environment Division, Ministry of Agricultural Development	Chairperson
Dr Ramita Manandhar	Senior Horticulture Development Officer	Food Security and Environment Division, Ministry of Agricultural Development	Member
Mr Ash Lal Tamang	Senior Seed Development Officer	Seed Quality Control Centre, Harihar Bhawan	Member
Mr Suresh Kumar Wagle	Chief	Fishery Research Centre, NARC	Member
Ms Naina Dhakal	Senior Agriculture Economist	Ministry of Agricultural Development	Member
Dr Resham Bahadur Thapa	Professor	Institute of Agriculture and Animal Science	Member
Mr Uddhav Adhikari	Chairperson	Farmers Group Federation Nepal	Member
Dr Loknath Paudel	Senior Livestock Development Officer	Livestock Production Directorate	Member
Mr Uttam Kumar Bhattarai	Joint Secretary	Ministry of Agricultural Development	Member
Dr Hari Bahadur KC	Senior Plant Protection Officer	Ministry of Agricultural Development	Member
Ms Sabnam Shivakoti	Under Secretary	Policy Section, Ministry of Agricultural Development	Member Secretary

Annex 5.5: Physical infrastructure and environment group

Name	Designation	Organisation	In the thematic group
Mr Madhav Karki	Joint Secretary	Ministry of Physical Infrastructure and Transport	Chairperson
Mr Sundar Bhattarai	Under Secretary	Ministry of Physical Infrastructure and Transport	Member
Mr Purva Kumar Rai	Senior Divisional Engineer	Ministry of Physical Infrastructure and Transport	Member
Mr Shiv Prasad Nepal	Senior Divisional Engineer	Department of Roads	Member
Mr Kavish Tandukar	Engineer	Ministry of Physical Infrastructure and Transport	Member
Mr Duryodhan Karki	Senior Officer	Home Ministry	Member
Mr Madan Mohan Jha	Senior Divisional Engineer	Department of Water Induced Disaster Prevention	Member
Mr Bamsi Kumar Acharya	Section Officer	Home Ministry	Member
Ms Sarita Maske	Senior Divisional Engineer	Department of Water Induced Disaster Prevention	Member
Ms Shobha Bhandari Chalise	Sociologist	Ministry of Physical Infrastructure and Transport	Member

Annex 5.6: Environment and disaster risk management group

Name	Designation	Organisation	In the thematic group
Mr Ram Prasad Lamsal	Joint Secretary	Ministry of Science, Technology and Environment	Chairperson
Mr Prakash Mathema	Joint Secretary	Ministry of Science, Technology and Environment	Chairperson
Mr Nikendra Bahadur Rawal	Hydrologist Engineer	Department of Hydrology and Meteorology	Member
Mr Lila Nath Rimal	Senior Divisional Geologist	Department of Mines and Geology	Member
Mr Dipendra Bahadur Oli	Legal Officer	Garbage Management Technical Assistance Centre	Member
Mr Khagendra Basnet	Director	Department of Industry	Member
Mr Ashok Prasad Bhattarai	Under Secretary	Ministry of Science, Technology and Environment	Chairperson
Mr Ram Hari Pant	Under Secretary	Ministry of Science, Technology and Environment	Chairperson

Annex 5.7: Society, indigenous peoples and environment group

Name	Designation	Organisation	In the thematic group
Mr Gopi Krishna Khanal	Joint Secretary	Ministry of Federal Affairs and Local Development	Chairperson
Mr Ram Sharma	Assistant Director	Council of Social Services	Member
Mr Pragati Sharma	Climate Change Officer	Nepal Climate Change Support Programme	Member
Mr Chakrapani Sharma	Under Secretary	Ministry of Federal Affairs and Local Development	Member
Mr Ram Prasad Bhattarai	Under Secretary	Ministry of Women, Children and Social Welfare	Member
Mr Lakshmi Pande	Under Secretary	Ministry of Federal Affairs and Local Development	Member
Mr Reshmi Raj Pande	Joint Secretary	Ministry of Federal Affairs and Local Development	Chairperson
Mr Om Gurung	Professor and Chief	Department of Sociology and Anthropology, Tribhuvan University	Member
Mr Devendra Karki	Officer	Ministry of Federal Affairs and Local Development	Member

Annex 5.8: Law and policy provision group

Name	Designation	Organisation	In the thematic group
Mr Kamalshali Ghimire	Joint Secretary	Ministry of Law, Justice, Constituent Assembly and Parliamentary Affairs	Chairperson
Mr Shambhu Raj Regmi	Under Secretary	Ministry of Law, Justice, Constituent Assembly and Parliamentary Affairs	Member
Mr Dhruva Basnet	Member	Nepal Forum of Environmental Journalists	Member
Mr Bishnu Prasad Regmi	Under Secretary	Ministry of Law, Justice, Constituent Assembly and Parliamentary Affairs	Member

Annex 6: Sagarmatha Declaration on Climate Change

The world's tallest peak Sagarmatha (Mt. Everest) and the world's beautiful mountain ranges that span to both East and West of Sagarmatha have had a positive and extraordinary contribution in the civilization, economic-social-cultural prosperity of the 1 billion and 300 million people, and natural heritage as well as tourism development and other various areas.

In recent times, the world's climate change has affected various areas, such as human life, social and economic development, biodiversity, tourism development, including the Himalayas. As a result, the risk of heavy precipitation, or very light precipitation, floods, landslides, glacial landslides and drought has increased. This has had negative impact not only on the land masses in the vicinity of the Himalayas but also on South Asia as well as on the environmental balance of the entire world.

The world is our common home. Acknowledging that as much as the world as our common home is important to us, it is also important to our future generations, we have been expressing bilateral and multi-lateral commitments on sustainable development and environmental preservations since several decades. Through the Sagarmatha Declaration, we would like to highlight our collective commitment on climate change and areas of mutual co-operation. For the entire humanity to move ahead in the preservation of world heritage, biodiversity, sustainable economic-social-cultural development, tourism development, as well as to help preserve mountain ranges, including Sagarmatha, the Government of Nepal thus makes this Declaration:

1. We express commitment to work together with the South Asian nations as well as other nations in order to protect the Himalayas and that mountain ecosystem that are at risk because of climate change and to draw the attention of the world community to this issue.
2. To launch mass awareness campaigns, at the local as well as the national level, on studies of the potential impact and ways of mitigation about the adverse situations created by climate change in the Himalayan ranges and the affected areas, on the local livelihood and subsistence, especially among the poor, marginalized groups, indigenous peoples, dalits, women, and children.
3. To address the negative impact of climate change in advance and to foster social resilience in agriculture and other areas, adopt early warning system, develop a blueprint on climate change, and enhance the needed skills in this area.
4. In course of preserving the mountain ecosystem, expand the currently preserved 20 per cent area of Nepal to 25 per cent in the country and consolidate the forest area to 40 per cent. To explicate our commitment, declare Gaurishankar and Apinapa regions as conservation areas.
5. Obtain support of the world community to effectively implement projects in accordance with Nepal's needs, in order to address the adverse impact of climate change on Nepal's social-economic sector, specially water-resources, agriculture, biodiversity, forests, human life, and health. Also, endorse the proposal requiring developed nations to contribute at least 1.5 per cent of their GDP to the Climate Change Fund.
6. With the confidence that by developing clean energy, we can reduce carbon emission in the region, draw attention of developed and neighboring countries for the appropriate, modern technology, its easily accessible transfer and investment.
7. Take the initiative to amend the Clean Development Mechanism (CDM) in order to make it more accessible and beneficial to poor nations and for Nepal to fully benefit from it.
8. To prevent perilous situations due to human-induced climate change, call for maintaining the level of greenhouse gases in the atmosphere below 350 PPM (Parts Per Million) and the average temperature of the planet at the level that existed in the pre-industrial world, not more than 1.5 degree centigrade.

9. Given that very limited research has been carried out concerning the impact of climate change on the process of snow and glacial melt in the Himalayan region, take the initiative to meet knowledge needs in this respect.

10. Call to reduce emissions of greenhouse gases in order to mitigate the serious impact

of greenhouse gases and other activities on mountain ecosystem and the Himalayas. In addition, draw attention of everyone to obtain compensation from the countries emitting greenhouse gases, and relief for poor nations and people adversely affected by such gases.

4 December 2009

Annex 7: Conventions, protocols and agreements to which Nepal is party

SN	Name of conventions, protocols and agreements
1.	Plant Protection Agreement of the Asia and Pacific Region, 1956
2.	Convention on the High Seas, 1958
3.	Treaty Banning Nuclear Weapon Test in the Atmosphere, in Outer Space and Under Water, 1963 (Nuclear Test Ban Treaty)
4.	Treaty on Principle Governing the Activities of the State in the Exploration and Use of Outer Space including the Moon and Other Celestial Bodies, 1967 (Outer Space Treaty)
5.	Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property, 1970
6.	Treaty on the Prohibition of the Emplacement of the Nuclear Weapons and other Weapon of Mass Destruction on the Seabed and Ocean floor and in the Subsoil thereof, 1971(Nuclear Weapon treaty)
7.	Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention), 1971
8.	Convention on for the Protection of the World Cultural and Natural Heritage, 1972
9.	Convention on the Prevention of Marine Pollution by dumping of Wastes and other Matters, 1972
10.	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 1973
11.	(a) Vienna Convention for the Protection of the Ozone Layer, 1985
12.	(b) Montreal Protocol on Substance that Deplete the Ozone Layer, 1987
13.	(c) London Amendment to the Montreal Protocol on Substance that Deplete the Ozone Layer (London amendment), 1990
14.	Convention on Biological Diversity, 1992
15.	United Nation Framework Convention on Climate Change, 1992
16.	Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction, 1993
17.	Agreement on the Networks of Aquaculture Center in Asia and the Pacific, 1988
18.	Basel Convention on the Control of Trans-boundary Movement of Hazardous Wastes, 1989
19.	Law of the Sea convention, 1982
20.	1982 Agreement relating to the Implementation of part XI of the UNCLOS, 1994
21.	Annex 16, Vol. II (Environmental Protection: Aircraft Engine Emission) 1981 to the Chicago Convention on International Civil Aviation, 1944
22.	Convention to Combat Desertification in those Countries Experiencing Serious Drought and or Desertification, Particularly in Africa, 1994
23.	International Tropical Timber Agreement (ITTA), 1994
24.	Kyoto Protocol to the United Nations Framework Convention on Climate Change, 1997
25.	Convention on Persistent Organic Pollutants (POPs), 2001
26.	International Treaty on the Plant Genetic Resource for Food and Agriculture, 2001
27.	Cartagena Bio-safety Protocol, 2002
28.	ILO convention No. 169, (Indigenous and Tribal Peoples Convention, 1989)
29.	Convention for the Safeguarding of the Intangible Cultural Heritage, 2003
30.	WTO (Agreement on Agriculture, Agreement on Application of Sanitary and Phytosanitary Measures and TRIPs), 2005

Annex 8: Excerpts of social inclusion of some nature conservation-related policies

Forest Policy

- Decentralise forest management according to the concept of community forest and give priority to those individuals within a community who have less access to facilities.
- Enhance public participation through effective environmental education and dissemination activities and plan according to public aspiration.
- Encourage to garner more participation of women in users' groups.
- Make reasonable income available to rural poor collectors who supply herbs to forest material-based industries by collecting them in the forest.
- Encourage the local community to manage forest resources by taking ownership over them.

Herb and Non-Timber Forest Product Development Policy

- For the commercialisation of herbs and non-timber forest products, public participation shall be garnered with special priority and a maximum of benefit for women below poverty line.
- Provision will be made for agricultural loans where a part of the credits disbursed to the poor, pro-poor and disadvantaged groups through the Local Development Fund and the Poverty Alleviation Fund will be utilised in herbs farming and market expansion and diversification activities.
- The poor, the landless and marginal families shall be collectively encouraged to cultivate herbs and non-timber forest products

Agricultural Policy

- The involvement and participation of women in all possible fields of the operation of agricultural programmes shall be raised up to 50 per cent.
- Seeds and technical services will be made available free of cost for the exploited, Dalit and other marginalised and landless agricultural labourers who have organised themselves into agricultural production groups by obtaining agricultural land, ponds, reservoirs or river areas on a contract or leasehold basis.
- For the purpose of upgrading forests and other lands and providing support to the task of alleviating poverty, marginal lands, pastures, degraded forests and waste public lands shall

be handed over to the target communities under lease agreements for their use, based on their feasibility, as farms to cultivate cash crops such as grass, agro-forests, medicinal herbs, and silk and other permanent plants and trees, or as horticultural farms.

- A participatory system shall be promoted by ensuring the involvement of the stakeholders at the local level concerned (village, district, region or central) in the process of formulating, monitoring and evaluating plans related to the agricultural sector from the local level to the central level.

Agro-Biodiversity Policy

- Agro-biodiversity registration shall be initiated to prepare a document for which the ownership shall remain with farming communities.
- The ownership of traditional and local knowledge, skills, innovations, technologies, uses and practices shall remain with the farming communities.
- There shall be equitable sharing of benefits arising from businesses based on the use of traditional and local foods, agricultural genetic resources, knowledge of local communities and intellectual property rights.

Land-Use Policy

- A land-use policy shall be formulated in a coordinated way by ensuring the participation of government and public agencies as well as the private sector.
- While formulating the land-use policy, themes like productivity, environmental balance and conservation, social and economic prosperity, and poverty alleviation shall be linked.

National Transport Policy

- The private sector shall be encouraged in the construction of traveler and tourist friendly and short distance green roads.
- Urban roads shall be constructed with public participation.

Hydropower Development Policy

- The private sector shall be encouraged to invest.
- Hydropower shall be generated for the benefit local people, too. This provision shall be prescribed at the time of issuing permits.

Irrigation Policy

- Gender equality, positive discrimination and social inclusion shall be ensured in the irrigation sector.
- Necessary legal arrangements shall be made in order to guarantee prior water rights.
- Arrangements shall be made for the representation of Dalits, *Utpidits*, disadvantaged and ethnic communities as well as at least 33 per cent women in a users' group.
- Existing gender discrimination in the irrigation sector shall be eradicated.
- Gender equality shall be achieved and women empowerment-related social programmes shall be carried out.
- Water resources shall be managed appropriately with special emphasis on irrigation development aimed at disadvantaged groups and regions.
- The participation of women and ethnic groups in water users' committees shall be ensured as prescribed.

Climate Change Policy

Climate adaptation-related activities shall be implemented by ensuring the participation of the poor, Dalits, marginalised ethnic groups, indigenous peoples, women, children and youths in these activities.

Rangeland policy

- For sustainable management of rangelands, scientific procedure and management systems shall be adopted by using traditional knowledge, technologies, skills and environment-friendly technologies with community participation.
- The local community shall be provided with the right to, and responsibility of, the conservation, promotion and use of rangelands.

Tourism Policy

- To share benefits arising from tourism enterprises with women, Madhesis, indigenous peoples and the poor who have not been included in the development process of the country, an appropriate structure shall be designed and developed through inclusive and co-operative means.
- To bring benefits arising from tourism enterprises within the access of communities, a structure shall be designed and developed with the involvement of the poor, women, Madhesis, indigenous peoples, and groups that have not been included to date, through rural tourism.
- Local bodies, women, indigenous peoples, Madhesis, Dalits and less developed classes and local communities shall be encouraged in conservation and promotion activities of local tourist sites as well as intangible cultural heritages.

Annex 9: Excerpts of social inclusion of some nature conservation-related strategies

Social inclusion is mentioned to some extent in the forestry, agriculture, biodiversity, irrigation and land-use policies, briefly in the transport, rangeland, climate change and tourism policies, and insignificantly in other policies. This National Strategic Framework facilitates social inclusion in the implementation of sectoral policies.

Forest Sector Strategy

Enhance the participation, efficiency and leadership of women, the poor, Dalits, indigenous peoples, Madhesis and less developed classes in all kinds and levels of institution of the forest sector, based on their population, represent these people in the decision-making process of community-based forest programmes, emphasise the capacity building of these users, promote the inclusion of such classes in soil and watershed plans and programmes, carry out activities of positive discrimination as required for the inclusion of such classes, coordinate the entry of such classes into forestry study institutes, assess the capacity of these classes from time to time and conduct training and other programmes as required, and review conservation-related laws and regulations and make necessary amendments to them for the participation of these classes

Agricultural Development Strategy

Include gender, the poor, disadvantaged and less developed classes, lay emphasis on the inclusion of such classes in value added chain, build the capacity of all level agencies concerned and design an appropriate mechanism for the inclusion of such classes in policy formulation, planning and implementation, increase the productivity of land through the equitable and effective participation of all classes, cooperatives and the private sector, enhance the qualitative and quantitative participation of men and women of all social groups in agricultural development activities carried out by all district, sub-district and community-level agencies, make the agriculture extension programme gender-sensitive in all districts,

Biodiversity Strategy

Minimum involvement of disadvantaged groups in the decision-making process, lack of participation of women and disadvantaged social groups are the

gaps observed in biodiversity management of areas outside the protected area. Lack of stakeholders' ownership over policies and strategies because of their low participation in policy formulation, implementation affected, biodiversity-related knowledge being concentrated in youths, lack of awareness about biodiversity conservation and climate change among a majority of rural people, lack of sufficient participation of women and disadvantaged groups in forest users' groups despite a significant increase in it ... Because of all this, the participation of such classes in conservation programmes shall be enhanced and they shall be led to the decision-making level and leadership roles

National Seed Vision

Encourage the participation of women and disadvantaged groups in producers' groups, ensure inclusive and equitable development, conduct awareness programmes for the participation of women and disadvantaged groups, the value added chain should create an environment which promotes women and disadvantaged groups and removes obstacles to their entry into the seed value added chain.

National Strategy for Disaster Risk Management Design and conduct disaster risk reduction-related special programmes for marginalised, disadvantaged and vulnerable groups, based on priorities, control the expansion of settlements in unsafe areas, protect unsafe settlements as well as relocate, or cause to relocate them as required, and while relocating give priority to the poor, women, senior citizens and developing classes.

National Tourism Strategic Plan

Develop employment in rural areas by enhancing participation of women and disadvantaged classes, promote local resources and public participation, enhance tourist attraction potential by enhancing local people's participation in management, conservation, operation and regulation of protected areas and reserves, encourage local participation in identification, preservation and development of the religions, cultures and traditions that promote tourism.

Water Resource Strategy

Develop the water resource sector based on consultations with, and the participation of, all concerned stakeholders, gender balanced participation of men and women, encourage communities' participation in water resource sector management, benefit disadvantaged and vulnerable groups, ensure that people who are affected by a project are encouraged to take ownership by laying emphasis on their participation.

New Physical Infrastructure – Foundation of the New Nepal (2007)

Encourage women's leadership in drinking water and sanitation-related awareness programmes, introduce a housing plan affordable for the homeless, Kamaiyas, Dalits and single women, encourage the use of local resources and technologies, emphasise the involvement of disadvantaged groups and Dalits in drinking water schemes, develop physical infrastructure to ensure equitable benefit-sharing among all classes, communities, people of all religions, ethnic groups are secured.

Annex 10: Risks foreseen in achieving the results of sectoral strategies

Strategies/policies	Implicit assumptions	Risks	Remarks
National Biodiversity and Action Plan (2014)	Article 15 of the CBD requires the State Parties to draft and enforce an Act on access to, and use of, genetic resources and benefit sharing. In accordance with this provision, the existing legal gap shall be filled-up by formulating rules and laws on, among others, access to genetic resources and sharing of benefits, an Act on keeping wildlife in private zoos, control of invasive species and Intellectual Property Rights, by 2016.	As the government's priorities are on constitution writing, holding elections to local bodies and restoration of peace, these laws may not be drafted by 2016. Past experience corroborates this. For example, although the bill on access to genetic resources and sharing of benefits was drafted way back in 2006, it has not yet been ratified.	The Biodiversity Coordination Committee will pay necessary attention to formulation and ratification of these laws to realize the desired achievements that necessitate enactment of these laws.
	Impose ban on development projects in the core areas of national parks and wildlife reserves and integrate the concept of greenery in the development of physical infrastructure in other areas.	As experience shows, there is a high chance that these provisions will not be complied with.	This Commission will provide explicit directions to the concerned authorities.
	Implementation of and compliance with the measures recommended by EIA reports for mitigating the adverse impacts will be monitored.	As EIAs have not been complied with in the past, this may not be followed.	The Commission will play a major role in realizing this.
	By 2016, the ambiguities between the Department of Forests and the Department of Livestock Services over their respective roles and responsibilities in pasture management and between the Department of Forests, Department of Agriculture, Nepal Electricity Authority and Department of Irrigation over the management of wetlands outside the conservation areas will be clarified.	Based on analyses of the relationship and coordination between these authorities in the past, it is uncertain whether this will be followed.	The Commission will provide directions, and carry out coordination and progress monitoring.
	By 2017, environment-friendly local governance district/village/municipality coordination committees will have been put in place in at least 15 districts and 30 VDCs/municipalities that have been selected for biodiversity planning, coordination and monitoring and implementation.	With regard to the absence of elected representatives in local bodies, the possibility for this is minimal, because of which the possibility of implementation of the Local Biodiversity Strategy and Plan of Action at village/municipality level is very low.	In such a situation, the Commission will play a crucial role in translating it into action.
	By 2015, a national strategic framework for nature conservation will have been prepared and implemented.	Its formulation process is at the final phase. However, as its implementation requires government approval, its implementation is not yet certain.	The Commission will take steps to obtain governmental approval for its implementation.

Agriculture Development Strategy (2014)	The area under principal crops will increase from 3,087 thousand ha to 3,318 thousand ha.	The increment in area does not seem feasible. On the one hand, the Agricultural Development Strategy (2014) states that there will be no increment in land and, on the other hand, the demands for forest area, road, physical infrastructure, parks and open spaces are increasing. There is also a target to replace cereal crops with high value crops. Hence, all this should be achieved through an increase in intensity – and so it should be mentioned in the crop intensity goal.	MoAD and the Commission will conduct continuous monitoring to ensure that the envisaged increment in land area does not take place at the cost of forests and marginal land.
	If the Government implements the land-use management regulatory system effectively, farm size will increase for agricultural mechanisation.	As mechanisation will not take place without increasing the farm size and as the problem of decreasing labour cannot be addressed without mechanisation, the land use management regulatory system should be implemented effectively, which is quite risky.	The Commission and the Ministry of Land Reforms and Management will provide directions and monitor.
	Subsistence production based forestry is developed into competitive, agriculture friendly and inclusive forest management practice, with a holistic and community based landscape approach to natural resource management and livelihoods improvement.	This activity is quite risky. As this activity requires shifting from forestry to agriculture, it will not be successful until it is transferred to forestry. However, it is not mentioned in the Forest Strategy.	The Commission will monitor the incorporation of the activities that are common to both sectors in both strategies through joint monitoring.
	MoAC and other concerned Ministries shall draft and enact laws on partition of land use areas and contract farming for agriculture commercialisation.	The processes of formulation and implementation of policies and laws call for commitment on the part of various Ministries and as the country has adopted the open economy policy, there is little possibility that the land use zoning will be completed as predicted.	The Commission will properly coordinate and direct agricultural and other related agencies to work in this direction.
	Output 2.7: Arrangements will have been made for adequate investment for resource and capacity enhancement.	There is little likelihood that priority will be placed on agro biodiversity conservation because of the provision of the policy on implementation of the biodiversity policy only mentions that biodiversity will be registered and investigative research into Nepal's biodiversity and genetic resources will be regulated, and it does not mention the increasing and stabilising productivity through use of such resources.	The Commission will properly coordinate and direct agricultural and other related agencies to work in this direction.

Draft Forest Sector Strategy for Nepal (2014)	An appropriate policy environment will have been created.	This is very difficult because the various sectoral policies and laws are contradictory.	The Commission will coordinate in realising harmony between contradictory laws.
	Availability of stable political environment and implementation of laws.	The past experience shows weakness in the enforcement and compliance of law in times of political instability. Since the country is still passing through a phase of political transformation, there is doubt on the establishment of a stable political environment. Neither does the Strategy offer an alternative to it.	The option of reviewing such strategies and presenting alternatives should be explored. In addition, the Commission will monitor the state of forests, especially their total area and quality.
	Estimation of budget and institutional resources of forest authorities.	The Strategy does not include the necessary budget. Given that the budget for this sector has been more dependent on foreign aid in the past, there is doubt on mobilisation of necessary budget for this sector.	The Commission will facilitate the Ministry of Forests and Land Management in raising funds.
Water Resource Strategy (2002)	The Strategy expects output by 2027 through analysis of various water resource-related issues such as general, social, drinking water and sanitation, irrigation-related, hydropower-related, legal, data-related, international, and institutional issues. It is stated that the target will be achieved by adopting the principles of social development, economic development and sustainable environment.	The Strategy has not included a risk analysis. The current risks include political instability, lack of analysis of, and response to, integrated issues in big projects, risk to water resources-related infrastructure and development from natural disasters, and instability in regional coordination in cross-border river systems.	Harmony has not been established between the policy and the Act drafted after the formulation of this strategy and the targets of the Strategy. This strategy needs to be reviewed, as well as the risks analysed.
National Seed Vision (2014)	MoAD will implement the Seed Policy and laws in all districts. Furthermore, the prevailing seed policy will be harmonised with the policy of the neighbouring country and an appropriate sui generis policy will be formulated and promoted for conservation and commercialisation of local genetic resources.	Give the current low budget allocation and scarcity of human resources, there is doubt over timely formulation of this policy.	MoAD will motivate the National Seed Quality Control Centre to work on this and monitor its progress.
National Strategy for Disaster Management (2009)	The 10-year Hyogo Framework for Action 2005-2015, to which Nepal is party, calls for incorporating the risk reduction concept in emergency preparedness, response and recovery programmes in a systematic manner.	As there is no law on implementation of this strategy, its implementation is faced with high risk.	It is necessary to ratify and enforce the proposed disaster risk management bill as an Act.
Climate Change Policy (2011)	Develop and scale up the agricultural technologies that reduce methane emissions and identify, develop and use agricultural breeds that can bear the pressure of both water scarcity and excess.	As the Agricultural Development Policy does not cover this, its implementation faces risk.	The Commission will coordinate and ensure its inclusion in the annual programme.

Land Use Policy (2013)	Land use zoning will be practised to achieve maximum benefits from land based on land composition, fertility and appropriateness.	As there is no supporting law, programme or action plan for the policy, it is not certain when it will be enforced. Furthermore, no authority has been identified policy implementation at the district and VDC level.	Ministry of Land Reforms and Management will take the initiative in this regard and the Commission will monitor this.
	Notice calling up all concerned to use land only on the basis of land use classification shall be issued. If there are justified reasons for changing land use, provision requiring introduction and approval of policy and institutional provisions will be introduced. If it is found that land use has been changed without fulfilling necessary procedures, the land will be reverted to its previous use and fine and punishment will be imposed as per law.	As the legal framework necessary for implementing such policy has not been prepared yet, its implementation is not certain.	Ministry of Land Reforms and Management will take the initiative in formulating such a law.
Irrigation Policy (2070 BS)	Necessary legal provision shall be introduced for guaranteeing prior rights over irrigation system water.	As a timeframe has not been set for introducing such legal provision, it is not certain when such a policy will be implemented.	Ministry of Irrigation will take initiative in formulating such a policy.
	Provision shall be introduced for channeling water from one watershed or sub-watershed area to another watershed or sub-watershed area for irrigation only after water has been reserved for the entire irrigable land within the first area.	Since implementing this requires technical guidelines, which have not been framed yet, implementation of this policy is uncertain.	
Hydropower Policy (2001)	Provision will be made for releasing river water either at the rate of 10 per cent of its monthly mean or the amount shown by the EIA report, whichever is higher.	This policy has not been followed so far and is not likely to be followed in the future.	The Commission will take the initiative in this regard and ensure provisions for its monitoring and compliance through the Ministry of Environment.
Industrial Policy (2010)	Special measures will be adopted for promoting environment-friendly industries and turning the existing industries pollution-free and zero carbon.	Since implementing this requires technical guidelines, which have not been framed yet, implementation of this policy is uncertain.	Ministry of Energy will take initiative in this regard.
Rural Energy Policy (2006)	Micro and small hydropower projects will be linked to sectoral projects such as irrigation, health, education, drinking water, small and cottage industries, and ropeways and their implementation in community and institutional form will be encouraged.	Since implementing this requires technical guidelines, which have not been framed yet, implementation of this policy is uncertain.	Ministry of Energy will take initiative in this regard.

<p>Herbs and Non-timber Product Development Policy (2009)</p>	<p>If any person or group desires to cultivate, produce, process and sell herbs, the State will provide concessions to such person or group. Farmers will be encouraged to cultivate herbs and agricultural crops, under an inter-cropping system, in cultivable land and necessary technical knowledge and advice will be made available to them. Existing quarantine inspection capacity will be enhanced to aid export promotion.</p>	<p>In spite of the fact that all these tasks cannot be carried out without coordinating with the agricultural sector, it is not mentioned anywhere in the Herbs and NTFP Development Policy that coordination will be established with the agriculture sector. Consequently, the Herbs Farming Promotion Programme has not yet been galvanised.</p>	<p>The Commission will provide directions on translating the policy into practice.</p>
<p>Agriculture Policy (2061 BS)</p>	<p>Opportunities will be created for the landless, marginalised and small farmers with skills to access land by identifying options such as effective implementation of existing legal ceiling, effective monitoring of exemptions on ceiling, progressive tax system, and legal provision on contracts for farm land.</p>	<p>Since implementing this requires technical guidelines, which have not been framed yet, implementation of this policy is uncertain.</p>	<p>MoAD will take initiative in this regard.</p>

Annex 11: Strengths, weaknesses, opportunities and threats of nature-sensitive development efforts

Strengths, weaknesses, opportunities and threats
Strengths
<p><i>Organisations</i></p> <ul style="list-style-type: none"> • Existence of organisations with determined responsibilities and availability of technology and management • Network of organisations involved in nature conservation formed • Enabling national organisational arrangements in place • Management models like protected area management and community forest management have already been established • Environmental education included in the curricula of almost all levels of education
<p><i>Policies and strategies</i></p> <ul style="list-style-type: none"> • Existence of required laws and policies (more than 40) • Existence of enabling policies and strategies (more than 50)
<p><i>Human resources</i></p> <ul style="list-style-type: none"> • Availability of human resources with knowledge of nature conservation in the country • Increasing educational and literacy levels
<p><i>Natural resources</i></p> <ul style="list-style-type: none"> • Protected areas have already been identified • Existence of appropriate ecological conditions for different natural resources • Rich in water and forest resources • Existence of diverse physiographic conditions and existence of different ecosystems in the country
<p><i>International</i></p> <ul style="list-style-type: none"> • Nepal is a member nation of different multi-lateral environmental treaties and agreements • Nepal is a member nation of different regional associations • Nepal is working abroad are introducing nature conservation-related technologies in the country
Weaknesses
<p><i>Organisations</i></p> <ul style="list-style-type: none"> • Though many organisations and agencies are involved in conservation, coordination between them is very weak. • Meetings of high-level councils and committees are not held regularly • Lack of education, awareness and participation • Ambiguities and duplication in responsibilities • Weak implementation • Lack of financial and human resources • Lack of capacity to take advantage of international treaties and conventions • Sectoral policies and strategies are not sensitive to other cross-sectoral issues and priorities
<p><i>Policies and strategies</i></p> <ul style="list-style-type: none"> • Lack of an Agricultural Act despite being a predominantly agricultural country • Isolation in policy formulation and implementation • Contradictions in numerous existing policies • Weak legal provisions for implementation of policies
<ul style="list-style-type: none"> • Human resources • Illiteracy is still high (37 per cent) • As nature conservation is a dynamic science, there is absence of human capacity development along with scientific exploration • Availability of only limited skilled human resources in natural resource-based industries • Both intelligent and physically strong human resources are migrating abroad • Increasing responsibility of women in agriculture and forest sectors
<p><i>Natural resources</i></p> <ul style="list-style-type: none"> • Excessive dependence on natural resources for livelihood • Obstruction in commercialisation as a result of small and scattered land ownership • Declining land fertility (due to factors including land erosion and desertification)
<p><i>Pollution</i></p> <ul style="list-style-type: none"> • Negative impacts of uncontrolled use of pesticides on the balance of the biological system • Mixing of urban and industrial waste in rivers and reservoirs • Lack of a clean development mechanism and strong agricultural practices
<p><i>Physical structures</i></p> <ul style="list-style-type: none"> • Limited use of water resources • Weak conservation structures (such as genetic bank, herbarium and air conditioned store) • Most physical structures are not tolerant to the effects of earthquakes and are obstructed due to lack of road repairs

<p>Opportunities</p> <p><u>Political transformation</u></p> <ul style="list-style-type: none"> • As a new Constitution is in the process of being drafted, nature conservation-related legal provisions have not yet been determined • Numerous sectoral policies are being formulated • Overexploitation of the country's natural resources • Increasing demand for nature-based problem solution tools <p><u>Learning from others</u></p> <ul style="list-style-type: none"> • Although Nepal is lagging behind in adopting some nature conservation-related international treaties and agreements, it has opportunities to learn from others <p><u>Identity of Nepal</u></p> <ul style="list-style-type: none"> • Availability of diverse climate and ecological conditions • Rich in diverse natural and cultural heritages • Rich in carbon stock • Nepal has habitats for important species like tiger, rhinoceros, snow leopard, red panda, alligator, yarsagumba (Cordyceps sinensis) • Nepal has two natural and eight world heritages and nine wetlands <p><u>Human resources</u></p> <ul style="list-style-type: none"> • Those returned to Nepal after working abroad have introduced conservation-related technology • Many are seeking locally available employment <p><u>International</u></p> <ul style="list-style-type: none"> • International commitment for sustainable development • Availability of international support in climate change and adaptation
<p>Threats</p> <p><u>Organisations</u></p> <ul style="list-style-type: none"> • Preventing violation of conservation-related laws and regulations • Achieving the government's commitments • Agencies coming together to achieve national commitments and responsibilities <p><u>Policies and laws</u></p> <ul style="list-style-type: none"> • Clarifying ambiguities in some legal provisions • Maintaining coordination between different agencies <p><u>Livelihood</u></p> <ul style="list-style-type: none"> • Reducing excessive dependence on forest products for livelihood • Diversifying livelihood resources <p><u>Loss of resources</u></p> <ul style="list-style-type: none"> • Deforestation, encroachment and degradation • Decreasing over exploitation of resources • Decreasing degradation of soil fertility <p><u>Emerging issues</u></p> <ul style="list-style-type: none"> • Reducing increasing natural disasters caused by climate change • Reducing negative impact on ecosystems caused by industrialisation and urbanisation • Reducing negative impact on natural resources caused by increasing population and changing food habit • Managing negative impact on human health caused by increasing use of pesticides

Annex 12 : Physiographic diversity

Geographic zone		Altitude	Climate zone	Main income source
Himalaya region (15 percent)		Above 3000m		
Main Himalaya	Twenty-eight snowcapped range spread from east to west	Above 5000m	Polar/ Himalayan	Nominal agriculture, herbs, and raising yak, sheep, mountain goat, horse, etc
Inner Himalaya	In the north of main Himalaya and south of Tibetan coastal area	4000-5000 m	Alpine	Cottage industry (woolen carpet, home-spun coarse woolen blanket)
Marginal Himalaya zone	Trans Himalayan range (parallel costal area of Tibet)	3000-4000 m		
Hills (68 per cent)		300-3000 m		Agriculture, livestock, forest, horticulture, cottage industry, cement and mining industries
Churia range or Shivalik (12.7 percent): Situated in the south of Nepal, the range is parallel to the Mahabharat range from the east to the west.	<ul style="list-style-type: none"> – Situated between Himalaya in the north and Terai in the south, it has spread from east to west – High and low hills, wide and narrow valleys, Duns, level plots of land and terrace – Area of upland – High in the west and low in the east 		Temperate	
Mahabharat range (25.8 per cent): The range in the west of Nepal is sloppier than in the east. Compared with Eastern Nepal	Chisapani of Karnali, Devaghat of Kali Gandaki, Gajuri of Trishuli, Chatra of Koshi, Palungtar, Salyantar, Rumjatar, Phulchoki, Shivapuri, Daman, Sworgadwari, etc belong to this range.	60-3000 m		
Midland (29.5 percent)	Midland refers to large level land, foothills and valleys situated between Mahabharat mountain range and Himalaya mountain range. Similarly, Midland includes fertile plain land like Jarayotar, Salyantar, Chepetar, Karaputar, Beltar, Suketar, Tumlingtar, Rumjatar, Kharinitar and Battar.			
Terai (17 percent)		60-600 m	Tropical	Agriculture, medium and large industries
Bhawar (4.5 percent): In the north of Terai and the south of Churia	A 13-16 kilometer wide belt located in the north of Terai proper and the south of Churia mountain range	60-380 m		
Inner Madhes (8.5 percent): Between Churia and Mahabharat range	Huge flat and surrounded by hills is called Inner Madhes or Dun area. Udayapur, Sindhuli Valley, Makwanpur, Chitwan, Nawalparasi, Dang, Deukhuri and Surkhet belong to Inner Madhes.	60-610 m		

Source: Department of Information, 2013

Annex 13: Ethnic diversity, priority and occupation

Indigenous peoples related to nature conservation and their main income sources: There is a longstanding and close relationship between human society and nature. Therefore, nature conservation is not possible without human communities. If there is positive impact of clear air, water, wildlife, flora, etc on human wellbeing, there will be contributions to conservation and, if there is negative impact, conservation will become a complicated task. The relationship between society and nature, as well as moral dimensions in the issue of nature conservation, are also important. The moral dimensions mainly include the rights of indigenous peoples to natural resources and of local inhabitants to livelihoods.

The relationship between indigenous peoples of Nepal and nature are interdependent. This relationship is directly linked to the use, management and conservation of natural resources and is inherent not only in daily livelihood practices of indigenous society, but also in their languages, norms, values and culture. It seems that indigenous peoples have been arranging their livelihoods primarily from natural resources since time immemorial. Indigenous peoples can be divided into five groups (Table 1) based on their dependence on natural resources for livelihoods (Lama, 2014). Therefore, it is necessary that nature conservation programmes do not impact the base of livelihoods of these indigenous peoples.

Dependence on natural resources	Major indigenous peoples
Forest resources (Hunting, collection, and shifting agriculture)	Raute, Bankariya, Chepang and Hayu
Pastoralism and transhumance	Himali, Bhote, Tamang, Gurung, and Khas (Jumli, Humli, Mageli)
Shifting agriculture, slash and burn, agro-forest, and livelihood-oriented agriculture	Chepang, Magar, Tamang, Gurung, Rai and Limbu
Forest, agriculture and water	Tharu, Dhimal, Meche, Tajpuriya, Santhal, Urawan, Kumal and Newar
Water	Majhi, Danuwar, Bote, Raji and Darai

Major ethnic populations living near rivers and their main occupations: The geographical structure of Nepal and location of rivers seem to have guided the interaction and relationship between indigenous community living in those areas and nature from different perspectives, and knowledge and practices have developed accordingly. Studies of the use of natural resources, management and special practices of conservation developed by indigenous peoples in the main rivers and watershed areas of Nepal should occupy an important place in the national conservation policy of Nepal.

The main rivers of Nepal and their watershed areas can be divided into five categories from the nature conservation point of view (Lama, 2014)

1. Arun-Tamor- Dudhkoshi watershed area: The main communities living in this area are Limbu, Rai, Lepcha and Sunuwar. Bhote, Sherpa and Singsawa communities live in the north part of the area whereas Dhimal, Tharu, Tajpuria,

- Rajvanshi, Meche, Koche, Kisan, Munda and Santhal communities live in South Terai.
2. Sunkoshi–Trishuli watershed area: The major community living in this area is indigenous Tamang; other groups in the area are Chepang, Hayu, Thami, Jirel, Surel, Pahari, and Yolmo.
3. Bagamati- Bishnumati (Kathmandu Valley) watershed area: In this area, the Newar community is in a majority.
4. Kali Gandaki–Marsyangdi watershed area: The major population residing in this area includes mainly Magar and Gurung communities; other communities include Chantyal, Baramu, Dura, and Kumal. There is a majority of Tharu in the Terai part of this watershed. Other indigenous communities include Thakali, Dolpo and Bhote who live in the north of this watershed area.
5. Karnali– Bheri watershed area: Khas is the main community in this area. Spread in this area from Jumla, Jajarkot and Dandeldhura, Khas society has a unique relationship with nature in accordance with distinctive geographical ecological circumstances. Living In the hill area

of this area are Raute, Raji and some Magars, whereas in the north of Humla and Mugu districts are Bhote, Vyas, etc.

These groups have extended their respective communities closer to nearby rivers. They have managed their livelihoods based on natural resources available near their development sites.

It is evident that there should be no obstruction in the livelihoods of these ethnic groups while conserving nature in these areas. Provisions of the ILO Convention 169 also state that other people should not interfere in livelihood sources of such indigenous peoples, and they should be consulted while conducting development programmes in their areas.

Annex 14: Government of Nepal (mandates) Regulations (2012)

There are only the following types of nature conservation related mandates.

SN	Ministry	Allocation of Business
1	Ministry of Forests and Soil Conservation	<ul style="list-style-type: none"> Nature conservation Conservation, utilization, promotion and management of forests Conservation and management of forest products Conservation, utilization and distribution of benefit of the forest, vegetation, wildlife, bio-diversity, and protection of natural environment Conservation, promotion, development, coordination and management on the matters relating to soil and watershed conservation area, greater watershed area and lakes and water reservoir Protection and balance of natural environment
2	Ministry of Agricultural Development	<ul style="list-style-type: none"> Development of seeds Development of breeds Development of pasture Agro-environment and pesticide management Bio-technology relating to agriculture
3	Ministry of Home Affairs	<ul style="list-style-type: none"> Disaster management
4	Ministry of Land Reform and Management	<ul style="list-style-type: none"> Protection of the record of the government and uncultivated land
5	Ministry of Physical Planning, Works and Transportation Management	<ul style="list-style-type: none"> Protection of the strategic road
6	Ministry of Environment, Science and Technology	<ul style="list-style-type: none"> Pollution control, environment protection and balance
7	Ministry of Culture, Tourism And Civil Aviation	<ul style="list-style-type: none"> Promotion and protection of culture Archaeological monuments and collection, protection, preservation, research and excavation of archaeological monuments/goods/substances Protection and preservation of cultural heritage, cultural resources and historically important palaces Protection and development of language, dialect, script, art and culture, of various religions, of tribes and ethnic communities

Source: Government of Nepal (Allocation of Business) Regulations, 2012

Annex 15 : Some legal contradictions in nature conservation

Natural resource	Act concerned	Section	Right-holder agency or community	Main contradiction
Mines and minerals	Local Self-governance Act (1999)	215	The District Development Committee may impose tax on ...stones, slates, sand and on other goods at the rate approved by the District Council not exceeding the rate specified in the district development area.	Although local bodies and the Department of Mines and Geology both have the right to mobilise mines and minerals, there is an ongoing dispute between these agencies.
	Mines and Minerals Act (1985)	3 and 4	All minerals lying or discovered on the surface or underground in any land belonging to an individual or the government shall be the property of the Government of Nepal. The Government of Nepal shall have the exclusive right to carry out mining operations.	
Forest and forest products	Forest Act (1993)	22, 24, 25 and 32	The District Forest Officer concerned and community shall have the right to sell and distribute forest products pursuant to the approved work plan	Although local bodies and the District Forest Office both have been granted the right to sell forest products, there is an ongoing dispute as to which of these two agencies should use this right. Regarding this matter, cases have been repeatedly filed in the Supreme Court.
	Local Self-governance Act (1999)	215 and 218	The District Development Committee may impose tax on wool, turpentine, herbs...bankas (khar), and bone, horn, wing, and leather of the animals except those prohibited, pursuant to the prevailing law, and on other goods as prescribed at the rate approved by the District Council not exceeding the rate specified in the district development area. The District Development Committee may sell, as prescribed, sand, gravels, stones, slates, and soil in the rivers within its area.	
	Land Revenue Act (1978)	24	No one shall register in his or her name or cultivate, or cause to be registered or cultivated, any governmental land or public land.	The main intention of the Land Revenue Act (1978) and the Land Act (1964) is to give importance to the land-use policy, but the Land Acquisition Act (1977) maintains that any land may be used for any purpose. This is a basic contradiction in the context of land use.
	Land Act (1964)	51G	In an area where the land-use programme is operated pursuant to this Act, no person shall employ a land fixed for any one use in another use without obtaining approval of the prescribed committee.	
	Land Acquisition Act (1977)	3	The Government of Nepal may, if it so deems necessary, acquire any land at any place for any public purpose, subject to compensation under this Act.	
	Public Roads Act (1974)	16	The Department of Roads shall plant trees on the right and left sides of a public road, as per necessity. It shall be the duty of the Village Development Committee concerned to take care of and protect the trees planted.	The Local Self-governance Act (1999) (28C) has not given this responsibility to VDCs.

Annex 16: Some Legal Provisions on Accountability

<ul style="list-style-type: none"> • Forest managers to be responsible for the conservation of forests • Punishment to be imposed under Criminal Offense in cases relating to the destruction of forests 	Forest Act (1993), Forest Regulations (1995), Soil and Watershed Conservation Act (1982)
<ul style="list-style-type: none"> • Protected area managers to be responsible for the conservation of protected areas • Punishment to be imposed under Criminal Offense in cases relating to the destruction of protected areas 	National Parks and Wildlife Conservation Act (1973), and different regulations
<ul style="list-style-type: none"> • Local bodies to be responsible for the conservation of local-level natural resources, wetlands and environment in collaboration with local communities 	Local Self-governance Act (1999), Local Self-governance Regulations (2000)
<ul style="list-style-type: none"> • Government, local bodies, local communities and the private sector to be responsible for the conservation of wetlands in accordance with their importance 	Wetland Policy (2012)
<ul style="list-style-type: none"> • Resource Use License to be obtained to use water resources • There will be a Resource Dispute Resolution Committee to resolve drinking water resource disputes • Compensation to be paid for polluting water resources 	Water Resources Act (1992), Water Resources Regulations (1993)
<ul style="list-style-type: none"> • There should be no significant adverse impact on environment while generating, transmitting or distributing electricity 	Electricity Act (1992), Electricity Regulations (1993)
<ul style="list-style-type: none"> • Users' organisations and projects to fulfil responsibilities, including service fee, for sustainability of the irrigation system 	Irrigation Regulations (2000) ^m
<ul style="list-style-type: none"> • Service providers to be responsible for preventing drinking water resources from being polluted, maintaining their quality and conserving environment 	Drinking Water Regulations (1998) ⁿ
<ul style="list-style-type: none"> • Local bodies, government offices and judicial bodies to be responsible for enforcing these Acts • The Government of Nepal may instruct for specified farming in a specified area • While surveying land, government and public land to be surveyed first and protected 	Land Act (1965), Land (Survey and Measurement) Act (1963) and land related other regulations ^o
<ul style="list-style-type: none"> • Inspectors, customs, airports, air services, post offices, police, and local administration to be responsible for enforcing laws relating to plant protection 	Plant Protection Act (2007)
<ul style="list-style-type: none"> • The National Seed Committee to be responsible to regulate and control and cause to regulate and control the quality of seeds produced in Nepal or imported from abroad for sale and distribution 	Seeds Act (1988)
<ul style="list-style-type: none"> • Food producers to be responsible for loss and damage 	Food Act (1967)
<ul style="list-style-type: none"> • Pesticide inspector to control other pesticides except for notified pesticides 	Pesticides Act (1991)
<ul style="list-style-type: none"> • The main responsibility of protecting aquatic animals to be vested in the Chief District Officer 	Aquatic Animal Protection Act (1960)
<ul style="list-style-type: none"> • As the State has ownership over all minerals, the State to be responsible for conserving them 	Mines and Minerals Act (1985)
<ul style="list-style-type: none"> • Local bodies to be responsible for conserving public road side plants and other natural resources 	Roads Act 1974, Road Board Act (2002)
<ul style="list-style-type: none"> • Local bodies to be responsible for managing solid waste 	Solid Waste Management Act (2011)
<ul style="list-style-type: none"> • Nobody to do any act that has a significant adverse impact on environment and such act to be punishable 	Environment Protection Act (1997), Environment Protection Rules (1997)

^m Irrigation-related legal provisions have been made in the General Code 2020 and the Local Self-governance Act 1999, too.

ⁿ In relation to drinking water – in addition to Drinking Water Regulations 1998 - Nepal Water Supply Corporation Act 1989, Water Tax Act 1966, Drinking Water Service Charge (Recovery) Regulations 1994, Water Tariff Fixation Commission Act 2006, Water Supply Management Board Act 2008, Rural Water Supply and Sanitation Fund Development Board (Formation) Order 1996, Small Urban Water Supply and Sanitation Project Implementation Guidelines 2060BS, and Water Supply and Sanitation Co-financing Project Implementation Guidelines 2060BS have been in implementation.

^o Birta Abolition Act 2016BS, Ukhda Abolition Act 2021BS, Jhora Area Land Act 2028, Rangeland Nationalisation Act 2033, Guthi Santha Act 2033.

Annex 17 : Approach papers of National Strategic Framework

1. Thematic report on forestry sector - Bhawani Prasad Kharel, Bijendra Basnyat, Sony Baral Gauli
2. Thematic report on biodiversity - Ambika P. Gautam, Ph.D. and Jhamak B. Karki, Ph.D.
3. Thematic paper on physical infrastructure development and environment – Tara Nidhi Bhattarai, Ph.D
4. Thematic report on agriculture – Devendra Gauchan, Ph.D.
5. Thematic report on tourism – Rajiv Dahal, Ph.D.
6. Thematic report on water and disaster risk reduction – Dipak Paudel
7. Thematic report on climate change and renewable energy – Ram Chandra Khanal
8. Thematic paper on socio-economic issues and regional planning- Purna B. Nepali, Ph.D.
9. Thematic report on health sector - Bandana K Pradhan, Ph.D.
10. Environmental education/Education for sustainable development – Badri Dev Pande, Ph.D.
11. Thematic paper on society, nature and indigenous peoples – Mukta S. Lama, Ph.D.
12. Thematic paper on gender equity and social inclusion –Sushila Chatterjee Nepali, Ph.D.
13. Thematic report on law, policy and institutional development- Narayan Belbase & Dilraj Khanal

Annex 18: Nature-responsiveness mainstreaming analysis

SN	Evaluation criteria	Excellent	Very good	Good	Not good	Not at all
		10	8	6	4	0
1	Has the strategic environmental assessment of development policies, strategies, plans and programmes related to this been carried out? Has the sectoral environmental guidelines been prepared and implemented?					
2	Has a precautionary approach in issues of natural resources, ecosystems, human health, climate change, etc been adopted? Have irreplaceable property and full recognition of carrying capacity of nature (sustainable use of natural resources) been identified?					
3	Have there been gender equality, green employment, income generation, and poverty alleviation programmes in integration of development and nature conservation? Has it had negative impact on current livelihood opportunities of women, Dalits, indigenous peoples and other disadvantaged groups?					
4	Have the elements of good governance been adopted in integration of development and nature conservation?					
5	Have there been specific programmes and budget arrangement for conservation of endangered biological and cultural diversity?					
6	Have access and rights of communities, civil society and disadvantaged groups to natural resource-related information and meaningful participation been ensured. Has public (private sector, local bodies, NGOs, communities and cooperatives) participation in conservation programmes been ensured?					
7	Has there been documentation of knowledge, skills and technology of sectoral characteristics? Has the issue of copyright protection been addressed?					
8	Has the role (complementary, supplementary, expected, synergy and joint action) of agencies responsible to maintain coordination been clear?					
9	Are there provisions for clarity in the responsibility of nature conservation integration, organisational structure and responsible sections? Have resources for required investment in conservation been ensured?					
10	Has the valuing and accounting ecosystem goods and services been carried out? Is the plan for assumption analysis and seriousness of risks in the nature conservation integration of development efforts clear? In addition, are the indicators of monitoring of conservation results clear and adequate?					
	Sub-total					
	Total					
<p>As presented in the table above, there are 10 criteria. The evaluator should evaluate each of these criteria as <i>Excellent</i>, <i>Very good</i>, <i>Good</i>, <i>Not good</i> or <i>Not at all</i> and give mark 10, 8, 6, 2 or 0 respectively. The total mark 80 or above will be considered very sensitive, 65 to 79 sensitive, 50 to 64 less sensitive, and less than 50 not sensitive. The evaluator should suggest as required if the total mark is less than 50.</p>						

Annex 19: Evaluation period of strategies

Strategy/master plan/ policy	Period	Proposed time for evaluation
National Biodiversity Strategy and Action Plan (2014)	35 year long-term plan with an action plan up to the year 2020	Year 2016 and 2019
Agriculture Development Strategy (2013)	20 years	Every five years
Forest Strategy (draft) (2014)	10 years	After five years
Disaster Risk Management National Strategy (2009)	No timeframe	As this Strategy has been formulated to comply with the Hugo Convention, there is possibility of evaluation after 2015
National Seed Vision (2014)	Up to 2025	Every five years
National Tourism Strategic Plan Nepal	Up to 2023	In five years
Tourism Vision (2009)	Up to 2020	Year 2020
New Physical Infrastructure – Foundation of the New Nepal (2007)	20- year	In three years and 20 years
Water Resource Strategy (2002)	25- year	Year 2007, 2017 and 2027
Ten-year Master Plan of the Tele Communication Sector 2010 (2011-2020)	10- year	In five years
REDD+ Strategy	In the course of being formulated	
Low Carbon Strategy	In the course of being formulated	
Bio-energy Strategy	In the course of being formulated	

Annex 20: Estimated budget for implementation of Nature Conservation National Strategic Framework

Expenditure details	Total expenditure (in 000) rupees (constant price of the FY 2071/72 (2014/15))			
	First 3 years (2015-17)	4 to 8 years (2018-22)	9 to 16 years (2023-30)	Total of 15 years
Activities to be conducted for implementation of National Strategic Framework	273,960	268,200	197,500	739,460
Monitoring of National Strategic Framework	8,000	13,350	10,200	31,550
Managerial expenditure	4,300	7,800	12,000	24,100
Total	286,260	289,150	219,700	795,110

Annex 21: Conservation-related representative indicators to be monitored and evaluated**Annex 21.1: Conservation-related representative indicators to be monitored and evaluated**

This Annex will be completed during implementation of the Framework by collecting detailed information on the FY 2069-70 (2012/13) status of thematic and sectoral representative indicators to be monitored and evaluated by this Framework, the target to be achieved, and the year of achieving target.

Thematic area and indicator	Unit	Source of data	Status of 2069/70 (2012/13)	Target	Target year	Reference
Forest sector						
Forest conservation and management (disaggregated by mountain, hill and Terai)						
– Area covered by forests	Per cent	Central Bureau of Statistics (CBS)				
– Area of forests managed sustainably or scientifically	Hectare	Ministry of Forests and Soil Conservation (MoFSC)				
– Area of community-managed forests	Hectare	MoFSC				
Land and watershed conservation (disaggregated by mountain, hill and Terai)						
– Watershed areas managed as per the integrated land conservation plan	Hectare	MoFSC				
– Area of the forest managed under the pro-conservation forest management system in the Churia area	Number	MoFSC				
Wetland management (disaggregated by mountain, hill and Terai)						
– Area of conserved and managed wetlands of national and international importance	Hectare	MoFSC				
Biodiversity						
Loss and degradation of forest, wetland and rangeland habitats						
– Degradation rates of forest, wetland and rangeland habitats	Per cent	MoFSC				
– Degradation rates of Churia and other land arc areas	Per cent	MoFS, Churia Conservation Committee				
Extinction of species or their number decreased						
– Number of endangered species increased	Number	MoFSC				
Implementation of the National Biodiversity Strategy and Action Plan (2014)						
– Inclusion of conservation action plan in other sector policies and strategies as per the National Biodiversity Strategy and the status of its implementation	Number	National Planning Commission (NPC)				
Conflict between human and wildlife						

– Status of the number of conflicts between human and wildlife	Number	MoFSC			
Budget provision for conservation					
– Budget allocated for conservation increased	Per cent	Ministry of Finance (MoF)			
Agriculture sector					
Productivity increased					
– Productivity of major crops, livestock and fish increased	Per cent	Ministry of Agriculture Development (MoAD)			
Sustainable management of agriculture land and soil					
– Rehabilitation of degraded agriculture land (disaggregated by mountain, hill and Terai)	Hectare	Ministry of Land Reforms (MoLR)			
Conservation and sustainable use of agro-biodiversity	Per cent				
– Farming and production of local varieties/breeds		MoAD			
– Use of hybrid seeds (maize, rice and vegetables)		MoAD			
Management of disease and insect of crops, livestock and fish					
– Organic farming (production) increased (disaggregated by mountain, hill and Terai)	Per cent	MoAD			
- Loss due to diseases and insects decreased	Per cent	MoAD			
Development of physical infrastructure					
Urbanisation, industrialisation and pollution management					
– Number of projects that have adopted land use policy while formulating physical infrastructure plans	Number	Ministry of Physical Infrastructure and Transport (MoPIT)			
– Status of natural sites and open spaces in urban areas (area in per centage of rural area)	Per cent	Ministry of Urban Development (MoUD)			
Physical infrastructure works management					
– Index of green roads increased					
Solid waste management					
– Number of municipalities with appropriate landfill from engineering perspectives	Number	MoUD			
Mine and excavation management					
– Excavation projects that have passed environmental auditing		Ministry of Industry (MoI), Ministry of Local Development (MoLD)			
Implementation of the provision of environmental auditing					
– Action against those who have not complied with the provision of environmental auditing	Number	MoPIT			

Land management								
-	Use of agriculture land for non-agriculture purposes decreased	Per cent	MoLR					
-	Status of assurance of local livelihood (poverty)	Per cent	Ministry of Cooperatives and Poverty Alleviation (MoCPA)					
Renewable energy								
-	Government budget allocation	In thousands of rupees	Ministry of Science, Technology and Environment (MoSTE)					
-	Electricity generated from renewable energy supplied to the national transmission line	Per cent	Ministry of Energy (MoEn)					
-	Rate of energy generation from the use of clean and green technology	Per cent	MoSTE					
Water resource and disaster management								
-	Population with access to drinking water	Per cent	MoEn					
-	Area irrigated throughout the year	Hectare	Ministry of Irrigation (Molr)					
-	Community with provision established for making payment in lieu of ecological services to the upstream community that promotes water purity	Number	MoEn					
-	Minimum of water flow in the river maintained	Per cent	MoSTE, MoEn					
-	Inclusion of the ecosystem-based disaster management system in policies and programmes	Number	Ministry of Home Affairs (MoHA), MoUD, Molr					
-	Establishment of a disaster management unit in the local level							
-	Women's participation in Water Users' Groups and Disaster Management Committees	Per cent	MoEn, Molr					
-	Certain per centage of revenue obtained from hydropower used in conservation	Per cent						
Climate change								
-	Sectoral strategies that have integrated and improved climate change adaptation and adverse impact mitigation concerns (mention sectors)	Number	MoSTE, NPC					
-	Area of forests managed in accordance with REDD+Strategy	Hectare	MoSTE					
-	Mobilisation of climate fund for local adaptation	Per cent	MoSTE, MoLD					
Health								
-	Number of people using clean toilet increased	Per cent	Ministry of Health (MoH)					
-	Number of households using improved cooking stove increased	Per cent	MoH					
-	Population suffering from bacteria-induced diseases	Number	MoH					

Poverty alleviation							
Population below poverty line		Per cent					
Rural population below poverty line		Per cent					
Society, nature and indigenous peoples							
- Harmony between projects and indigenous peoples through independent and pre-informed consent, and reduction in conflict		Number	Ministry of Women, Children and Social Welfare (MoWCWSW)				
- Identification and documentation of physical and non-physical cultural heritages		Number	MoWCWSW				
- Number of men and women participants of indigenous peoples		Number	MoWCWSW				
- Number of people speaking mother tongues		Number	CBS				
Gender and social inclusion							
- Review of existing policies and legal frameworks related to gender and social inclusion of all sectors		Number	MoWCWSW				
- Women benefiting from payment for ecosystem services		Number	MoFSC				
- Representation of women, marginalised and socially excluded communities in governance and decision-making processes of natural resources, and in membership		Per cent	MoFSC, MoWCWSW				
Law and institutional arrangements							
- Work of nature conservation also to be added to allocation of business of some ministries (such as Ministry of Energy, Ministry of Irrigation, Ministry of Industry, Ministry of Physical Infrastructure and Transport, Ministry of Education, Ministry of Health) related to nature conservation in the Government of Nepal (Allocation of Business) Regulations (2012)		Number	Ministry of Law, Justice and Parliamentary Affairs (MoLJPA)				
- Achieving harmony in contradictions in different acts (Annex 15) related to nature conservation		Number	MoLJPA				
- The Government of Nepal to accede the Convention on Conservation of Migratory Species of Wildlife Animals (1970) and ratify the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (2010)		-	MoLJPA				
- Formulation and implementation of an Agriculture Act		-	MoLJPA				

Annex 21.2: Examples of nature conservation-related indicators to be collected from the agencies concerned

Annex 21.1 will become a complete table like examples given below after receiving data of all indicators.

Thematic area and indicator	Unit	Source of information	Status of 2069/70BS (2012/13)	Target	Target year	Reference
Area covered by forests	Percent	MoFSC	39.6	40	Continuous	Draft FSS (2014), NBSAP (2014), NPC (2013)
Area of forests under the forest management plan	Percent	MoFSC	50	100	2080	Draft FSS (2014)
Community-managed forests	Percent	MoFSC	39.7	60	2080	Draft FSS (2014)
Commercially supplied annual timber in the internal market	Cubic meter	MoFSC	1.2	12	2080	Draft FSS (2014)
Protected area	Percent	MoFSC	23.23	23.23	Continuous	NBSAP (2014)
Annual average rate of deforestation	Percent	MoFSC	Terai 0.44	Terai 0.05	2080	Draft FSS (2014)
Number of tigers	Number	MoFSC	155 in the year 2011	310	2092	NBSAP (2014)
Use of hybrid seeds (maize, rice and vegetables)	Metric tonne	MoAD	2,390	5,840	2082/83	Seed Vision
Productivity of major crops, livestock and fish increased	Percent	MoAD				
Productivity of rice	MT/ha	MoAD	2.72	3.8	2092	ADS
Productivity of wheat	MT/ha	MoAD	2.41	2.98	2092	ADS
Productivity of milk						
Status of degraded land	Hectare	MoAD	3200,000	1600,000	2092	ADS
Households with access to drinking water	Percent	Energy (MoEn)	85	100	2085/86	National Water Plan (2005)
Households with clean latrines	Percent	MoEn	62	100	2085/86	National Water Plan (2005)
Electricity generation	Mega Watt	MoEn	758	4,000	2085/86	National Water Plan (2005)
Population below poverty line	Percent	NPC	23.8	5	2091	NPC, ADS
Rural population below poverty line	Percent	NPC	27	10	2091	ADS

Annex 22: Direct Conservation Outcome Indicators adopted by Different Strategies

Strategies	Indicators
National Biodiversity Strategy and Action Plan (2014)	<ul style="list-style-type: none"> • Supply of forest products from scientifically managed areas increased • Rate of deforestation and degradation decreased • Improvement in encroached forests • Rehabilitation of degraded forests • Management in additional degraded forest area through pro-poor leasehold forest management • Control of encroachment and pollution of wetlands • Collection and conservation of agronomic and horticultural genetic materials in the Gene Bank • Characterisation of domestic animals' DNA • Rehabilitation of degraded forests in the Himalayan area by conducting ecosystem-based adaptation programmes • Rehabilitation of forest ecosystems by conducting REDD+ strategy and ecosystem-based adaptation programmes • Control of invasive species • Conservation of wild relatives of cultivated crops • Conservation of critical land arcs, including Churia • Conservation of endangered species through different measures, including connectivity • Conservation of herbs that are over harvested
Agriculture Development Strategy (2013)	<ul style="list-style-type: none"> • Content of soil organic matter increased • Use of crop residue in soil increased • Rate of deforestation decreased • Rehabilitation of degraded land • Productivity of land, water and labour increased • Maintenance of forest coverage in 40 per cent of land • Poverty reduction in rural areas • Rate of seed replacement increased • Development of climate-resilient varieties • Number of representatives from the disadvantaged group • Food sufficiency increased • Farm land ownership by women and as joint ownership increased • Participation of 50 per cent women farmers
Forest Sector Strategy (2014)	<ul style="list-style-type: none"> • Maintenance of forest coverage in 40 per cent of land • Number of tigers, rhinos and wild buffaloes increased • No poaching of rhinos in any of the years • Carbon storage increased • Reduction of the deforestation rate in the Terai • Upgrading of the watershed area • Upgrading of the degraded forest
Water Resource Strategy (2002)	<ul style="list-style-type: none"> • Upgrading of quality of the watershed area • Systematic sanitation increased • Drinking water facility to 100 per cent of the people • Engagement of stakeholders in environment protection and management
National Seed Vision (2014)	<ul style="list-style-type: none"> • Seed replacement rate increased • Use of registered genetic materials (number) by plant breeders • Development of climate-flexible varieties • Crop productivity increased • People's access to government seed resources increased
National Strategy for Disaster Risk Management (2009)	<ul style="list-style-type: none"> • Food grain storage facility in disaster-prone areas • Compulsory assessment of disaster and risk in large infrastructure development projects
National Tourism Strategic Plan for Nepal (2013)	<ul style="list-style-type: none"> • Development of a reward system to promote good practices • Protection and promotion of intangible cultural heritages • Use of renewable energy • Standards for trekking and travelling
New Physical Infrastructure –Foundation for the New Nepal (2007)	<ul style="list-style-type: none"> • Rain water harvest • Compulsory compliance of National Building Code for Nepal • Greenery along the roads, public places and rivers increased by planting trees

	Current indicators	Indicators to be added
<p>National Monitoring and Evaluation Guidelines (2013) (National Planning Commission)</p>	<ul style="list-style-type: none"> • Population below poverty line • Area covered by the forest • Area covered by the protected forest • Watershed area • Measurement of CO₂ emissions • Population with sustainable access to safe drinking water • Population with basic and safe access to sanitation (toilet) • Rate of youth's migration • Gender equality and social inclusion 	<ul style="list-style-type: none"> • Rates of deforestation and degradation • Encroachment and pollution of wetlands • Conservation of critical land arcs, including Churia • Conservation of endangered species • Conservation of herbs that are over harvested • Changes in land use • Content of soil organic matter increased • Rehabilitation of degraded land • Productivity of land, water and labour increased • Upgrading of degraded land • Upgrading of degraded rivers • Engagement of stakeholders in environment protection and management • Development of climate-resilient varieties and breeds • Use of renewable energy • Rain water harvest • Budget allocation to nature conservation • Ecosystem services valuing and accounting

Annex 23: Translation of some Nepali words used in the Framework

अकुशल	Inefficient
अर्थपूर्ण	Meaningful
प्रतिकार्य	Response
अपरम्परागत	Non-conventional
अमूर्त	Intangible
अल्पसुविधाप्राप्त	Underprivileged
अन्तरसम्बन्धित	Cross-cutting
अन्तरक्षेत्रगत	Cross-sectoral
अन्तर्निहित	Implicit
अनुकूलन	Adaptation
अनुपूरक	Supplementary
अवधारणा	Concept
अवशेष	Residue
ध्यान नदिनु/अवज्ञा	Ignore
आगत/प्राप्त	Return
आवद्ध	Link
आयाम	Dimension
आमोदजनक	Fun
उत्कर्षण	Emission
ऋतुप्रवास	Transhumance
तोकिएको/किटिएको	Focal
कुशल	Efficient
खोल्सा	Gully
खोला समुन्द्रमा मिलने स्थान	Estuary
गाम्भीरता कम गर्ने, नकारात्मक प्रभाव कम गर्ने	Mitigating
गोड/सोचविचार	Envisage
गौण/अप्रधान	Nonessential/second rate
जनादेश/कार्य जिम्मेवारी	Mandate
जटिलता	Complicacy

जीवाश्म इन्धन	Fossil fuel
जैविक राशि	Biomass
तर्कसङ्गत	Logical
छलफल	Discourse
तीव्रता	Intensity
थकान	Fatigue
दमदार	Hardy
दर्शनमा परिवर्तन/अवधारणामा परिवर्तन	Paradigm shift
दाखिल/प्रवेश	Accession
दृष्टिकोण, परिदृश्य	Perspective
धावा, डर	Threat
नवोदित	Emerging
नाजुक	Critical
निर्वाध	Uninterrupted
निष्ठा	Integrity
नियमन	Regulate
निक्षेपण, निक्षेपीकरण/शेग्रीकरण	Siltation
पथान्तरण	Diversion
पालना	Compliance
पूरक, परिपूरक	Complementary
परभक्षी	Predator
पद्धति	Regime
पर्याप्तता	Sufficiency
परिप्रेक्ष्य, सन्दर्भ	Context
परिमाण निर्धारण गर्नु	Quantification
पहिचान नहुनु	Unrecognised
पारिस्थितिकीय सेवाको मूल्य भुक्तान	Payment for ecosystem services
पारिस्थितिकीय प्रणाली	Ecosystem
पुनरावर्तन	Recycling

पुनर्स्थापित	Restore, rehabilitation
पुनः संयोजन	Retrofitting
प्रत्याभूत	Guarantee
प्रतिद्वन्द्विता / प्रतिविरोध	Contention
प्रतिरक्षण	Preservation
फुर्तिलो, चुस्त	Smart
भूमण्डलीकरण	Globalisation
भूमि भरावक्षेत्र	Landfill site
भुक्तान	Payment
भूमि एकत्रीकरण	Land consolidation
मञ्जुषा	Box
मार्गदर्शी	Piloting
मुनाफा	Profit
मूल, मुख्य, मार्मिक भित्री भाग	Core
सुरक्षा	Safety
रञ्जुमार्ग	Ropeway
रेशा	Fibre
लवणीकरण	Salinisation
लाभ	Benefit
लागत	Cost
लाभविमुख वर्ग	Disadvantaged group
बाह्यता	Externality
व्यवहारमा ल्याउनु	Introduce
शब्दसार	Acronym
शरणस्थान	Sanctuary
सङ्कटमा परेको	Threatened
सङ्कटासन्नता/ जोखिमयुक्त	Vulnerability
सताउने	Torture

सन्मुखता	Exposure
समर्पित	Devoted
सम्पूर्ण रूपले	Holistic
समानुकूलन	Resilience
संयोजन/ एकीकरण	Integration
संरक्षण	Conservation
सरेखा	Align
सरोकार	Concern
सरोकारवाला	Stakeholder
सर्वोत्कृष्ट	Flagship
सविस्तार, विस्तारयुक्त	Comprehensive
संयोजकता	Connectivity
सहक्रियता, सहक्रिया	Synergy
स्वतः, यसैकारण, तथ्यतः	Ipsa facto
स्थल	Site
स्थलगत	Terrestrial
सार्थक	Significant
सामञ्जस्य	Harmonisation
सामयिक/ समसामयिक	Current
सिलसिलेबार	Consistent
सुख विषयक मूल्य	Hedonic pricing
सुधार	Reclaim
सुरक्षा	Security
सुविचारित	Considered
सुरक्षण	Protection
सोपान/ जलप्रपात/ भरना	Cascade
सौदावाजी/ सम्झौता	Tradeoff
क्षय, हानी	Loss



Government of Nepal
National Planning Commission
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