

Nepal Status Paper

United Nations Conference on Sustainable
Development 2012 (Rio+20)
Synopsis



National Planning Commission
Government of Nepal
Singhadurbar, Kathmandu



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November 2011

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Contents

Foreword and Acknowledgements	v
Acronyms and Abbreviations	vii
Summary	1
Green Economy	2
Institutional Framework for Sustainable Development	2
<i>New and emerging challenges</i>	3
<i>Special needs of mountain countries</i>	4
<i>Closing the implementation gap</i>	5
<i>Cooperation mechanisms, partnership arrangements</i>	6
<i>Priorities for strengthening the three pillars of sustainable development</i>	6
Economic Pillar	6
Social Pillar	7
Environment Pillar	7
Background	9
Review of Policies, Progress, and Institutional Frameworks	12
<i>Economic pillar</i>	12
Agriculture and food security	14
Exports and imports	15
Patterns of consumption and production	16
Poverty reduction	17
Income inequality	18
Remittance	19
Energy and transport	20
Tourism	23
<i>Social pillar</i>	23
National laws, policies, plans and programs	24
Hunger and income opportunities	25
Access to health services	26
Access to water and sanitation	26
Access to education	27
ILO 169	28
Access to forest and bio-diversity resources	28

Migration and its social implications	29
Gender and social inclusion mechanisms	29
Progress towards the MDGs	30
<i>Environmental pillar</i>	31
The CBD, state policies and development plans	32
CBD and the key environmental sectors	33
Forest, biodiversity and watershed	33
Environment and climate	34
Agricultural biodiversity	35
Sustainable mountain development, land management and infrastructure development	36
NGOs and other stakeholders	36
Challenges and Opportunities	37
<i>Challenges</i>	37
Gaps in building economic capacities	37
Gaps in gender and social inclusion	38
Gaps in maintaining environmental sustainability	39
<i>Opportunities</i>	40
Economic sector	40
Social sector	43
Environmental sector	43
Green Economy: Issues, Barriers and Solutions	44
<i>Key issues and barriers in promoting green economy</i>	44
<i>Proposed solutions/drivers to remove barriers</i>	45
Major Recommendations and Key Messages for Sustainable Development	46
<i>Green economy and poverty reduction</i>	47
<i>Institutional framework</i>	48
<i>Political commitment for sustainable development</i>	49
<i>Addressing new and emerging challenges</i>	50
<i>Sustainable mountain development</i>	51
<i>Financing</i>	51
References	53

Foreword and acknowledgements

The global community has made several commitments after the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992. Many institutions have been created to govern the process and implementation of the commitments at the international, regional, country and community levels. Many of those commitments have been translated into the Millennium Development Goals (MDGs). However, implementation has been remained partial and as a result, the world is facing newer challenges – those related to food adequacy, energy crises related to the global recession, and climate change and its threat on natural resources. The challenges are more pronounced in mountainous countries. The United Nations Conference on Sustainable Development (UNCSD), or the ‘Rio+20’ or ‘Earth Summit 2012’ is being held at this critical juncture, with the following goals: a) Secure renewed global commitment for sustainable development, b) Assess the progress and gaps in the implementation of major summit commitments on sustainable development, and c) Address new and emerging challenges.

This is a process-driven document and an outcome of discussions and deliberations among civil society, government and non-government stakeholders, parliamentarians and local communities. The findings suggest that Nepal has made significant progress on the policy, legislation and institutional aspects of sustainable development but has remained weak in implementation. There also have been positive achievements in implementing programs related to natural resources management, renewable energy, health and education, and poverty reduction. Nepal has comparative advantage in developing sustainable agriculture, tourism, renewable energy, non-timber forest products, community forestry and biodiversity conservation. It has also launched a global initiative to advocate for attention to the perilous situation in the mountains. Nepal needs additional international support in financing, technology transfer and capacity building, and special support for improving terms of trade and for assisting it to bolster its competitive advantage in agricultural product marketing.

On the green economy theme, Nepal shares the voice of developing countries that it should offer new trade opportunities to all countries, and not become a pretext for “green protectionism”. The green economy should be used to promote and enhance capacity in Least Developed Countries (LDCs) without constraining the policy space to pursue their national development agendas. This would require high priority on substantial transfer of new appropriate technologies to LDCs with strong institutional support, primarily contributing to a “just transition” and productivity enhancement, for leading Nepal towards a low carbon but high and equitable economic growth path. Further, there is a critical need to fulfill all previous commitments of developed countries, particularly the ODA commitment of allocating 0.15-0.20 percent of their Gross National Income (GNI) as development aid.

Nepal believes that Rio+20 will present an excellent opportunity for the international community to enhance cooperation on sustainable development. We also hope that this opportunity will be

used productively and wisely for renewing political commitment, formulating concrete action plans, and building an effective system of global governance to coordinate efforts for delivering on the conference commitments.

I appreciate the contributions made by the expert team of Professor Govind Nepal, PhD (Team Leader), Mr Prabhu Budhathoki, PhD, and Ms Dibya Gurung in preparing the Background and Synopsis Reports. I also acknowledge the inputs provided by the reviewers Dr Dinesh C. Devkota, PhD, Honorable Ms Arju Deuwa, PhD, Mr Krishna Gyawali, Mr Ganesh Raj Joshi, PhD, and Mr Madhav Karki, PhD. Mr Tek Jung Mahat from ICIMOD deserves special thanks for facilitating the report preparation process, offering information and documentation support. I like to thank also Mr Sanam Aksha and Mr Sudas Sharma for logistics support. Finally, I commend the coordination work of Mr Yuba Raj Bhusal and Mr Purushottam Ghimire. I also appreciate the support extended by UNDP and ICIMOD towards the preparation of this report.

Deependra Bahadur Kshetry
Vice-Chair

Acronyms and Abbreviations

ADB	Asian Development Bank	HDI	Human Development Index
AEPC	Alternative Energy Promotion Centre	HIV	Human Immune Deficiency Virus
AIDS	Acquired Immune Deficiency Syndrome	HRD	Human Resource development
APP	Agriculture Perspective Plan	ICIMOD	International Centre for Integrated Mountain Development
BOP	Balance of Payment	ILO	International Labor Organization
BZ	Buffer Zone	IMR	Infant Mortality Rate
CBD	United Nations Convention on Biological Diversity	IPCs	Integrated Planning Committees
CBO	Community Based Organization	IUCN	International Union for Nature Conservation
CBS	Central Bureau of Statistics	kWh	Kilowatt hour
CCC	Climate Change Council	LAPA	Local Adaptation Plans of Action
CDKN	Centre for Development and Knowledge Network	LDCs	Least Developed Countries
CDM	Clean Development Mechanism	LI-BIRD	Local Initiatives for Biodiversity, Research and Development
CFUGs	Community Forestry Users Groups	LPG	Liquefied Petroleum Gas
COP	Conference of the Parties	LSGA	Local Self Governance Act
DFID	Department for International Development	MAPs	Medicinal and Aromatic Plants
DOF	Department of Forest	MCCICC	Multi-stakeholder Climate Change Initiatives Coordination Committee
EIA	Environmental Impact Assessment	MDGs	Millennium Development Goals
EPC	Environment Protection Council	MEAs	Multilateral Environmental Agreements
FAO	Food and Agriculture Organization	MOEn	Ministry of Energy
FCPF	Forest Carbon Partnership Facility	MOEnv	Ministry of Environment
FDI	Foreign Direct Investment	MOEST	Ministry of Environment, Science and Technology
FECOFUN	Federation of Community Forest User Groups Nepal	MOF	Ministry of Finance
GDP	Gross Domestic Product	MOFSC	Ministry of Forest and Soil Conservation
GSEA	Gender and Social Exclusion Assessment	MOTCA	Ministry of Transport and Civil Aviation
GESI	Gender Equality and Social Inclusion	MW	Mega Watt
GHG	Green House Gas	NAP	National Agricultural Policy
GJ	Giga Joule	NAPA	National Adaptation Programme of Action
GMCC	Gender Mainstreaming Coordination Committee	NASDP	National Agriculture Sector Development Priority Plan
GMOs	Genetically Modified Organisms	NBS	Nepal Biodiversity Strategy
GNI	Gross National Income	NCCNCR	National Council for the Conservation of Natural and Cultural Resources
GON	Government of Nepal		
GRB	Gender-Responsive Budgeting		

NCS	National Commission on Sustainable Development	SEA	Strategic Environmental Impact
NEFEJ	Nepal Forum of Environmental Journalists	SMD	Sustainable Mountain Development
NER	Net Enrolment Rate	SWAp	Sector-Wide Approach
NGO	Non-governmental Organization	TYIP	Three Year Interim Plans
NLFS	National Labor Force Survey	TYP	Three-Year Plan
NLSS	Nepal Living Standard Survey	UNCCD	United Nations Convention to Combat Desertification
NPC	National Planning Commission	UNCED	United Nations Conference on Environment and Development
NRs	Nepali Rupees	UNCSD	United Nations Conference on Sustainable Development
NTFP	Non-timber Forest Products	UNDESA	United Nations Department of Economic and Social Affairs
NTNC	National Trust for Nature Conservation	UNDP	United Nations Development Programme
ODA	Overseas Development Assistance	UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
PES	Payment for Environmental Services	UNFCCC	United Nations Framework Convention on Climate Change
PIP	Priority Investment Plan	VDC	Village Development Committee
PRSP	Poverty Reduction Strategy Paper	WB	The World Bank
REDD	Reducing Emissions from Deforestation and forest Degradation	WDO	Women Development Office
RTI SWAP	Rural Transport Infrastructure Sector-wide Approach	WECS	Water and Energy Commission Secretariat
SD	Sustainable Development	WWF	World Wildlife Fund for Nature
SDAN	Sustainable Development Agenda for Nepal		
SDC	Swiss Agency for Development and Cooperation		

Summary

This document follows the guidance note of the Co-chairs of the UNCSD Bureau and the outcome is based on discussions and deliberations with representatives from civil society, government and non-governmental organisations, communities and parliamentarians. A Steering Committee chaired by the Vice-Chair of National Planning Commission (NPC), Government of Nepal, including 11 secretaries from different ministries, and representatives of development partners, intergovernmental organizations, INGOs, NGOs, CBOs, experts and other stakeholders was formed for preparing the Rio+20 Country Report. The Steering Committee formed a Task Force chaired by the Secretary at the NPC, with seven Joint Secretaries of key ministries to facilitate and coordinate the process. An expert panel backed up the preparatory process that also involved consultations with parliamentarians, government agencies, and technical partners, NGOs, CBOs, media and youth.

Twenty-five representatives from major stakeholder groups, government agencies and technical partners attended the first meeting of the Task Force (23 September 2011) and finalised the process, scope, methodology and timelines for preparing the document. Based on the guidelines, an expert group prepared the first draft in October 2011 that was reviewed by the Task Force, Steering Committee members, and experts. The second draft was shared at the national expert group meeting to ensure that all the three pillars of sustainable development – economic, social and environmental were adequately addressed.

A National Multi-stakeholder Consultation workshop held on 20 October 2011 was attended by more than 100 representatives of different stakeholder groups including parliamentarians, former ministers and policy makers, government secretaries and senior officials, the resident representative of the UNDP, experts at ICIMOD, and representatives of media, youth, I/NGOs, CBOs, the business community, independent experts, and Major Groups of Rio+20. The workshop discussed key questions in the “General Content” of the Guidance Note as well as the specific aspects of Least Developed and mountainous countries. The discussions covered the issues and themes under the “Specific Elements” of Guidance Note. The following sections summarise key messages from Nepal to the Rio+20 Conference.

Nepal’s main expectation from Rio+20 is a renewed commitment of Member States for preserving the Rio principles and fostering an implementable consensus for narrowing down the implementation gaps in the Rio declaration and other associated commitments, and addressing new and emerging challenges fairly and equitably based on the principle of common but differentiated responsibilities. Nepal also expects a clear articulation by the Rio+20 summit of the commitment to ensure a balanced and integrated approach for addressing all three pillars of sustainable development with poverty alleviation and inter-generational human wellbeing at the centre. Nepal’s position on the two Rio+20 themes and other components are elaborated in the following sections.

Green Economy

1. The green economy should be an instrument for sustainable development, poverty reduction and inclusive and equitable economic growth. Economic growth must be sustainable, supported by well-functioning markets, and preferential access for green products at prices that reflect the scarcity value of natural resources. Further, property rights must be clearly defined to enable and encourage true stakeholders to use natural resources sustainably – both individually and collectively.
2. There must also be provisions for technology adaptation and transfer, easy finance, capacity building and favorable terms of trade and transit facilities to LDCs in order to facilitate economic transformation that is needed for sustainable development.
3. Proven, people-centred, pro-poor, sustainable, and green development interventions should be planned considering tenurial security and property rights of indigenous people and local communities to land and other natural resources. This would also require national commitment to enact appropriate legal and policy frameworks.
4. Developing countries in general and mountainous LDCs in particular need support for adopting and customising policies and strategies, and special provisions for meeting their additional financial, technical and capacity building requirements.
5. Unsustainable consumption patterns, particularly in developed countries, must be changed as the trend is also catching up in urban centres of developing countries.
6. Green economy should encourage the formulation and implementation of policies and mechanisms that are conducive in engaging governments, private sector and the civil society in green enterprises. Training, capacity building and targeted interventions, including financing and credit facilities, can help to increase participation and enable the poor, women and socially excluded groups, and promote gender and social equity in education, skills and entrepreneurship development, health care, child welfare and social security.
7. The LDCs and mountainous countries have very low capacity to control and manage the expanding ecological footprints of globalisation. Special safeguard measures and global commitment is needed to ensure the protection of natural resources of environmentally vulnerable countries, for protecting livelihoods that are being affected by both economic globalisation and global climate change.

Institutional Framework for Sustainable Development

1. The institutional framework for sustainable development must include provisions for technology adaptation and transfer, easy finances, capacity building and favorable terms of trade and transit facilities to LDCs for attaining the economic transformation needed for sustainable development.

2. There is an emerging consensus on the need to have coherence, coordination and improved service delivery in MEAs, intergovernmental bodies, the UN system and other international organisations. There is also a realisation that the Environmental Pillar is relatively weak compared to the other pillars of sustainable development, because of its fragmented governance structure.
3. Nepal considers the importance and relevance of creating a specialised agency, a World Environment Organisation, as the global technical arm of the UN system. This agency can focus attention on implementing MEAs, building in-country capacity for addressing existing and emerging threats of environmental degradation, and promoting sustainable approaches for poverty reduction. The proposed agency should have regional and country presence. Nepal is a firm believer in the “one UN approach” and calls for coordinated and efficient systems and mechanism at all levels.
4. Further, green technologies in developed countries are generally in the private domain and come under the Intellectual Property Rights regime making the costs prohibitive. An appropriate mechanism is therefore urgently required for ensuing affordable access to appropriate technologies to LDCs, and for setting up technology research and development centres in LDCs for developing, adapting and transferring technologies suitable to their contexts, priorities and needs, and also for addressing limitations imposed by landlocked, and mountainous geographical conditions.

New and emerging challenges

1. There is a need to agree on a framework of action during Rio+20 and have, among others, a timeline for implementing sustainable development commitments with a set of actionable goals. The poor and mountainous countries contribute least to global warming but are the most vulnerable to climate change and erratic weather patterns. But, their capacity to address the problems is limited. Therefore, the global community needs to develop mechanisms to support the most vulnerable countries in effectively addressing the adverse impacts of climate change and for using the opportunities resulting from it to improve livelihoods and achieve climate-resilient development.
2. The ability of vulnerable countries to address different global crises is limited and therefore the need for a mechanism to help such countries to overcome crises, and improve resilience. Nepal believes this can be achieved through proper and effective integration of Istanbul Program of Action for LDCs in the global sustainable development agenda.
3. While using natural resources (hydropower generation and biodiversity conservation) for economic gains, care must be taken to ensure fair and equitable benefit sharing with local communities and indigenous people, whose life and livelihoods directly or indirectly depend on the resources or ecosystem services.
4. Both income inequality and poverty reduction need to be addressed sustainably taking into account the need to democratise ownership, control and decision making over productive

natural resources and assets. There has to be an appropriate mix of democratic and inclusive models such as cooperatives, collective and community-based and driven ventures, and public–private enterprises for ensuring that the economic activities contribute to the developmental goals of the community and society.

5. LDCs such as Nepal need support for strengthening innovation capacity to generate appropriate technologies, enhance extension services and improve market infrastructures for increasing the productivity of agriculture and natural resources. It is also necessary to develop easily adoptable and resilient technologies that meet the needs of the poor, women and excluded groups and communities.
6. Both farm and non-farm linkages need to be strengthened by improving connectivity, creating post-harvest infrastructures and facilities, promoting value adding small and micro enterprises (SMEs) and increasing marketing and distribution efficiency.
7. Despite constraints, Nepal has made considerable progress in implementing programs related to natural resources management, renewable energy, health and education and poverty reduction. It can do better given its comparative advantages and natural resources endowment for developing sustainable agriculture, eco-tourism, water resources, renewable energy, non-timber forest products, community forestry and biodiversity conservation. However, it needs additional support (finances, technology transfer and capacity development) for sustaining the achievements and scaling up the successful pilot interventions.

Special needs of mountain countries

A green economy should offer new trade opportunities to developing countries, and not become a pretext for “green protectionism”. Instead, it must be designed as an opportunity to promote and enhance the technical and institutional capacity in LDCs for pursuing a green growth-based developmental agenda. The transition to a green economy has to be gradual and inclusive for all stakeholders. Further, there has to be fair cost sharing to assist LDCs in making a just transition to a green economy. Nepal’s economy that is largely green can remain green even while reducing poverty, if sufficient international support is available in terms of finance, capacity development and technology transfer. A green economy would entail developing national accounting systems to measure human welfare benefits, or the true value of ecosystem services benefiting the national, regional and global economies and environment. Valuation of environmental services though difficult is a precondition for establishing payment for environmental services (PES). Since mountain ecosystems are important for every one, including downstream residents and the larger environment, Rio+20 needs to agree on updating the Mountain Agenda (Chapter 13 of Agenda 21) that was adopted in 1992.

The international community needs to recognise upstream-downstream interdependency and come up with enhanced policies, institutional structures, funding mechanisms and support systems that promote multi-stakeholder involvement in managing trans-boundary resources.

Mountain ecosystems need better recognition for the services they provide, and this would require greater attention on livelihood issues faced by mountain communities, and on maintaining/enhancing ecosystem services. The framework of the green economy does not address the concerns of mountain regions, particularly those in LDCs. This needs to be corrected by,

- Recognising the direct and indirect benefits derived from mountains by national and regional plans and policies;
- Incorporating the value of ecosystem services in national plans, GDP accounting and decision-making;
- Establishing global, regional, national, and local mechanisms to compensate and reward mountain communities for the services they provide;
- Establishing favourable conditions for improving markets for mountain ecosystem goods and services; and for inclusion of equity concerns in the green economy in hills and mountains; and
- Ensuring access to resources, and ownership rights, for mountain communities especially women, indigenous communities and marginalised groups.

The efforts of mountain communities need to be complemented for ensuring continued environmental stewardship that is needed to assure availability of fresh water, biodiversity, cultural diversity, and space for tourism, recreation, and spiritual renewal, as well as for coping with effects of climate and environmental changes.

Nepal's experience in promoting community-based resources management, particularly community forestry, is an appropriate model for improving mountain livelihoods and mitigating and adapting to the adverse impacts of climate change. The achievements so far can be enhanced for promoting low-carbon development by creating green jobs and environmental services related businesses such as REDD+ and PES.

Closing the implementation gap

The LDCs lag behind in sustainable development partly because international support has not been effective and adequate. Their progress has tapered due to the lack of proper and timely implementation of commitments made by the international community. The LDCs have capacity constraints, inadequate, and low access to financial support, and face continued marginalisation in the international trading system. They also shoulder debt burdens – compounded by inadequate debt relief measures – and receive negligible FDI inflows. Implementable commitments from the North for adequate financing (according to common but differentiated responsibility), appropriate technology cooperation, and need-based capacity building are vital for assisting developing countries for making a just transition to sustainable development pathways. It is vital that developed countries fulfill their previous commitments, particularly the ODA commitment of providing the 0.15-0.20 percent of Gross National Income (GNI) as development aid to LDCs.

The LDCs need to use funds for promoting community-driven green enterprises such as organic farming, biogas and solar energy; and seed-banking, watershed management and on-farm improvement of crop varieties and animal breeds through collective, and gender equality and social inclusion (GESI) sensitive value chain approaches.

Cooperation mechanisms, partnership arrangements

Effective implementation tools and cooperation and partnership arrangements are needed for narrowing down the implementation gaps. This requires more coordinated, integrated, and results-oriented efforts at both national and international levels for arranging adequate finances, ensuring appropriate technology transfers, supporting capacity building, and promoting sustainable consumption and production patterns. Good practices, information and knowledge, and experiences need to be shared for replicating and scaling up successful models, for empowering women, and for enhancing scientific and technological cooperation with participation of scientists from LDCs in collaborative technology development.

Developed countries need to take concrete steps to reduce and cancel debt, remove trade barriers and open up their markets. Further, a global mechanism needs to be developed to assess the impacts of new technologies on health, biodiversity and environment. Such mechanisms need to provide resources for building capacity of the LDCs and communities, especially on assessing and monitoring the impacts.

Sizeable investment will need to flow into the green sectors in the LDCs. While domestic resource mobilization will play a key role, enhanced access to international finance (including new and additional resources), is crucial. There is also an urgent need for greater synergy and complementarities between financing for climate change and sustainable development.

Priorities for strengthening the three pillars of sustainable development

Nepal strongly feels that the three pillars of sustainable development need to be further strengthened and integrated.

Economic Pillar

Nepal has made good progress in terms of poverty reduction and towards attaining the MDGs but there is a long way to make the development sustainable. Economic growth for reducing poverty was the policy focus in Nepal for the past 20 years. It aimed at creating an environment conducive for free enterprise with some social protection measures for disadvantaged groups. The period saw private sector investment in hydropower, transport, education, health, telecommunication, civil aviation, and financial intermediation. However, distributional inequalities also grew and even triggered social conflicts, which have dampened growth and widened income inequality.

The multi-dimensionality and complexities of poverty need to be taken into account for making poverty alleviation measures more effective. Reinvigorating rural agriculture and the financial sector, universal access to safe and nutritious food, water, health and energy services, education, and sanitation areas are vital for improving the quality of life. Therefore, there is need for a renewed focus on these sectors by creating a more investment-friendly environment and by promoting public-private partnerships.

Social Pillar

An integrated GESI sensitive value chain approach in collaboration with government, private sector, NGOs and CBOs, with adequate resources, targeted activities, well-trained human resources, and enhanced coordination and collaboration can help improve the effectiveness of social measures in conservation and sharing of benefits from community-based natural resources management.

Social inclusion was one of the pillars of Nepal's Tenth Plan (2002-07). After 2006, the issues of social and geographical inclusion and gender equality have become a focus of public policy, as a response to demands by various social movements that have given voice to grievances that had remained largely subdued. Nepal is committed to good governance through effective decentralization with concrete policies, plans and programs to reach out to and benefit women, socially and geographically excluded groups and indigenous people.

Environment Pillar

Nepal's Tenth Plan (2002-2007) internalised the Sustainable Development Agenda for Nepal (SDAN) and adopted various policies and laws to facilitate sustainable growth. Nepal has enabling policies and laws in forestry, buffer zone management, community and leasehold forestry and water resource development. In 2009 Nepal established a Climate Change Council. A year later it prepared a policy for tackling climate change and approved the National Adaptation Programme of Action (NAPA). Climate-resilient planning began in Nepal with the Three Year Plan (2010/11-2012/13). Its policies and guidelines focus on community participation, resource sharing, sustainable resource use, good governance and transparency. Nepal's Environment Protection Act (1997) provides a basis for ensuring that there is minimal environmental damage while pursuing development.

Nepal has some proven environmental conservation models that have potential for expansion and replication. In addition to assisting conservation, these models have the potential to facilitate the move towards a green economy provided there is adequate access to international finance and technology that would be needed for scaling up. Nepal also has opportunities for watershed and landscape level ecosystem conservation whose benefits are global.

Nepal lies in one of the most fragile eco-regions of the world and is prone to natural and human-induced disasters. There is, therefore, the need to strengthen climate resilient planning with increased focus on disaster risk reduction. Frequent disasters cost lives and destroy ecosystem services on which the poor depend for livelihoods. Therefore, adequate planning for tackling disasters remains a key to effectively managing the impacts of climate change. The international community can contribute to these efforts by supporting the construction of 'green infrastructures' including forest conservation and watershed management, and water storage systems.

The global efforts to tackle climate change and foster sustainable development cannot be successful unless effective checks are put in place to arrest the rampant commercialization and unsustainable exploitation of environmental goods and services. This needs to be taken into consideration while formulating climate resilient policies by harmonizing the various conventions that seek to promote sustainable development and environmental conservation.

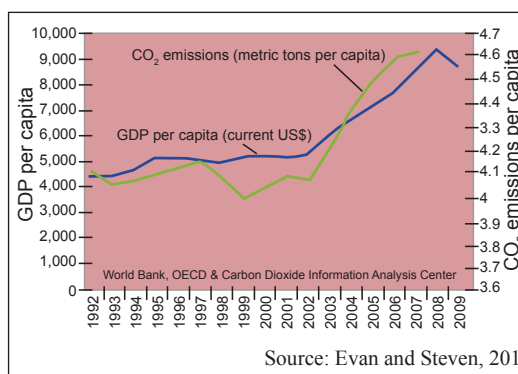
Countries with extreme topography and varied climatic regimes such as Nepal are particularly vulnerable to the impacts of climatic change, some of which are already visible. Nepal does not have the capacity and resources to cope with the vulnerabilities resulting from a changing climatic regime. Nepal believes that our common future as a planet can be assured only through immediate attention on the vulnerabilities in small, poor mountainous countries. This is urgent because the ecosystem services these countries provide are vital for the global community. Interventions and adequate support to arrest the impact of climate change in LDCs, as a priority, can be the first important steps at Rio+20 that could make a real difference towards assuring our common future. *(Based on the Government of Nepal's submission to the Rio+20 Secretariat).*

Background

The UN General Assembly is organizing the Conference on Sustainable Development (CSD), or the ‘Rio+20’ or ‘Earth Summit 2012’ in Rio de Janeiro in 2012. Rio+20 aims to build on previous global summits: the United Nations Conference on the Human Environment in Stockholm (1972), the Conference on Environment and Development in Rio de Janeiro (1992), and the World Summit on Sustainable Development in Johannesburg (2002). There is no universally accepted definition of sustainable development but there is general acceptance that it is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987). The Rio+20 conference’s objectives are to: a) secure renewed global commitment for sustainable development, b) assess the progress and gaps in the implementation of the outcomes of major summit commitments on sustainable development, and c) address new and emerging challenges.

The implementation of Agenda 21 and other multilateral environmental agreements (MEAs) have had some positive outcomes. In the two decades after the Earth Summit (1992) the average living standards have improved significantly, with global per capita Gross Domestic Product (GDP) doubling in real terms between 1992 and 2008, before being affected by the recession. More people have been able to meet their basic needs, and the world is believed to be on track towards meeting the MDG of halving extreme poverty by 2015. There have also been some impressive outcomes related to the social and economic pillars, while progress on the environmental pillar has lagged. However, the Earth Summit’s promise to make “environmental protection an integral part of the development process” remains unfulfilled, and Agenda 21 itself has been forgotten (Evans and Steven, 2011). Figure 1 shows the GDP and emissions since 1992.

Figure 1: GDP and emissions since Rio 1992



Nepal has made good progress in terms of poverty reduction and towards achieving most of the MDGs. But the country still has a long way to go in terms of sustainable development as both the social and environmental pillars remain weak.

Nepal – landlocked and mountainous with an area of 147,181 square kilometers and 26.6 million people (CBS, 2011c) – is a party to various conventions on sustainable development. Nepal has a low Human Development Index (HDI) of 0.428 (UNDP, 2010) and a per capita nominal GDP of USD 642 – the estimated GDP for fiscal year 2010-11 is 3.47 percent (CBS, 2011a). More than one third of the GDP is derived from agriculture.

The country lies in the transitional region between Indo-Malayan and Palearctic bio-geographical realms. Its unique geographical position and the altitudinal and climatic variations have resulted in nine bio-climatic zones, from tropical to alpine within a vertical span of less than 200km. Nepal includes four of the Global 200 eco-regions – critical landscapes of international biological importance – and ranks 25th in biodiversity with about 118 ecosystems, 75 vegetation types and 35 forest types (FAO, 1999). The country harbors around three percent of the recorded faunal species in the world and one percent of the global faunal species (GON/MOEST, 2008). Most of Nepali territory (86%) comprises of the hills and mountains. Mount Everest in Nepal and other Himalayan peaks function as the water towers of Asia, and feed the region’s largest rivers that nourish hundreds of millions of people downstream. Over 6,000 rivers flow through Nepali territory.

Nepal’s economy depends largely on natural resources but the distribution of resources and use in socio-economic development remains uneven. The country has 103 caste and ethnic groups (including two unidentified groups) speaking 92 languages (UNDP, 2009). Further, while Nepal has introduced policies to ensure fairer distribution, implementation has remained slow because the country has also been involved in a political transition, since 2006, for transforming the unitary system of government into a federal republic.¹

Nepal has attempted to realign its policies and institutions with the international commitments for sustainable development. It introduced sustainable development in national planning in the Sixth Plan (1982-1987) and fully translated it into actions in the Eighth Plan. This plan’s main objective was to achieve sustainable economic growth, poverty alleviation and reduction of regional imbalances. The Ninth Plan (1997/2002) emphasized the need for development activities to be sustainable and for establishing links between environment and poverty. It reiterated the implementation of Agriculture Perspective Plan (APP) and revised the Forest Sector Master Plan, giving communities a greater role in natural resources management.

Sustainable Development Agenda for Nepal (SDAN) 2002 has been an important strategy for promoting environmental management and sustainable development. It calls for effectively integrating the sustainable development approach in planning, with people’s participation, and also proposes some long-term targets in infrastructure, social and environmental sectors to be attained by 2017.

The Tenth Plan (2002/2007) internalized the SDAN strategies. Adhering to the SDAN commitment, Nepal adopted the Leasehold Forestry Policy Guidelines, 2003; Collaborative Forest Management Guidelines, 2003-2004; and revised the Water Resource Policy, 2003. All of these policies and guidelines focus on community participation, resource sharing, sustainable use of resources, and privatization of services, good governance, and transparency.

The Three Year Interim Plan (2007/08–2009/10), formulated after the People’s Movement–II (2006), emphasized protection, restoration and sensible use of natural resources, and promoting

¹ Nepal went through a decade long internal conflict from 1996-2006.

sustainable development through people's participation in campaigns to mitigate urban pollution, to make rural areas clean and green to ensure an individual's right to live in a clean environment, and to effectively implement commitments on environmental management.

The Three Year Plan (TYP) (2010/11-2012/13) aims to promote green development, make development activities climate-resilient, mitigate the adverse impacts of climate change, and promote adaptation. It seeks to mitigate urban pollution and protect rural natural landscapes. The TYP focuses on identifying agencies and ensuring their roles and responsibilities for NAPA implementation with national and international support. The TYP also emphasizes the need for developing partnerships amongst donor agencies, NGOs, local bodies, CBOs and other agencies, and initiatives for establishing an international research center on climate change (GON/MOEnv, 2010). Box 1 summarizes major sustainable development policies and legal provisions introduced by the government.

About this report: This Country Status Report has, a) primarily reviewed the commitments made by Nepal at Rio'92 by presenting and appraising key strategies, policies, instruments, and programs for promoting sustainable development and sustainable mountain development. It has also analyzed and indicated Nepal's position on major global agendas and its commitments to promote the Rio+20 agenda – green economy and poverty alleviation.

Box 1: Nepal's Efforts for Nature Conservation

- | | |
|---|---|
| 1. Enactment of National Park and Wildlife Conservation Act, 1973 | 16. Environment Protection Act, 1996 |
| 2. National Park and Wildlife Conservation Rules, 1974 | 17. Environmental Protection Rules, 1997 |
| 3. The National Forestry Policy (NFP), 1976, | 18. Buffer Zone Management Guidelines, 1999 |
| 4. Leased Forest Rules, 1978 | 19. Formulation of Sustainable Development Agenda for Nepal (SDAN), 2002 |
| 5. Watershed Conservation Act, 1982 | 20. Nepal Biodiversity Strategy, 2002 |
| 6. King Mahendra Trust for Nature Conservation Act, 1982 | 21. Nepal Biodiversity Strategy Implementation Plan, 2006-2010 |
| 7. Soil and Watershed Conservation Regulation, 1985 | 22. National Wetland Policy, 2002 |
| 8. National Conservation Strategy, 1987 | 23. Water Resources strategy, 2002 |
| 9. Nepal Environmental Policy and Action Plan (NEPAP), 1993 | 24. Leasehold Forestry Policy Guidelines, 2003 |
| 10. Forestry Policy, 1992 | 25. National Action Program on Land Degradation and Desertification, 2004 |
| 11. Hydropower Development Policy, 1992 | 26. National Agricultural Policy, 2004 |
| 12. Industrial Policy, 1992 | 27. Community Forestry Guidelines, 1996 revised in 2002 and 2005 |
| 13. National Shelter Policy, 1996 | 28. Agro-biodiversity Policy, 2007 |
| 14. Buffer Zone Management Regulation, 1996 | 29. National Adaptation Programme of Action (NAPA), 2010 |
| 15. National Solid Waste Management Policy, 1996 | 30. Climate Change Policy, 2011 |

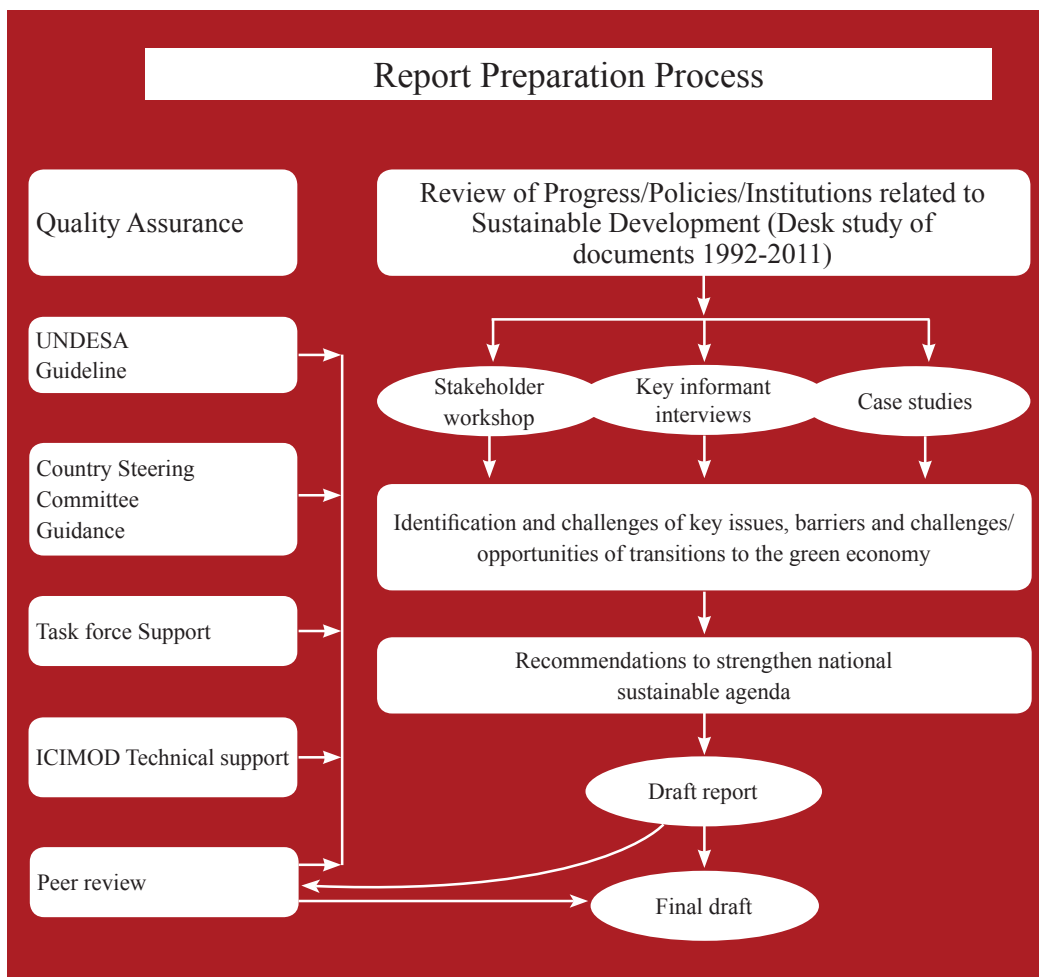
The report involved desk study and consultations under the guidance and technical inputs of the government and other national and regional agencies. The body of report focuses on elaborating the three pillars of sustainable development – economic, social and environmental. Under each pillar, there is a review of policies, and progress against Nepal’s commitment to sustainable development, identification of challenges and gaps, analysis of options and opportunities, and conclusions and findings. The report concludes with the key messages and policy recommendations on green economy for sustainable development and poverty reduction, institutional framework, and political commitment for sustainable development for addressing new and emerging challenges. The economic, social and environmental pillars are interlinked and development of one pillar impacts the others. The impacts depend on the approach and type of development interventions, and more success is likely where the processes are integrated and synergized. (See Chart in page 13)

Review of Policies, Progress, and Institutional Frameworks

Economic pillar

There are concerns that the prevailing economic development model built on policies such as privatization, export-led development, structural adjustment, deregulation, substitution of technology for nature, and driven by the goal of GDP growth, suffers from a series of market and institutional failures that render it inefficient, unsustainable, inequitable, making it a poor vehicle for advancing sustainable development goals (UNDPI, 2011). Several concurrent global crises have unfolded during the last decade: climate change, biodiversity loss, fuel, food, and water shortages, and more recently, the meltdown of the global financial system. Global leaders have been rethinking growth and development strategies since 2008 in response to the twin challenges of a global economic downturn and increasing environmental degradation. Public opinion is now swaying towards the belief that green growth can promote economic development while responding to climate change, loss of natural capital and resources, and addressing development objectives (CDKN, 2011).

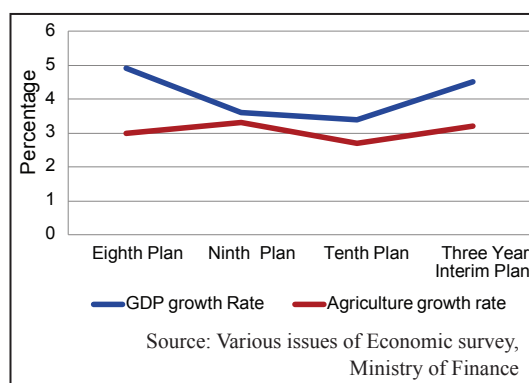
In the past 20 years Nepal focused primarily on economic development and poverty reduction. Policy and legislation in the first 15 years attempted to create an environment for a free market economy with some shallow social protection measures for disadvantaged groups. During these years, amidst the failure of a majority of public sector enterprises, there was private sector investment in hydropower, transportation, education, health, telecommunication, civil aviation, banking and financial institutions, telecommunication and mass communication. However, the private sector has yet to become competitive. For decades, Nepal’s GDP has fluctuated between 3-5 percent per year. The growth rate was 4.9 percent, 3.6 percent, 3.4 percent and 4.5 percent during the Eighth, Ninth, Tenth, and the Three Year Interim Plan, respectively (Figure 2). Nepal could not achieve the planned rates owing mainly to political instability that overshadowed economic issues since the mid 1990s. The weak infrastructure, including electricity, and uneasy labor relations have also contributed to the low growth. The agriculture growth rates were three percent, 3.3 percent, 2.7 percent and 3.2 percent, respectively during the period (Figure 2).



Traditional farming practices, dependence on the monsoon, growing shortages of farm labor and poor access to markets are some major factors leading to the low growth.

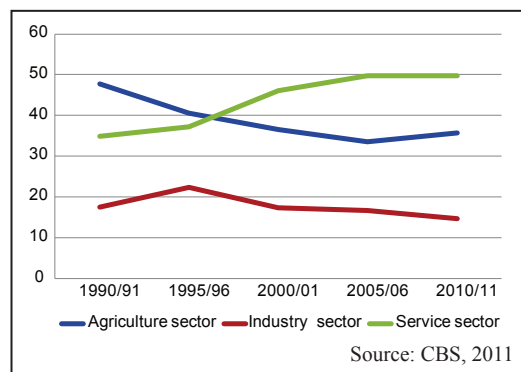
The structure of Nepali economy has been changing. The service sector has grown, while the share of industry and agriculture sectors has declined. The share of agricultural GDP decreased from 47.68 percent in 1990/91 to 35.66 percent in 2010/11. Similarly, the share of the industrial sector decreased from 17.53 percent in 1990/91 to 14.58 percent in 2010/11.

Figure 2: Average growth rate



However, the share of services increased from 34.79 percent in 1990/91 to 49.76 percent in 2010/11 (Figure 3). Service sector growth was brought about mainly by changes in the financial intermediation, and education sub sectors. The implication of the slow growth in agriculture is shrinking of employment and income-generating opportunities and the inability to foster broad based growth. As result only a small section of the population has been benefitting from the existing development, and economic policies.

Figure 3: Changing structure of the economy



Various international conventions stress the sustainable development agenda. The signatories, including Nepal, are therefore ethically bound to incorporate the promises in planning, and to implement the plans with national efforts and international cooperation. Eradication of poverty, creation of employment and income generation opportunities, sustainable agriculture and rural development, diversification of mountain economies, sustainable tourism, food production and food security, increasing access of the rural people, particularly women, small farmers, landless and indigenous people, to resources, credit, technology and markets; integration of rural energy and poverty, and equitable sharing of benefits are some of the major economic and social goals supported by the international instruments.

Agriculture and food security

Building on the World Food Summit (Rome) Declaration 1996, and the MDG targets (1990-2015), Nepal adopted food and nutrition security in the Ninth Plan (1997-2002). Further, both the Interim Constitution 2006 and the Three Year Interim Plan (TYIP) (2007-2010) aim for food sovereignty.

The Agricultural Perspective Plan (APP) (1995-2015) emphasizes the realignment of investment in selected priority inputs and outputs and is expected to generate strong multiplier effects on output and employment also in the non-farm sectors. The National Agricultural Policy (NAP) 2004, with the primary goal of attaining food security² and improving livelihoods by transforming subsistence agriculture into a commercialized and competitive system, remains the official policy framework for all interventions in the sector. It has been supplemented with sector and commodity specific policies such as the National Seed Policy 2000, National Fertilizer Policy 2002, National Irrigation Policy 2003, National Water Plan 2005, Agricultural Business promotion policy 2006, Commercial Agriculture Policy 2007, Agriculture Bio-diversity Policy

² FAO definition of food security: "a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life".

2007, etc. The Government of Nepal endorsed the National Agriculture Sector Development Priority Plan (NASDP 2011-2015) in September 2010. It builds on the NAP-2004 taking into account the changes in the social and political environment in the country.

The TYP (2007/08-2009/10) agricultural sector objectives were to increase production and productivity to ensure the food and nutrition security, and to transform the subsistence agriculture into commercial enterprises. The implementation approach was to develop a sustainable base for commercial and competitive farming systems, to conserve and use agricultural bio-diversity, and to develop and transfer environment-friendly technologies.

Available information shows that annual per capita food availability (edible form) declined from 198kg during 1990/91 to 186 kg in 2008/09. The fluctuation over the years was mainly due to the variability in domestic production of food grains. Though agriculture is the predominant economic sector, it remains overwhelmingly subsistence-oriented, highly diversified at the farm level (an antithesis of specialization and commercialization), and grossly underserved by modern productive inputs and technology. The agriculture sector has lost its competitive edge owing to shortage of fertilizers, seeds, irrigation and other productivity-enhancing inputs resulting in food security concerns for people dependent upon agriculture. (GON/MOF, 2011)

Exports and imports

Performance of Nepal's external sector has not been satisfactory. Industry has been on a continuous downslide with falling output, owing to a number of factors including political instability and lack of peace and security, energy shortages, and labor relations. The sectoral GDP growth rate averaged at around 0.3 percent in the past 10 years. The contribution of this sector to GDP has slipped from nine percent in FY 2000/01 to 6.5 percent in FY 2010/11 (GON/MOF, 2011).

In FY 2010/11³, trade with India was 67.5 percent and that with other countries, 32.5 percent. The export to India was 66.92 percent and that to other countries 33.08 percent (GON/MOF, 2011). Export to India mainly comprises zinc sheets, jute materials, plastic utensils, juice, cardamom, wires, Ayurvedic medicines, clothes, toothpaste, shoes and sandals, leather and ghee. Exports overseas comprise of mainly woolen carpets, Pashmina lentils, processed leather, tea, silver jewelries, herbs, Nepali paper and paper products, handicrafts and readymade garments.

In fiscal year 2010/11, 67.56% of imports were sourced in India and the remaining 32.44% from other countries (GON/MOF, 2011). Imports from India include petroleum products, M.S. billets, and cold roll and hot roll sheets in coils, machines and spares, chemical fertilizers, medicines, electrical goods, paper, coal, rice, dry-cell batteries, pipe and pipefittings, fruits, and sugar – all of which grew significantly. Petroleum products made up 25.82% of the import bill. Third country imports comprised of gold, readymade garments, steel rods and sheets, machineries and spares,

³ The data for fiscal year 2010/11 is of only eight months.

yarns, medicines, electrical goods, transport equipment and spares and edible oils. In 2009/10 the trade deficit with India widened by NRs 174.36 billion (55.41%), with China NRs 42.07 billion (13.37%) and with other countries narrowed by 31.1% to NRs 68.60 billion (Figure 4).

Patterns of consumption and production

Agenda 21 recommends five actions for sustainable consumption and production:

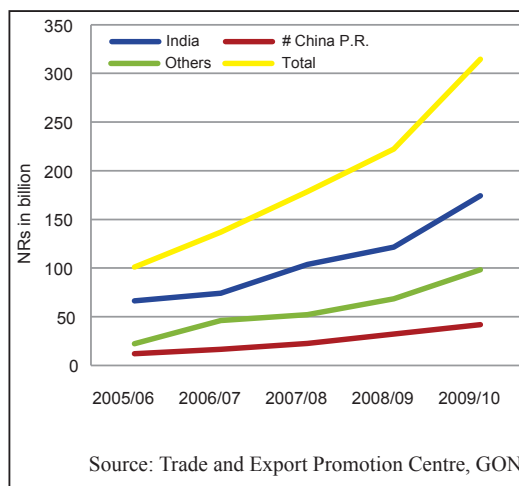
- a) encouraging greater efficiency in the use of energy and resources;
- b) minimizing the generation of waste;
- c) assisting individuals to make environmentally sound consumer decisions;
- d) showing leadership through government purchasing; and
- e) moving towards environmentally sound pricing.

Nepal's economy is gradually becoming consumption oriented, mainly pushed by remittance income, thereby causing a decline in savings and investment rates. Consumption to GDP ratio that was 88.3 percent in FY 2000/01 went up to 93.3 percent in FY 2010/11. As a result, the rate of domestic savings has come down to 6.7 percent from 11.7 percent. A consumption-oriented economy leads to dependency resulting in shortages of resources for investment, particularly in environmental sustainability. Hence, creating the foundation for economic growth through enhanced savings and investments by discouraging unnecessary consumption remains an issue (GON/MOF, 2011). The changing consumption pattern has also begun to have adverse impacts on environmental resources (urban air quality, rivers, and soil).

The government has formulated many policies and enacted laws and regulations related to environment and climate change. These include the Soil and Water Conservation Act 1982, Water Resources Act 1992, Industrial Enterprises Act 1992, Vehicle and Transport Management Act 1992 and Regulations 1997 (First Amendment in 2004), Forest Act 1993 and Regulations 1995, Local Self-Governance Act 1999 and Local Self-Governance Regulations 1999, and Ozone-Depleting Substance Consumption Regulations 2001. These instruments are being implemented for promoting sustainable consumption and production.

The economic and environmental policies are gradually focusing on promoting renewable resources particularly, renewable energy. Nepal is implementing major programs to enhance productivity, and resource conservation and also influence consumption patterns. These include programs on Promotion and Development of Renewable Energy, Cropping Intensity and Productivity Enhancement, High Value Agriculture Commodities Production and Development, Community Forestry Development Programs, Bio-diversity Conservation and Watershed

Figure 4: Nepal's trade deficit 2005/06-2009/10



Management Program, Energy Sector Assistance Program, Environment Sector Support Program, and Energy Conservation Programs.

Despite these efforts, the share of renewable energy and hydropower is still less than three percent of Nepal's total energy supply. Many industries also continue to discharge effluents directly and/or indirectly into land or nearby rivers violating standards and pollute nearby rivers, agricultural land and soil. Further, farming activities are still carried out on marginal lands causing soil erosion and pollution of water bodies. In the urban centers the use of old vehicles, and an increasing number of new vehicles, have increased pollution while the use of petroleum products has continued to rise. Elsewhere riverbeds have been depleting due to poorly regulated mining and quarrying. In the uplands, terraces account for three-fourths of the total cultivated area and terrace farming constitutes an important aspect of Nepali agriculture (www.unescap.org/DRPAD/VC/conference/bg_np_17_wmt.htm). But increasing population pressure has led to unsustainable use of natural resources, including overgrazing and deforestation. Erosion in the uplands can cause a range of environmental problems in the lowlands that can be devastating to crop yields.

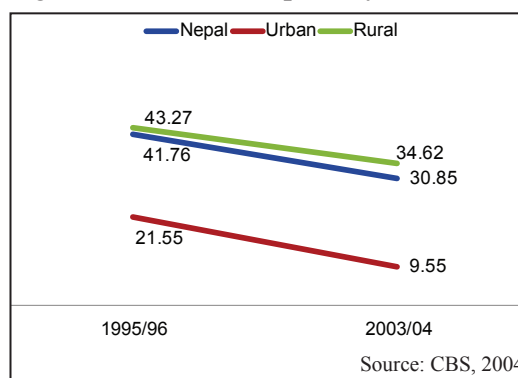
Poverty reduction

A development policy that focuses mainly on increasing the production of goods without addressing the sustainability of the resources on which production is based will sooner or later run into declining productivity, which could also have an adverse impact on poverty (Chapter 3, Agenda 21).

Poverty alleviation has been the main focus of development in Nepal since 1956 when the country began planned development. While the Ninth Plan (1997–2002) developed a 20-year framework for reducing poverty, the Tenth Plan (2002–2007), formulated as a Poverty Reduction Strategy Paper, was focused on reducing poverty. These efforts contributed to bringing the poverty level down to 25.4 percent by 2009. The Approach Paper for the TYP has the objective of reducing inequality and poverty through dignified and profitable employment opportunities by expanding inclusive, productive and targeted programs.

The number of Nepalis living below the national poverty line decreased from 42 percent in 1996 to 30.8 percent in 2003 (Figure 5) and to 25.4 percent in 2009 (CBS, 2009). Despite the achievement, there still are structural problems such as economic disparities and inequitable access to productive resources and means, distributional conflicts, and shortfalls in good governance. Similarly, there is a huge disparity in the rural and urban poverty

Figure 5: Incidence of poverty



levels. Even though, the decline in rural poverty is not discouraging (urban poverty dropped by eight percentage points between 1995 and 2004, rural poverty dropped by 12 percentage points), income poverty across different communities remains unequal (UNDP 2009). Poverty reduction has also been highly unequal between different social groups. Poverty was lower among Newars and Brahman/Chhetri (14% and 18%) compared to Muslims and Dalits (41% and 46%) (Figure 7), while the national average was 31% (DFID and WB, 2006).

Land ownership reduces the probability of being poor in rural areas, a pattern that has remained unchanged over the years. Poverty incidence among households owning 0.2 hectares or less land (a quarter of all rural households) is almost 40 percent and is roughly similar to that of households who own 0.2 to 1 ha (half of all rural households). The poverty headcount declined more for households with larger landholdings compared to the small landholders (Figure 8).

Income inequality

Despite the increase in average per capita incomes, income inequality has remained a major challenge. Inequality is stark by income groups, castes/ ethnicity and rural urban populations (Table 1, Figure 6 and 7).

Nepal has adopted a broad-based, inclusive and employment-centric development strategy as well as a progressive tax system to narrow down income inequality. However, the effectiveness of such programs remains limited. Remittances, irrespective of caste and ethnicity, have been major contributors to income of the poor in the past 10 years.

Figure 6: Gini coefficient

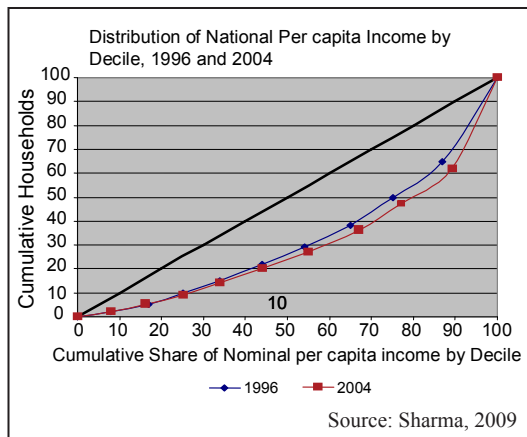


Figure 7: Poverty headcount rate

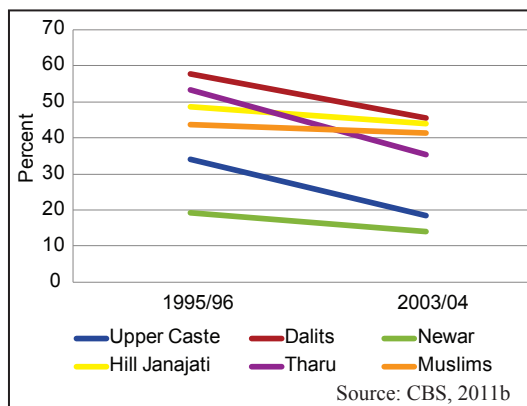


Figure 8: Poverty measurement by land ownership

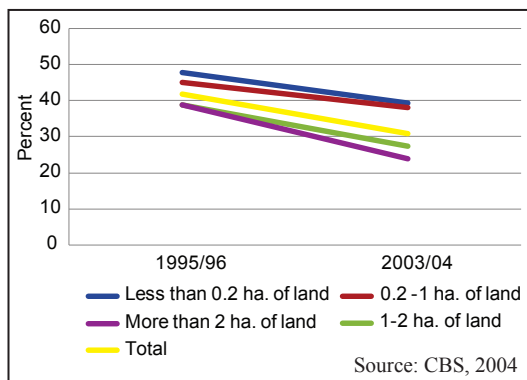
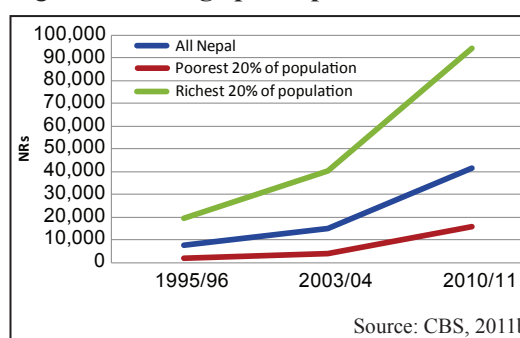


Table 1: **Per capita income over 1995/96 -2010/11**

Particulars	1995/96	2003/04	2010/11
Nominal average household income in NRs	43,732	80,111	202,374
Nominal average per capita income in NRs			
All Nepal	7,690	15,162	41,659
Poorest 20% of population	2,020	4,003	15,888
Richest 20% of population	19,325	40,486	94,149

Source: CBS, 1996; CBS, 2004; CBS, 2011b

Poverty in Nepal declined despite a dip in economic growth during the escalation of conflict in the first half of the decade. However, income inequality has widened and remained high (Figure 9). Growth in the agricultural sector, a source of livelihood for two thirds of the population, still faces problems of low public and private investment, non-remunerative prices, and poor access to credit. The decade-long conflict had a negative impact on the government's fiscal position. There was a sharp rise in defense spending and an increase in recurrent expenditure. Although government expenditure on social services was maintained during the conflict, increased defense spending resulted in lower spending on economic services and infrastructure. Tax reform has led to a situation where indirect taxes (such as customs duties and value added tax) have increased faster than direct taxes. The falling share of direct taxes did not contribute to lowering inequality.

Figure 9: **Average per capita income**

Remittance

Remittances from Nepali workers abroad have remained the second largest source of income after agriculture. A few studies have suggested that income growth from remittances is one of the key drivers of poverty reduction (DFID and WB, 2006; Hoermann and Kollmar, 2009; Lokshin and Glinskaya, 2009), especially in urban areas. Lokshin and Glinskaya (Ibid.) estimated that up to 20 percent of the poverty decline witnessed during 1995/96-2003/04 could be attributed to remittance inflows. The World Bank estimated that poverty would have declined by 7.1 percentage points instead of the observed 11 percentage points if remittances had remained unchanged between 1995-96 and 2003-04 (DFID and WB, 2006).

Remittances helped maintain macroeconomic stability during the conflict and contributed to growth. Remittance has also contributed to increase per capita income (Figure 10). The amount of remittance received in Nepal increased from NRs 13 billion 1995/96 to NRs 259 billion in

2010/11 (CBS, 2011b); 82 percent of the remittance goes to consumption and only two percent for capital formation (Figure 11).

The percentage of households receiving remittances increased from 23.4 percent in 1995/96 to 55.8 percent in 2010/11. Among the overseas workers, those relatively better off in terms of resources, skill and information earned more than the unskilled workers. Although remittances have helped to reduce poverty, the differences in earnings also contributed to widening inequality. The government devised the Labor and Employment Policy 2005, following the guidance in the Tenth Plan/PRSP. It also has special regulations – the Foreign Employment Act 2007 and Regulations 2008 – to regulate and streamline the labor and employment sector, to protect employee rights, and provide them security. A Labor Desk has been set up at the international airport to help outgoing migrants and diplomatic relationship with the destination countries has been strengthened.

Energy and transport

Energy: Despite its huge hydro potential, Nepal has one of the world’s lowest rates of per capita electricity consumption, averaging at 80 kWh annually. Of total energy, traditional sources account for 87.1 percent, commercial sources for 12.2 percent and renewable sources for 0.7 percent. A little more than half (56.1%) of all households have access to electricity for lighting, whereas 33 percent still depend on gas/oil/kerosene. Urban areas have greater access to electricity for lighting than rural areas (93.1% compared to 48.5%) (CBS, 2009a).

Cooking and heating are the main household uses of energy. More than two thirds (68.4%) of the households use firewood for cooking, followed by LPG (12.3%), dung (10.7%), biogas (2.4%) and kerosene (1.4%). LPG is the main source of fuel for cooking in urban areas (51.8%). Firewood is the main cooking fuel in the Mountains (87.9%), followed by the Hills (76.2%) and the Tarai (58.3%). In the Tarai region, dung is used by 21.3 percent households (CBS, 2009a).

Figure 10: Per capita income and per capita remittance

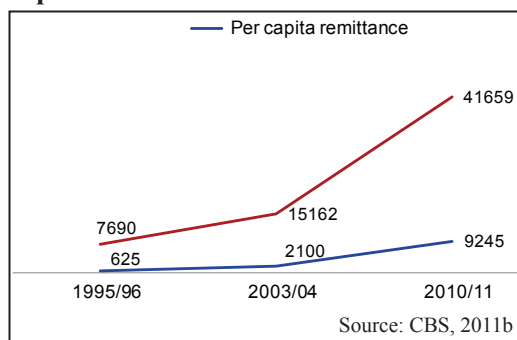
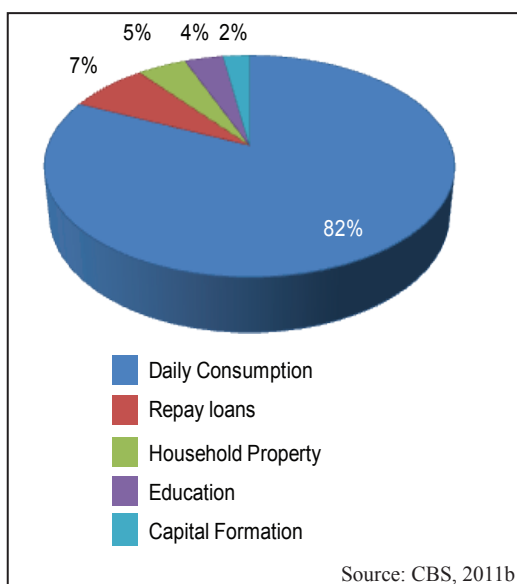


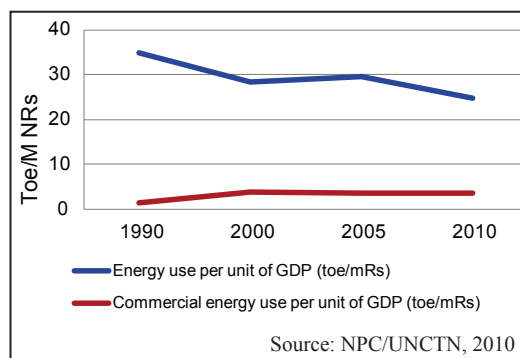
Figure 11: Use of remittance income



Energy intensity is a measure of the energy efficiency of a nation’s economy. It is calculated as units of energy per unit of GDP. High energy intensity indicates a high cost of converting energy into GDP and low energy intensity indicates a lower cost. The overall energy intensity is declining, whereas the energy intensity for commercial energy is increasing (Figure 12)

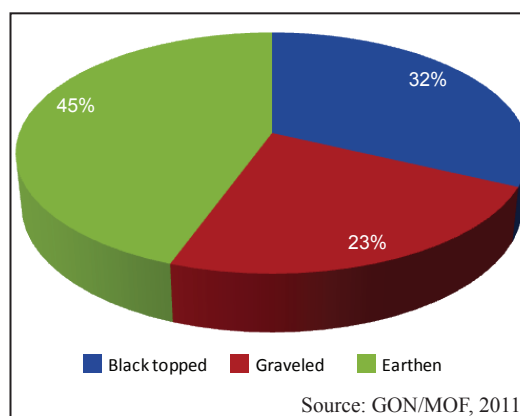
Nepal has formulated various policies and strategies to create an enabling environment for generating and expanding energy services using hydropower and other renewable resources. The Water Resources Act 1992, Water Resources Strategy 2002 and National Water Plan 2005, the Task Force Reports for Generating 10,000 MW Hydropower in 10 Years and 25,000 MW Hydropower in 20 Years are some of those policies and plans.

Figure 12: Energy intensity



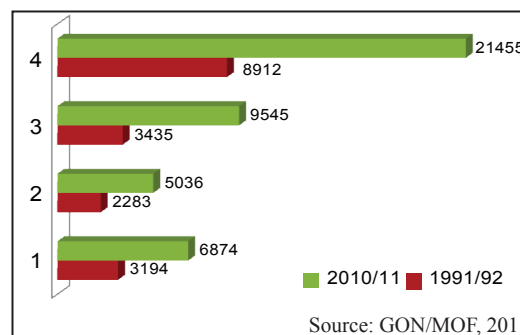
The Approach Paper for the TYP contains strategies and working policies for the development, transmission and distribution of energy. The strategy focuses on public–private partnership for developing hydropower, renewable energy and transmission lines, particularly climate change-friendly development. Further, it has also proposed a policy to promote ‘people’s hydropower’ under local governments.

Figure 13: Road infrastructure in Nepal



Transport: Transport is a basic requirement for socio-economic development. A review of progress in road building shows that the road network has expanded in last 20 year but the pace has been slow. Owing to the difficult terrain and geography, it is not easy to build roads in the Hill and Mountain regions. Nepal has 21,455 km of roads (Figure 13), including about 7,500 km of district roads and 2,500 km of urban roads (Figure 14). Only 32% of the roads are blacktopped, the remainder is gravel (23%) and earthen (45%) (NPC, 2011) (Figure 13).

Figure 14: Status of road infrastructure in 1992 and 2011



The TYP Approach Paper indicates that more than 25,000 km of road tracks have been opened. According to the Rural Road Maintenance Plan 2009 and the Rural Transport Infrastructure Sector-wide Approach (RTI SWAp) Paper, Nepal has about 14,293 km of maintainable local roads – paved (3%), graveled (19%) and earthen (78%). About 56 percent of the roads can be used around the year and 44 percent only in the dry season.

Seventy-one of Nepal's 75 districts are connected to the strategic road network. Nepal has 2,500 km of urban roads. Each kilometer of public road serves about 890 people. Likewise each km of the strategic road network, including district and urban roads, serves 1,310 people. In addition, there are about 12,000 km of trails and 4,100 trail bridges that serve about 12 million rural residents.

The Department of Road's Priority Investment Plan II 2007–2016 (PIP II) indicates that about 39 percent of people in the Hills and Mountains are more than a four-hour walk away from the nearest all-weather road; in the plains (Terai) about 13 percent are located within a two-hour walk from an all-weather road, 10 percent of the plains population is beyond the two-hour limit. In extreme cases in the High Himalayas and Mountains, even today it can take up to 13 days to walk to the nearest road-head.

The number of motor vehicles has also increased. The total number of vehicles increased from 75,141 in 1990 to 290,644 in 2000/2001 and 1,127,591 in 2010/11. Two wheelers (motor cycles, 75%) outnumber other vehicles followed by light vehicles such as cars, jeeps, and vans (11%).

The important government programs that seek to increase access in rural areas are: Rural Access Improvement and Decentralization Project, Rural Roads Reconstruction and Rehabilitation Support Program, District Road Support Program, Rural Community Infrastructure Works Program, Decentralized Rural Infrastructure and Livelihood Improvement Project, Rural Access Program Phase II, Suspension Bridge, Sector-wise and Local Level Road Bridge Program, Community Access Improvement Program, and the Local Infrastructure Development for Livelihood Improvement Project.

The integration of environmental concerns in transport management is a major highlight of the National Transport Policy 2001. The policy gives highest priority to promoting electric vehicles. The proper maintenance of roads, equalization of traffic density within the capacity of roads, preference for mass transport, compliance with environmental requirements, and operating public transport on a competitive basis are some other policy highlights. The project on Air Quality Management of Kathmandu Valley is focusing on promoting electric vehicles, reviewing vehicle emission standards and the monitoring mechanism. The Department of Transport Management is assessing the carrying capacity of Kathmandu Valley roads, and developing a Computerized Information System.

Tourism

The aim of sustainable tourism is to make a low impact on the environment and local culture, while helping to generate employment for local people. It seeks to ensure that development brings a positive experience for local people, tourism companies and the tourists. Increasingly, destinations and tourism operators are endorsing and following “responsible tourism” as a pathway towards sustainable tourism. Both responsible tourism and sustainable tourism have one identical goal, that of sustainable development through environmental integrity, social justice and economic development.

The vision of Nepali tourism is establishing the Nepal Tourism Board as the leading organization championing the best and innovative practices of destination marketing and development, and eco-tourism. Its goal is to make Nepal the number one mountain tourism destination in the world and to maximize benefits by developing the country as a premier holiday destination following the spirit of inclusiveness and sustainable tourism for greater harmony, and equitable income distribution.

The major environmental problems associated with tourism are more or less confined to adventure. Increasing numbers of trekking/mountaineering tourists, and their concentration in specific areas, have exerted pressure on mountain forests. Some other adverse impacts are inadequate disposal of solid wastes and increasing contamination of drinking water. There have also been some adverse social and cultural influences (Nepal’s National Report on UNCED, 1992). Attempts are being made to minimize the adverse impacts through education, occasional mountain clean up campaigns, providing alternative sources of energy and enforcing the provisions of the Tourism Act 1978.

Social pillar

Social inclusion gained prominence in public discourse and state policies after it was incorporated as one of the four pillars of Poverty Reduction Strategy Paper – also Nepal’s Tenth Plan. However, it was only after the People’s Movement-II of 2006 that social inclusion became a focus of the national discourse. Various social movements have emerged, giving rise to representative groups of excluded and marginalized people (Madhesi, Dalits, Janajati or Indigenous Peoples, Women, Third Gender, etc.). The political response has been immediate and systematic attempts have been made to inject Gender Equality and Social Inclusion (GESI) principles into policy making. One example is setting aside 50 percent seats in parliament for candidates elected through proportional representation in Nepal’s mixed electoral system. The following section reviews the commitments and actions that relate to the social pillar.

The Plan of Action of Agenda 21 reinforces the social commitments in the Rio Declaration. The social agenda includes combating poverty, reducing inequality, providing health and education facilities, improving access to resources and credit and participation in decision-making process of the Major Groups of Rio+20.

National laws, policies, plans and programs

Nepal has developed several progressive and innovative laws, policies and plans on sustainable development. The periodic plans, Interim Constitution 2007, sector policies, programs and service delivery mechanisms reflect the government's commitment to sustainable development. Multi-stakeholder, participatory and consultative approaches were adopted to prepare these documents, particularly for those prepared after 2006. The Interim Constitution and the TYIP (2007-2010) were prepared following consultations among diverse stakeholders. The policies promote the institutionalization of an inclusive and democratic local governance system, maximizing people's participation based on decentralization, devolution of power, and equitable distribution of resources.

The Interim Constitution 2007 addresses social development through devolution, decentralization, gender equality and social inclusion. It guarantees social justice and affirmative action for the marginalized and socially excluded groups (women, Dalits, Janajatis, Muslims, the Madhesi community, the transgender group, the disabled and other excluded or disadvantaged groups). It has also recognized the right to food security and sovereignty as a basic human right, although this is yet to be endorsed with appropriate legislation.

The government and the development partners have conducted several studies and assessments on sustainable development in Nepal. The Nepal Capacity Self Assessment Report and Action Plan (2008) highlight the capacity development needs for effectively implementing the Rio commitments. However, this document is very weak from the social development perspective. The Gender and Social Exclusion Assessment (GSEA) (Volume I and II) (jointly carried out by the DFID, ADB and World Bank) is a landmark document in terms of data, analysis and information on gender and social inclusion.

The TYP (2010/11-2012/13) has stressed inclusion, and makes the state's role more prominent than before. The main objective of the TYP is to reduce existing inequality and poverty by increasing dignified and profitable employment through the expansion of inclusive, productive and targeted programs. It emphasizes increasing production and productivity of agriculture and livestock for improving the social and economic status of rural residents.

Nepal has progressive sectoral policies on social development. However, the effectiveness of these policies varies across sectors. All sectoral policies seek to enhance access and equity issues, and have provisions to target women, the poor and excluded groups. All sectors have designated gender focal points and some sectors such as forestry, agriculture, health, and local development have developed their own Gender Equality and Social Inclusion (GESI) strategies. The Sector-Wide Approach has been adopted by the health, education and transportation sectors, and this has helped in fostering donor harmonization, and for focusing on gender and social inclusion issues. The Ministry of Finance has formed a Gender-Responsive Budgeting (GRB) committee.

Various studies and assessments including the Nepal Human Development Report (2009), Nepal Millennium Development Goals Progress Report 2010 and Nepal Living Standard Survey (NLSS III) (2011) document the progress made in the social sectors, mainly health and education, and in bringing the social inclusion agenda in the center of national debate. Nepal today is better positioned than ever before to make rapid progress towards gender equality and social inclusion. The increased levels of awareness among citizens about their rights, progressive policies and strategies, and the large number of groups representing different interest groups, are powerful forces that can change attitudes and accelerate GESI.

Nepal has crossed the first barrier towards addressing gender and social inclusion through progressive policies, plans and strategies. However, the challenge is to translate these policies and plans into action. Nepal is a heterogeneous society with different ethnic, caste, culture and language groups. Addressing these issues would require changing the attitudes of state structures and service providers; capacity, resources, delivery mechanisms, and mechanisms for effective representation and participation of women and other excluded groups.

The progress in social inclusion has been uneven. Women and men particularly from socially excluded groups and from remote areas lag behind in terms of access to assets/resources for livelihood improvement, voice, and effective representation in key national and local level institutions, and processes that influence decisions for their development.

Hunger and income opportunities

There has been significant progress in poverty reduction. The government has increased the budget for targeted social programs, for the poor, women, and people from disadvantaged castes and ethnic groups. Special grants have been made for the improvement of child nutrition in the Karnali region and other marginalized areas. However, the analysis of hunger shows that the progress is still very slow. The number of underweight children below five is still 38.6 percent and 39 percent of children do not meet the expected growth levels. Likewise, 36.15 percent of the population (the poor and geographically and socially excluded groups) is still deprived of the minimum food requirement, and about 47 percent children under five years of age are stunted (NPC/UNCTN, 2010).

Further, 38.8 percent of the people are either unemployed or underemployed and there is disparity in wages of men and women. Fully employed men are paid an average of NRs 5,721 per month and women are paid an average NRs 3,402 (NPC/UNDP, 2010). Micro-enterprises have become an important way for the poor and excluded groups to build assets. Overall, outcomes of microcredit include improved individual and household wellbeing, better nutrition and increased education of children (MEDEP, 2010). The government and its development partners have made some innovative interventions in creating rural employment through vocational skills-enhancement training, entrepreneurship development programs, credit inputs, micro-enterprise development programs, technology and market linkages, etc. Some examples: the Poverty Alleviation Fund (PAF) that channels funds directly to the local level; Microenterprise

Development Programme (MEDEP), which has gained good experiences in sustainably using natural resources for income generation; the Livelihood Forestry Program (LFP), Nepal Swiss Community Forestry Program, Terai Arc Landscape Program, etc. are initiatives that have made efforts to link natural resource conservation with livelihood improvement.

Access to health services

The health sector has been successful in addressing the needs of the poor, women and excluded groups through pro-poor and targeted free health-care policies and programs. The Aama (Mother) program addresses maternal health issues. The average life expectancy of Nepalis is 59.8 years (60.9 years for males and 59.8 years for females). Between 1995 and 2009 infant mortality rate (IMR) has declined from 64 deaths per 1,000 live births in 2001 to 41 in 2008. Likewise, the under-five mortality rate (U5MR) has dropped from 91 deaths per 1,000 live births in 2001 to 50 in 2009. The Maternal Mortality Rate (MMR) decreased by 32 percent from 415 deaths per 100,000 live births in 2000 to 229 in 2008 (NPC 2010). The percentage of births attended by a skilled attendant rose from seven percent in 1990 to 28.8 percent in 2010. However, despite these achievements, about six Nepali women die every day from maternal causes and the rate remains one of the highest in the world (DFID, ADB and WB, 2010).

Further, the successes in the health sector are not uniform across gender, and caste, ethnicity and location. Wide disparities persist both in the process and outcome indicators. The national average for the U5MR was 50 deaths per 1000 live births, but it was 171.2 for Dalits (formerly 'untouchable' caste group); IMR for Brahmin (the so-called 'high' caste group) was 52.5 per 1000 live births and 133 for Dalits. Similarly, the average life expectancy for Dalits was 50.3 years and even worse, 42 years for Dalit women, whereas for Brahmin women it was 60.1 years. Overall, HIV infection in adults aged 15-49 years seems to be declining from 70,000 in 2005 to 64,585 in 2007. The government supplies materials for HIV-positive people for use in treatment, prevention, and care, thus improving the capacity of public and private institutions in delivering quality services (NPC/UNCTN 2010). However, these services are inadequate and not easily accessible to the poor, and people from excluded groups and in remote rural areas. Access is constrained by distance, high costs, social/power relations and language barriers. HIV infection also has strong linkages with migration. Women have become vulnerable to HIV infections as a consequence of high male migration, especially in Nepal's Far and Mid-western regions where the men migrate seasonally for work in India.

Access to water and sanitation

The number of households with access to safe drinking water has increased to 83 percent from 70.4 percent since 1995/96 (CBS, 2011b). Social and poverty mapping has helped to promote and ensure equitable access to Water Supply and Sanitation (WSS) facilities. The affirmative action policies and efforts by projects/programs such as the Rural Water Supply and Sanitation Fund Development Board (RWSSFBD), Community Based Water Supply and Sanitation Programme

(CBWSSP), Small Town Water Supply and Sanitation Sector Project (STWSSSP) and Nepal Water for Health (NEWAH) have assisted women, the poor and excluded groups to access the services, including paid jobs and training opportunities (DFID, ADB and WB, 2010).

The access to improved drinking water and improved sanitation facilities, such as toilets, vary across social groups and urban and rural areas. The Department of Water Supply and Sewerage database shows that the national average for households using improved water sources is 80 percent, but the usage among urban households is 94 percent and it is 78 percent in rural households. Further, 78 percent of the urban households have toilets against 37 percent for rural households. Almost half of Nepal's population still defecates in the open. Access to sanitation in the richest quintile is about 80 percent, while that for the poorest quintile is only 10 percent (UNICEF 2006 in DFID, ADB, WB 2010). Similarly, access to sanitation for Newars, a social group, is 72 percent compared to only five percent for Madhesi Dalits (Bennett, 2006).

Access to education

Overall, Nepal has made significant improvements in education through progressive policies and programs. For example, policies such as free primary education, strengthening decentralized management; building data-collection systems – a user-friendly system for collecting disaggregated data on gender, Dalits, and other excluded groups – scholarships (financial) and in-kind (uniforms, textbooks, meals and oil), support for girls and students from poor and marginalized groups, social mobilization and advocacy campaigns, Community Managed Information System (CMIS), social audits, including social mapping – to increase opportunities for civil society to monitor the activities of the School Management Committees and Department of Education – have all contributed to the improvements.

The net enrolment rate (NER) has increased from 64.0% in 1990 to 93.7% in 2010; students who start in grade 1 and reach grade 5 increased from 38% in 1990 to 77.9% in 2010 and literacy rate of 15-24 year olds, increased from 46.6% in 1990 to 86.5% in 2010 (NPC/UNCTN, 2010). The overall literacy rate among 15-24 year olds (formal and non-formal) has increased from 79.4 percent in 2005 (MOHP, 2006) to 86.5 percent in 2010 (NPC/UNCTN, 2010). These improvements, however, are not uniform across the region, caste, ethnicity and gender (UNDP-Nepal, 2009). For example, the NER of the richest quintile was 87 percent while that of the poorest group was 51 percent in primary school; the enrolment of girls (including Dalits, other excluded caste and ethnic groups) at all levels has improved, but the rates are significantly higher for males than females in all age groups (53.1% for females over five years, compared to 74.7% for males of same age). The Tarai Madhesh has much lower levels of education – except for the Madhesi Brahmin/Chhetri, whose men and women have the highest education attainment compared to other groups. The largest gender gaps in literacy exist in the Tarai/Madhesh region (DFID, ADB and WB, 2010).

ILO 169

ILO 169 (2007) has been well received in Nepal. However, its application has been slow mainly due to confusions on the implications for both indigenous people and the general population. Sufficient detailed work on the implications of the Convention on agriculture, and practical steps for application are yet to be developed, and provided as Ministry guidance to all stakeholders (DFID, ADB and WB, 2010). The implementation of the ILO 169 has been slow in terms of promoting the rights of the indigenous peoples to resources. Nepal's accountability to the convention has thus remained weak. Even after four years after ratification, the government has not submitted its country report to the ILO 169 secretariat. A draft indigenous peoples strategy paper that proposes detailed steps of application as a guidance document for implementing the ILO 169 remains to be approved by the government.

Access to forest and bio-diversity resources

Progress in the forestry sector varies according to the different management systems, such as those a) directly administered and protected by government agencies, government-managed and protected forests, and b) those managed by community or user groups such as the community, leasehold and religious forests. Among these management systems, community forestry, which covers 31.62 percent of forest area (4.27 million ha.) (GON/MOF, 2011), is the most decentralized and relatively more successful in terms of social development. Other community-managed forests – buffer zone and leasehold – are slowly becoming pro-poor and people-centered. A study suggests that community forestry mobilizes about NRs 800 million annually in various social development activities (Ojha et al. 2009). In most of donor-supported districts, community forests have contributed to reducing poverty. For example, in the seven districts, where the DFID-funded LFP is being implemented, average annual household incomes had increased by 61 percent in 2008. The highest increase has occurred for Dalits (93%), indicating that forestry has a high potential to contribute towards reducing poverty and inequality.

Another major achievement in community-managed forests is the contribution towards building a strong civil society and the development of new partnerships between government and NGOs. This process has led to clarification and demarcation of the roles of different stakeholders: government staff as regulators, service providers and enablers and NGO/CBOs as facilitators of voice of the poor and the excluded, and a mechanism for making government accountable. There has been an improvement in access to resources and services for interventions aimed at overcoming locational exclusion related issues in the Terai region.

Despite innovations and successes, the progress in community forestry is still not fully inclusive and participatory. Different studies show that the policies and operational processes still have elements that contribute to exclusion. The government and its partners view social issues in forestry from a technocratic point of view and that has limited focus beyond participation, resulting in lower priority to the analysis of social, institutional and power issues (Khadka, 2009). Change in the institutional dynamics, and not just policies, programs and strategies, is necessary to make community forestry truly participatory and inclusive.

Migration and its social implications

Migration for work in foreign countries has helped improve the economy. Remittances have provided more money to families particularly for spending on health and education. In Nepal, more men migrate compared to women triggering social and economic changes, particularly for women. With more men migrating agriculture has largely become feminized. One study (SDC 2011-unpublished) suggests that the absence of men has given women more freedom whereas in some cases the mobility of women has been restricted. In remote villages of Khotang district, men migrating to Saudi Arabia want their women to stay at home and not be involved in agriculture and other social activities. They feel that with the remittance money workers send, the women should stop working – and often control the activities of women through mobile phones. Rural women with low education and very limited skills have also begun migrating for work outside the country, particularly to the Arab States to work as domestic help. These women are exposed to vulnerabilities, such as harsh working conditions, sexual harassment, and inadequate legal protection. They also have low knowledge about their destination countries. There is therefore a need for strengthening laws and mechanisms to protect the migrant workers, particularly rural women.

Gender and social inclusion mechanisms

Nepal has established mechanisms to address poverty, gender equality and social exclusion at the national and local levels.

National level mechanisms: At the national level the Social Development Division within the National Planning Commission (NPC), and the Gender Equality and Environment Division within the Development Division of NPC are responsible for addressing gender and social inclusion in plans and policies. The Ministry of Women, Children and Social Welfare (MWCSW) has Women Development Offices in 75 districts. Similarly, the Ministry of Local Development has a Dalit and an Adivasi Janajati (indigenous people) coordination committee. Nepal also has institutions such as the National Dalit Commission, National Women’s Commission and National Foundation for the Development of Indigenous Nationalities (NFDIN). The NPC and all ministries and their departments have Gender Focal Points (GFPs). The government has also introduced new provisions that require Community Forestry User Committees to have 50 percent women (there also are representation requirements for Dalits and indigenous peoples) members.

District level mechanisms: At the district level, besides the Women Development Office there is also a Social Development Office within the District Development Committee. There also are various watchdog committees such as the District Coordination Committee for indigenous people and Dalits, with representation from political parties. The Gender Mainstreaming Coordination Committee (GMCC), under the Women Development Office (WDO), is tasked with monitoring and coordinating district-level gender work. At the VDC level there is the Integrated Planning Committee (IPC) and Citizens’ Forum. The Local Self-Governance Act (LSGA), 1999 empowers

local bodies and has made them accountable, particularly for local development. It requires local bodies to formulate plans with active involvement and participation of local people, focusing on the special needs of the poor. It also requires 20 percent representation of women on village and ward-level development committees. However, the LSGA provisions do not address issues of inequity and vulnerability caused by gender, caste or ethnicity (DFID, ADB, WB, 2010).

Non-governmental mechanisms: In addition to government mechanisms, Nepal also has several federations and social/interest groups at national, district and local levels such as the Federation of Community Forest User Groups Nepal (FECOFUN), HIMAWANTI (grassroots women's network), local level women/mothers' groups, saving and credit groups, water users groups, etc. However, these groups have not been very effective for lack of authority, absence of any institutional linkages between their gender and social inclusion mandates and the work at government ministries, and also for lack of specific programs or resources for gender equality and social inclusion-related work (DFID, ADB and WB, 2010).

Progress towards the MDGs

The Millennium Summit (2000) brought the international community together to agree on a common set of development targets grouped under the MDGs. The MDGs focus primarily on the social pillar of sustainable development, particularly education, maternal health and access to basic services.

Despite the political instability, Nepal has already attained some MDG targets for 2015 – the population using improved drinking water sources (80% against the target of 73%) and under-five mortality rate per 1,000 live births (50 against the target of 54). The targeted ratio of girls to boys at the primary level has also already been met (NPC/UNCTN, 2010). Nepal is also close to attaining some other targets by 2015, e.g., proportion of the population living on less than US\$ 1 per day (PPP), proportion of population below national poverty line (%), net enrolment rate in primary education, ratio of girls to boys at secondary level, maternal mortality ratio (per 100,000 live births), and death rate associated with tuberculosis (TB) (per 100,000 of population).

Some targets would be very difficult for Nepal to achieve by 2015. These include those relating to the proportion of the population below the minimum level of dietary energy consumption, proportion of underweight children aged 6–59 months (> -2 SD), proportion of stunted children aged 6–59 months (> -2 SD), survival rate to Grade 5, literacy rate for 15–24 year olds, proportion of births attended by skilled birth attendant, universal access to reproductive health, and proportion of the population using improved sanitation facilities. Overall, Nepal is likely to achieve six out of the eight MDGs by 2015. However, much efforts will be required to create an environment needed for achieving full employment, and the climate change and HIV/AIDS related goals. There are, however, issues related to quality of services, and inclusiveness; maintaining the achievements would also require continuous attention to prevent possible reversal and rollback.

Environmental pillar

Nepal's environmental policies and programs have generally aimed at making a good match between economic development and conservation. Nepal is a signatory to more than 20 environment related international conventions and agreements including the UN Convention on Biological Diversity (CBD), 1992, the UN Convention on Combating Desertification (UNCCD), 1994 and UN Framework Convention on Climate Change (UNFCCC), 1992 and the Kyoto Protocol, 1997.

Principle 25 of the Rio Declaration stresses that peace, development and environmental protection, are interdependent and indivisible. Its key commitments include integration of environment and development in decision making, effective legislation and institutions to pursue sustainable development, environmental impact assessment of development projects, provision to make polluters pay for costs of clean up, recognition of the role of women, youth, indigenous and local people in environmental management and development, and application of a precautionary approach to environmental decision making. It requires states to reduce and eliminate unsustainable patterns of production and consumption, and to promote appropriate demographic policies to achieve sustainable development and a higher quality of life for all people (Principle 8). Agenda 21 has 40 Chapters, about a third of them deal with 'conservation of resources for development'. More specifically, chapters 9, 10, 11, 12, 13, 15 and 18 recommend programs and plan of actions related to the protection of the atmosphere, planning and management of land resources, combating deforestation, managing fragile ecosystems, sustainable mountain development, conservation of biological diversity, and protection of the quality and supply of freshwater resources, respectively.

The most important achievement of the UN Convention on Environment and Development 1992 was the near universal agreement on CBD, the first global pact committing to conserve biodiversity, achieving sustainable use and fair and equitable benefit sharing through community participation in management. Since its adoption in 1992, the Convention has been serving as a blueprint for national conservation actions.

The UNCCD aims to forge a global partnership to reverse and prevent desertification/land degradation and to mitigate the effects of drought to support poverty reduction and environmental sustainability. The "strategic objectives" set by the UNCCD for the period from 2008 to 2018 are i) to improve the living conditions of affected populations, ii) to improve the condition of affected ecosystems, iii) to generate global benefits through effective implementation of the UNCCD, and iv) to mobilize resources to support implementation of the Convention through effective partnerships between national and international actors.

The UNFCCC recognizes that climate change is an urgent and potentially irreversible threat to human societies and the planet and requires all Parties to address it urgently (Decision 1/COP.16). It requires Parties to enact effective environmental laws to protect the climate system for the

benefit of present and future generations (UNFCCC Article 3/3). If necessary, the Parties are required to take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects to human livelihood and ecosystem services (UNFCCC Article 3/1). They are also required to take climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions, and employ appropriate methods for minimizing adverse effects on climate (UNFCCC Article 4/f). Additionally, as a signatory to the Convention and a non-Annex I member, Nepal is required to follow various commitments made at the Conference of Parties (COPs) to address climate change.

In early 2011, Nepal announced its climate change policy and has begun implementing the most urgent and immediately needed actions under the NAPA. The NAPA requires more than 80 percent of the climate change related program funds to be channeled through local agencies for activities that are implemented under local leadership and community-based management based on the Local Adaptation Plan of Action (LAPA). Nepal is among the few pioneer countries to promote a clean and renewable energy path for low carbon emissions.

Realizing that the Himalayan mountains are being disproportionately affected by climate change, Nepal has launched a Mountain Initiative to make the global community aware of the impacts for ensuring increased attention and concrete adaptation and mitigation actions for alleviating the risks and vulnerability of mountain ecosystems. Nepal has agreed to the Cancun Adaptation Framework and advocates a country-led process in instruments such as REDD+ and CDM.

The CBD, state policies and development plans

Nepal has been an active and committed member of all international environmental movements and has remained mindful about the adoption of its commitments. Since 1992, various conventions and MEAs have guided the national development efforts. The Interim Constitution of Nepal 2007 recognizes ‘right to live in clean environment’ as a fundamental right and also embraces three CBD provisions. It states, “The State shall make necessary arrangements to maintain a clean environment. The State shall give priority to the protection of the environment, and also to the prevention to its further damage due to physical development activities by increasing the awareness of the general public about environmental cleanliness, and the State shall also make arrangements for the special protection of the environment and the rare wildlife. Provision shall be made for the protection of the forest, vegetation and biodiversity, its sustainable use and for equitable distribution of the benefit derived from it” (Chapter 4/35-5).

The Eight Plan (1992-1997) stressed increasing agriculture and forest productivity through efficient use of available resources and the importance of maintaining the sustainability of production processes in order to safeguard the rights of future generations to natural resources. In line with the CBD and the Agenda 21, the Ninth Plan (1998-2002) stressed environmental protection and promotion through voluntary or participatory techniques, collaborations of government organizations, local bodies, NGOs, user groups and the private sector, and by creating awareness to position environment protection as individual concern and common

responsibility. Likewise, the Tenth Plan (2002-2007) gave special attention to environmental protection and pollution control, while developing infrastructures and using natural resources for economic growth. The TYIP (2007/08-2009/10) and the TYP (2010/11-2012/13) indicate greater responsiveness to global environmental conventions and commitments. The TYIP stressed implementation of commitments and the TYP recognizes the direct link between environmental sustainability, living standards and the economic growth. The plan commits resources to priority areas that support broad-based, inclusive and sustainable development and also stresses the need for an integrated environmental policy and the integration of environmental conservation in socio-economic development policy and programs.

One priority of the TYP is to minimize the impacts of climate change. Accordingly, the government will encourage the concept of green development to minimize activities that contribute to climate change, and for reducing the negative impacts on human wellbeing.

Nepal has formed various institutions – National Council for the Conservation of Natural and Cultural Resources (NCCNCR) (1989), the Environment Protection Council (EPC) (1992), National Commission on Sustainable Development (NCSDD) (2002) and Climate Change Council (CCC) (2009) – to coordinate the implementation of various international commitments. The incorporation of the strategic directions provided by the commitments and decisions of the high level committees can be observed in subsequent five-year plans and the policies and programs.

CBD and the key environmental sectors

Various sectoral and cross-sectoral policies and strategies have been introduced to facilitate the implementation of environmental conventions. The policies and strategies designed to implement various provisions of the CBD, UNCCD and UNFCCC are broadly clustered into four sectors/themes for analysis.

Forest, biodiversity and watershed

The government's forestry agencies are responsible for managing forests, watersheds and protected areas. The Ministry of Forests and Soil Conservation, as national CBD focal point, has been pursuing policies and strategies for implementing the commitments. The Nepal Biodiversity Strategy (NBS), Nepal Biodiversity Strategy Implementation Plan (2006-2010), National Bio-safety Framework (2007), Forestry Sector Policy (2000), Herbs and Non-Timber Forest, Products Policy (2006), National Wetland Policy, 2003, Water Resource Strategy-Nepal, 2002, etc. are some key policy instruments. Besides, the NAPA stresses forests and biodiversity conservation at the watershed and landscape levels.

Some of the main strategies of forestry agencies to address CBD commitments are as follows:

- Aim at maintaining 40 percent of the national territory under forest cover
- Promoting decentralization, devolution, participatory and rights-based approach to forestry management and biodiversity conservation.

- Promoting ecosystem-based management approach to biodiversity conservation
- Conserving important watersheds for agriculture and hydroelectricity development
- Implementing Buffer Zone management policy to share conservation benefits with local communities and for expanding conservation beyond protected areas
- Promoting forest/green enterprises to reduce rural poverty
- Expanding protected areas to protect endangered and rare species and to increase ecological representations under protected areas. Nepal has already surpassed the 2020 biodiversity target for protected area coverage by bringing more than 23% of national territory under protected areas
- Implementing diverse resource governance regimes. Nepal has been implementing at least four types of protected area governance systems: protected areas with Buffer Zone, NGO managed conservation area, community managed conservation and government managed conservation.
- Implementing species conservation action plans: One Horned Rhinoceros Conservation Action Plan (2006-2010), Tiger Conservation Action Plan (2008-2012), Snow Leopard Conservation Action Plan (2005-2015), Vulture Conservation Plan (2009-2013), etc., and
- Establishing Ramsar sites to ensure long-term conservation of wetland biodiversity and surrounding ecosystems

Besides Nepal has formed a National Tiger Conservation Committee chaired by the Prime Minister (2011) and has established a Forest and Climate Cell and initiated REDD+ initiatives. The country has also begun the bio-diversity registration program. It has also approved a National Bio-safety Framework and Policy, 2006 to protect bio-diversity and human health from the unfavorable impacts of imports, production and the use of genetically modified organisms (GMOs).

Environment and climate

Since the signing of the CBD in 1992, Nepal has been strengthening the institutional and legal frameworks for effective protection of biodiversity. After Rio 1992 Nepal established the Ministry of Environment and a high-level Environment Protection Council (EPC), and also enacted the Environment Protection Act, 1996 and the Environment Protection Regulations, 1997. Nepal has prepared and implemented guidelines on Environmental Impact Assessment (EIA) and Strategic Environmental Impact (SEA) for assessing the impact of all development projects.

In response to the growing climate change concerns, in 2009 Nepal formed a high level 25-member Climate Change Council chaired by the Prime Minister. A separate Climate Change Management Division was then established at the Ministry of Environment (GON/MoEnv). Further, there is a multi-stakeholder Climate Change Initiatives Coordination Committee (MCCICC) representing relevant ministries and institutions, I/NGOs, academia, private sector, and donors for coordinating climate change activities and collaborative programs.

Nepal has also prepared the National Adaptation Programme of Action (NAPA) and Local Adaptation Plans of Action (LAPAs) to address the requirements of the UNFCCC. The strategies and actions of the NAPA seek to increase community adaptive capacity through livelihoods support, improved environmental resource governance, collective responses, improved service delivery, and access to green technology and finance. It has also suggested a watershed and landscape-level approach for addressing issues related to biodiversity loss, water scarcity, food security, disease outbreak, disasters and governance.

Additionally, the NPC has begun climate-resilient planning. The country has adopted the Climate Change Policy-2011 that aims to improve livelihoods by mitigating and adapting to the adverse impacts of climate change, adopting a low-carbon emission-based socio-economic development path, and supporting and collaborating in the spirit of Nepal's national and international commitments related to climate change.

Agricultural biodiversity

Nepal has begun measures for agro-biodiversity conservation. The Nepal Biodiversity Strategy (NBS), 2002 has recognized agro-biodiversity and has suggested various strategies for better conservation and sustainable use. Conservation of agro-biodiversity has been identified as a key strategy for preserving, promoting and properly using resources, environment and biodiversity in the Agricultural Policy 2004. In order to promote conservation, the policy recommends judicious use of chemical fertilizers, pesticides and plant and animal growth stimulating hormones, promotion of compost fertilizer, establishment of a gene bank and in-situ conservation sites, agro-forestry in degraded lands, and community-based conservation farming to protect watershed and river banks. The Nepal Agro Biodiversity Policy 2007 considers agro-biodiversity as a backbone for sustainable development of agriculture, food security and poverty alleviation.

Besides broad strategies and policies, Nepal also has specific policies and measures for fulfilling the CBD commitments and other agreements related to agricultural biodiversity. Some of the key policy provisions are:

- Conserving agricultural bio-diversity through adaptation to global climate change.
- Registering agro-biodiversity and traditional knowledge, skill, technologies and farming practices to ensure equitable distribution of access and benefits of, agricultural genetic resources to local people.
- Considering agro-biodiversity conservation while conducting EIA for development projects.
- Making arrangements for control and/or prohibiting production of GMOs that could pose risks to biodiversity, environment and human health.
- Carrying out integrated pest control services to lower the adverse impacts of pesticides on environment and public health.
- Encouraging organic agriculture for long-term conservation, use of agro-biodiversity, and environmental sustainability.
- Declaring organic zones and encouraging organic cultivation of high value crops.

- Disseminating knowledge and skills to the local level for expanding organic cultivation
- Developing appropriate technology and infrastructure conserving and using indigenous knowledge and genetic/ natural resources, and
- Encouraging production based on agricultural bio-diversity and employment and income generating activities, and promoting market centers and entrepreneurship

Sustainable mountain development, land management and infrastructure development

Mountain development and sustainable land management are top priorities in Nepal because of its topography and high vulnerability to natural disasters. Government policies and plans related to forestry, water resources, land management, and infrastructure have been directly and indirectly linked to sustainable land use and management. Recent development plans stress the development of systematic mechanisms for effective co-ordination of agriculture, land reforms, irrigation, and forestry-related programs (NPC, 2007). In the same line, the NAPA also promotes integrated management of agriculture, water, forests, and biodiversity to combat impacts of climate change. The thrust of all policies has been on increasing productivity and resiliency of land – cropland, forest, range land, water/wetlands through sustainable use of natural resources and rehabilitation of degraded land thereby contributing to the CBD, UNFCCC and UNCCD commitments related to sustainable mountain development, mountain biodiversity, land degradation, and climate change.

One objective of the forestry sector has been to help maintain land fertility by preventing soil erosion and degradation of watershed areas. The biodiversity management initiatives underway are directly or indirectly contributing towards achieving the CBD COP-7 (Decision VII/27) purpose of program work on mountain biodiversity, and the CBD commitments on land degradation. The network of protected areas in the mountains and community-based forest management programs are some examples of such initiatives.

Various environment-friendly provisions in water resource and other infrastructure development sectors also contribute to Nepal’s global environmental commitments. For instance, the TYP (2007/08–2010/11) gave special emphasis to environment protection and promotion while implementing development, construction and service interventions in the public and private sectors. Government policies also stress environment friendly rural roads in the mountains to reduce landslides and soil erosion.

Nepal has been piloting REDD+ by establishing a REDD Cell at the Ministry of Forest and Soil Conservation. The cell is responsible for coordinating REDD readiness processes under Forest Carbon Partnership Facility (FCPF) and other REDD projects.

NGOs and other stakeholders

Some important NGOs that are directly and indirectly contributing in the implementation of global environmental conventions are the National Trust Nature Conservation (NTNC),

formally known as the King Mahendra Trust for Nature Conservation (KMTNC); Nepal Forum of Environmental Journalists (NEFEJ), and Local Initiatives for Biodiversity, Research and Development (LI-BIRD). The NTNC has been managing three conservation areas including Annapurna Conservation Area. There also are a few international NGOs active in implementing the global conservation commitments. These include World Wildlife Fund (WWF-US), International Union for Nature Conservation (IUCN), The Mountain Institute, Practical Action, CARE Nepal, etc. These organizations work through government agencies and also support local NGOs and CBOs in implementing conservation and sustainable development activities.

Challenges and Opportunities

Challenges

Gaps in building economic capacities

Policy and institutional gaps: Nepal's conservation policies have been designed at different levels of the government hierarchy and even though they have helped in environmental conservation and economic growth, there also are gaps that have hindered effective implementation. Some of the gaps include, a) the lack of a policy to identify the poor and for providing special facilities on the basis of the identity, b) the policy gaps for effectively addressing the emerging global challenges, c) the policy gap in the mechanism of benefit sharing between the state, developer and local communities on the use of local natural resources, and d) the occasional conflicts between policies and acts that tend to take a long time to resolve.

The institutional gaps include the lack of holistic and integrated approaches, limited sustainable development focus, lack of effective multi-stakeholder mechanisms and limited multi-stakeholders participation. Other issues are the focus on a top-down approach in implementation, lack of effective monitoring mechanisms, and weak inter-sectoral and interagency coordination. These gaps have delayed decision making, leading to poor implementation, lack of an enabling environment for private-sector participation, poor compliance to environmental and social safeguards in construction projects, inadequate devolution to local bodies as envisaged by decentralization policy, and inadequate resources (human and financial) and technology for effectively implementing the MEAs. This is more so in the case of MEAs related to species and ecosystem conservation, sustainable use and benefit sharing, and climate change.

The political instability in the country has prevented actions for narrowing down the policy gaps. Nepal has been trying to prepare a new constitution since 2008, which has also been delayed by instability. The inability of successive governments to hold local elections since May 2002 has also resulted in absence of elected local representation. These have resulted in poor governance and frequent transfers of government staffs, and weak law and order and the outcome has affected project implementation. The protracted political transition has also begun to strain the economy that has reported low growth throughout the period. The review of economic performance for the

purpose of this report suggests that conventional growth may not be the answer to the problems, and therefore the need to embrace the green growth path.

Gaps in gender and social inclusion

The gaps in gender and social inclusion are as follows.

Limited capabilities and opportunities to ensure benefits from commercialization of agriculture, forestry and energy resources: The constraints faced by women, the poor and excluded groups make it difficult or them to participate in business enterprises at the scale necessary for commercialisation.

Unfavourable policies for harvesting natural resources: The policies and mechanisms for harvesting natural resources, particularly non-timber forest products (NTFP) are not conducive for the poor, women and the excluded groups.

Ad-hoc implementation of micro-enterprises and income-generation activities: Most micro-enterprises and income generating activities are implemented as livelihood improvement components of larger rural development programs bringing no/minimal changes in incomes of targeted groups. Proper analysis and identification of products, markets, capacities, and investment in terms of technology, infrastructure, finances, etc. is lacking. As a result most programs make investments on short-term and ad-hoc enterprises/income-generation activities, which have higher operational costs and even result in waste of resources and duplication.

Right to natural resources: The right to, and ownership of natural resources, particularly forests, in Nepal's proposed federal structure is an emerging issue. This will have implications on people and groups directly dependent on natural resources, particularly indigenous people, and socially excluded groups. Though Nepal has ratified ILO 169, the policy framework and mechanisms on indigenous peoples' right over the natural resources remain unclear. This, if not addressed adequately, could result in conflicts.

Weak service delivery: Most of the well-intentioned policies, plans and programs have failed to reach and benefit women, and the excluded groups, particularly in remote areas. This is largely due to the weak service delivery mechanism and implementation.

Under-representation and inadequate participation: The under-representation and passive participation of women and the socially excluded groups in economic, political, and legal institutions both at national and local levels has resulted in deficits in power and voice, allowing many inequalities to go unchallenged.

Lack of system for collecting desegregated data and weak monitoring: Nepal does not have a sound system of collecting desegregated data from the GESI perspective to feed into policy

planning, and monitoring remains weak. Further, the understanding of GESI principles is also poor across state institutions at all levels.

Forest Carbon Trading: Nepal is in the process of preparing methodologies, mechanisms and programs for REDD. However, in a situation of unequal representation and participation within the forest user groups, and unsettled issues relating to indigenous people's rights over the natural resources, it could result in further exclusion and marginalization of women, the poor and members of excluded groups.

Gaps in maintaining environmental sustainability

Despite achievements, there still are challenges in the implementation of CBD and other conventions. There are gaps in the understanding and knowledge about the conventions among stakeholders, in terms of adequate enabling policies and institutional mechanisms to implement them, and in implementation capacity. These are reasons why Nepal – despite being a landlocked and mountainous LDC – has so far been unable to access benefits, particularly of international funds for sustainable development.

Gaps in awareness, knowledge and capacity: The government has no coherent strategy for communicating the importance of environmental conservation. Most of the in-service trainings are designed to plan and implement programs independently rather than in integrated ways resulting in a 'silo syndrome'. There also are problems within government ministries and agencies in translating MEAs into operational programs.

Gaps in policies and implementation mechanisms: Environmental issues do not receive as much priority in government for lack of inter-agency coordination (NPC, 2007). The National Capacity Self Assessment report has pointed out inadequate environmental integration and coordination of policies, programs, and plans as the single most important cause for inadequate implementation of international conventions (GON/MOEST, 2008). Another reason for weak implementation is inadequate investment in the environmental sectors.

Weak implementation: The government acknowledges that meaningful implementation of the Sustainable Development Agenda for Nepal (SDAN) has remained elusive (GON/MOEST, 2008). Similarly, of 22 biodiversity targets in the CBD for 2010, only five were achievable (GON/MOFSC, 2009). The TYP (2010/11-2012/13) acknowledges that the chance of achieving environmental targets of the MDGs are fair for biodiversity and forests, and weak for climate change and GHG emission. The Bagmati River in Nepal's capital is almost 'dead' due to decreased water flow, encroachment and release of untreated sewages. Likewise the population of Ghdiayal crocodiles has been declining, and sighting of fresh water dolphin in the Narayani River in Chitwan has become rare. The pollution of the river has been increasing as most industries situated along its banks discharge highly toxic effluents directly in the rivers flowing through the Chitwan National Park.

Opportunities

Economic sector

Sustainable agriculture: The National Labor Force Survey (NLFS) (CBS 2008) indicates that agriculture is the major employer of 11.2 million ‘currently employed people’. Of the total employed (aged 15 years and above), 67 percent work in agriculture (56% male and 77% female). NLSS II showed that those in the poorest two quintiles also have a slightly higher share of workers in the agricultural sector (76.5% men and 96.4% women in 2003/04).

Overall, the agricultural sector had a relatively better growth rate (3.3% per annum from 2001 to 2007) compared to other countries in the region, albeit with some volatility. However, given the high population growth rate and the sizeable number of people employed in agriculture, enhancing productivity is crucial for raising per capita incomes. Sustaining the performance in agriculture requires attention on several inputs as well as the output side challenges. The input side issues are bottlenecks in supply of improved seed and fertilizers, and slow growth of irrigation. Marketing remains a challenge externally as it is constrained by infrastructure and lack of adequate private sector participation in transport, agro-storage and agro-processing. Another challenge for Nepali agriculture is climate change and its impacts along with the increasing risks of severe weather events such as floods (IFPRI, 2010).

According to 2003/04 NLSS data, 48 percent of household income comes from farm income, 28 percent from non-farm activities, 11 percent from remittances and 10 percent from own-housing consumption. However, for Mountain households 59 percent of household income comes from agriculture, while non-farm income is about 19 percent, and remittance nine percent. Generally, the poorest and second poorest groups, based on consumption quintiles, are highly dependent on farm income: 62 percent and 58 percent, respectively (CBS, 2005).

Non timber forest product: Non Timber Forest Products (NTFP) are important sources of income for poor communities in the Hills. The most important category NTFPs are Medicinal and Aromatic Plants (MAPs) used in the manufacture of herbal medicines and essential oils (Regmi et al. 2000). According to Edwards (1996), in some rural areas cash obtained from NTFPs is the only income derived from forests but may still contribute to over 50 percent of the annual average household income. However, there has been little research or development attention on Nepal’s NTFPs that have a potential of contributing to economic growth, especially the medicinal and aromatic plants (Belcher et al. 2003, Dev et al. 2004, Kanel et al. 2003).

Many community forestry user groups cultivate and conserve the NTFPs because they take less time to mature than trees and provide quick incomes. As result, there is increasing interest in NTFPs and greater recognition of them in sustainable forest management planning (Ehler et al. 2003). Edwards (1996) groups NTFPs into two categories: high value, high altitude products (above 2000 m) and low value product from low altitudes. Some of the high value high altitude

species are *bikh* (*Aconytum spicatum*), *chiraita* (*Swertia chirata*), *Jatamasi* (*Nardostachys grandiflora*), and *kutki* (*Picrorhiza scrophulariiflora*). Some of the popular low altitude NTFP species are *Tejpat* (*Cinnamomum tamala*), *kurilo* (*Asparagus recemosus*), *rittha* (*Sapindus mukorossi*), and *timur* (*Zanthoxylum armatum*).

More than 100 species of plants are traded commercially for making aromatic products, essential oils, cosmetics and toiletries, plant fibers, oils, gums and resins, herbal dyes, food and flavors, paper and pulp, and wood for cottage industries. Some of these NTFPs are of high value and come in low volumes while the others are relatively bulky and have lower value.

The main difficulties for farmers harvesting NTFPs are getting reliable information, processing technologies and market access. Since many high-value NTFPs are found in very remote areas, their processing and marketing costs are high. The support services available for processing and marketing of NTFPs are inadequate for small, fair trade businesses, and are often traded illegally. Further, most local traders do not have access to the capital required for processing and marketing of the NTFPs.

Tourism: Nepal aims to increase the contribution of tourism to GDP to 5% in 2030 from around 2% in 2011. The long term objective of tourism is to attain sustainable development by emphasizing on market and product diversification for enhancing income generation and poverty alleviation; strengthening, upgrading and developing accessibility/ connectivity to provide enhanced, safe, reliable and adequate air and road services to both domestic and international visitors; and conservation of historical, cultural, religious and archaeological heritage and natural resources. Nepali tourism needs to focus on a) developing natural, religious, historical, sports and medical products, b) developing hill stations and home stay, c) promoting tourist friendly affordable hotels and services, and d) expanding road networks, and communication and improving security. Nepal's tourism targets are given in Table 2.

Hydropower and renewable energy: Nepal has abundant water resources and a huge potential of generating hydropower. It is estimated that Nepal has about 42,000 MW of commercially

Box 2: Economic Potential of NTFPs

Nepal has 161 NTFP species that are harvested for commercial purposes. Over 100 of these are high value NTFPs that are traded in national and international markets. NTFPs support the livelihoods of a majority of mountain people in west Nepal.

The bulk of the NTFPs, especially medical and aromatic plants, are exported to India. Nepal's NTFP export was estimated at over NRs 2.5 billion (US \$ 35 million) in 2001/02 (Subedi, 2006). Nepal collected NRs 4.4 million, NRs 7.7 million and NRs 4.4 million, in taxes from NTFPs in 2003/04, 2004/05, 2005/06, respectively (DOF). Nepal, however, does not have a system for systematically tracking income and employment generated from NTFPs. Estimates suggest that the NTFP sub-sector can generate 26.55 million person days of employment for local people equivalent to six months or 180 days of employment each year for 147,500 persons (Pandey, Subedi, Dhungana, 2010).

Table 2: **Tourism development plan**

Indicator\year	2010*	2020**	2030
Tourist arrival (in thousand)	509	1,609	5,000
Expenses per tourist per day (in US\$)	65.3	88.2	150
Foreign currency income from tourists (in million US\$)	377	2,150	15,000
Direct employment (in thousand)	90	1,103	1,600
Length of stay (in days)	11.32	17	20

Source: * Three Year Plan (2010-13), National Planning Commission

** Tourism Master Plan, Nepal Tourism Board 2008 (Unpublished Report)

Table 3: **Clean energy generation and consumption**

Indicator\year	2011	2030
Installed capacity hydro (in MW)*	705.5	17000
Final energy consumption per capita (in GJ)**	16	23
Electricity consumption (kWh per capita)**	80	1,070
Share of renewable energy in final total energy consumption (in %)	11.9%	22.1%
Access to electricity to Households (in %)**	70	99

Source: * NEA, 2011; ** WECS, 2009; *** CBS, 2011b

exploitable hydropower⁴ including over 100 MW of micro hydropower;⁵ 2,100 MW of solar power for the grid;⁶ and 3,000 MW of wind power⁷. Also, there is a possibility of installing another 1.1 million domestic biogas plants.⁸

Despite the huge potential for clean energy generation Nepal has succeeded to harness insignificant amount (Table 3). If the development of clean energy sector goes according to the commitment of Government of Nepal as expressed in its periodic plans and sectoral strategic document, there is growing possibility of achieving significant progress by 2030.

In the Ninth Plan, Nepal had set a target to generate 22,000 MW of electricity by 2017. Recent studies conducted by the government suggest the possibility of generating 10,000 MW in 10 years and 20,000 MW in 20 years. In order to achieve the new target of generating 17,000 MW by 2030, the focus should be on:

- Attracting foreign as well as domestic investors in hydropower generation, providing incentives to local institutions/organizations to develop small hydropower projects (1 -25

⁴ WECS and UNDP estimates

⁵ Energy Sector Synopsis Report Nepal 2010, WECS

⁶ This potential is said to be possible to realize using 2% of suitable land area. The average annual Solar irradiation in Nepal is estimated to be 4.5 kWh/m²/day (Solar and Wind Energy Resource Assessment Report, 2008, AEPC)

⁷ Realizing this potential could require about 10% of suitable land area (Solar and Wind Energy Resource Assessment Report, 2008, AEPC)

⁸ Biogas Support Program (BSP) Phase IV (2003-1010), 2009, AEPC

MW), and Nepali private sector to develop medium hydropower projects (>25 -100 MW). For large hydropower projects government should seek partnerships with foreign and Nepali investors

- Achieving energy efficiency and energy security
- Increasing access to reliable modern energy services to all at affordable prices
- Pursuing a low carbon development path and replacing petroleum products to the extent possible in transport, industry, and household sectors, and
- Using of electricity in agriculture.

Social sector

- An integrated and GESI sensitive value chain approach with adequate resources, targeted activities, well-trained human resources (both technical and in social aspects), particularly at the district and local levels (front line), and coordination with other related sectors and agencies can help increase effective participation of people for benefitting from natural resource conservation.
- Potential green enterprises where Nepal has the comparative advantages and are suitable for women and excluded groups are: production of organic essential oils such as chamomile, grass and natural fibers; collective organic farming – for vegetables; vegetable seeds, cash crops, etc. through contract or leasehold farming; tourism – village/home-based/eco-tourism with training and investment on diversifying the tourism products; in the urban areas – recycling of urban wastes (currently women groups are involved in collecting urban waste).

Environmental sector

The most successful Nepali environmental conservation programs such as community forestry, conservation and buffer zone area management, farmer-managed irrigation and integrated watershed, etc. need to be strengthened, expanded and improved to make them more inclusive, integrated and enterprising. There are also opportunities for harmonizing policies to holistically address issues of food security, forest and water conservation, and climate change jointly.

Community forestry: The expansion of community forests and protected areas after 1990 is an outcome of the application of diverse community based resource management models. Nepal has about 18000 community forestry users groups (CFUGs) managing 1.65 million ha of forests. About 35 percent (2.18 million households) of the population is engaged in community forestry managing over 28 percent of Nepal's 5.83 million ha of forests. In the early 1990s, community forests covered around 130,000 ha. In addition to community forestry users groups, Nepal has 83 buffer zone forest users groups that are managing around 41,000 ha (DNPWC, 2009), and 5300 leaseholds forestry groups managing 35,000 ha (DOF, 2010). Further, eight collaborative forestry committees representing about 200,000 households have been managing 18,600 ha of forests in the Tarai (DOF, 2010). In all, about one third of Nepal's forests are being managed by local and indigenous communities. Community forestry has been successful in restoring degraded land and greenery, increasing and conserving bio-diversity, increasing supply of forest products,

empowering rural women, poor and the disadvantaged groups, promoting income generation and community development activities, and in improving livelihoods of people in rural areas (DOF website, 2011).⁹

Community based biodiversity conservation: Nepal has been in the forefront in developing and implementing innovative conservation policies and institutions. Since the 1990s, Nepal has pursued participatory conservation approaches to attain two objectives – biodiversity conservation and poverty alleviation. A variety of conservation governance models have been implemented to mobilize people’s participation. Since the late 2000s, conservation agencies have been promoting community-based landscape conservation (GON/MOFSC, 2009) to account for the impacts of climate change on biodiversity and local livelihoods. The TYP (2010/11-2012/13) has incorporated ecosystem services and poverty reduction as important objectives of protected area management (NPC, 2010). The area under protection has tripled between 1990 and 2011. Similarly, data also indicate that nearly two-thirds of areas designated for protection are under co-management (Figure 5), which was not a recognized concept in the early 1990s. Nepal is one of the top 20 countries in the world and second in South Asia in terms of the percentage of national territory under protected areas. In 2011 Nepal had 20 protected areas under different IUCN categories¹⁰ and of these spread across 34, 186 sq. km or 23 percent of the country’s surface area.

The successful protected area management efforts through community-based approaches at the landscape level have been contributing to biodiversity and soil and water conservation, and sustainable livelihoods of the mountain communities. These protected areas have potential to provide new, green jobs.

Green Economy: Issues, Barriers and Solutions

Humankind is said to be on a trajectory towards tipping points after which the decline of natural life-support systems might become irreversible. The technology, resources and know-how to successfully address the problems are available, and therefore an ecosystems goods and services based economy can present both opportunities and challenges. Attaining the right balance between use and conservation is always challenging but nonetheless necessary. Nepal’s ecological footprint has already crossed its bio capacity despite the low carbon emission. Managed well, green technology and PES can become the drivers of sustainable growth.

Key issues and barriers in promoting green economy

- Absence of a coherent strategy to communicate the importance of environmental issues and their links with poverty, climate change, loss of biodiversity, and land degradation.

⁹ http://www.dof.gov.np/index.php?option=com_content&view=article&id=95&Itemid=121 accessed: 22 Oct 2011

¹⁰ There are 10 national parks, three wildlife reserves, one hunting reserve and six conservation areas, and 12 buffer zones around national parks and wildlife reserves.

- Gap in the interface of science and public policy. Inadequate research, training, and engagement of academia in environmental policy making.
- Institutional and technical weaknesses and gaps in collecting baseline data and carrying out scientific analysis of environmental issues such as biodiversity, climate change, land degradation and ecosystem services.
- ‘Silo approach’ in policy-making, planning and implementation among government agencies.
- Inadequate policies and policy inadequacies. Policy contradictions, overlaps and conflicts remain major barriers to mainstreaming the sustainable development agenda.
- Inefficient use of limited resources arising from the disjointed implementation of policies, plans and programs.
- Lack of compatible legal and long-term sectoral policy frameworks to promote green and low carbon economy.
- Inadequate investment in the environmental sector.
- Inadequate capacity at local government institutions for enforcing standards.
- Existence of strong fossil fuel lobby that could create problems in promoting clean and green public and private transport technologies and systems.
- Weak enforcement of environmental standards to control industrial and urban pollution.
- Low capacity for carrying out international negotiations and for accessing national and global funds and lack of quality human resources to develop and implement green economy activities.
- Larger systemic problems affecting environmental sustainability. Deforestation, land degradation and biodiversity losses are largely due to low and slow progress in the economic and agriculture sectors.
- Inadequate resources and capacity to access green technologies.
- Weak coordination among government, private sector, NGOs and CBOs in planning and implementing environmental programs.
- Weak and disorganized private sector, and
- Less effective incentive mechanisms to promote green growth.

Proposed solutions/drivers to remove barriers

- Favorable policy making environment and well-functioning institutional frameworks.
- Strong policy commitment and growing realization among planners on the need for integrating environment and development, and commitment for this in the TYP. The government recognizes that poverty alleviation can be sustainable only through sound environmental management and climate resilient development.
- Growing recognition of the importance of a multi-stakeholder approach in environmental planning and management.
- Being at an early stage of development, Nepal can benefit by embracing the green development path by adopting clean and smart technologies. Nepal should avoid the ‘first pollute then clean’ approach.
- Nepal has some tested environmental community-based conservation models that have multiple benefits – biodiversity conservation, carbon sequestration and poverty reduction.

Community forests are not only effective for greening mountain environments but also provide a base for promoting green economy. Good practices like community forestry and organic farming can improve both livelihoods and mountain environments. In some districts local communities have been using income of community forestry for solar electrification. The community based resource management initiatives should be strengthened, expanded and improved to make them more inclusive, integrated and sustainable. Further, existing policies also need to be harmonized to integrate the objectives of food security, forest and water conservation, and climate change.

- The mountainous topography, diverse agro-climate, rich biodiversity and vast water resources provide Nepal tremendous opportunities to develop as a premium ecotourism destination; and also as an organic and high value herbal goods producer and leader in clean energy and green business.
- Climate change is a sustainable development issue. Climate resilient development infrastructure can be an opportunity for mitigating the impacts of climate change, and also for promoting environmentally sound and sustainable development through the use of clean technologies.
- ‘Green diplomacy’ should be promoted through diplomatic missions and the focal persons of various international conventions. A focused effort is necessary to acquire clean energy and clean technology, to promote ecotourism, to generate support for community based resource management, to develop ‘Green’ human resources to promote the green economy.
- There should be coordinated policy making taking into account all international conventions, facilitate environmental standards and mainstream environmental issues in development programs, and monitor compliance. Carry out research, training and awareness and explore the establishment of a constitutionally created ‘Environment Commission’ for promoting green economy. Such a commission can take leadership in promoting green diplomacy.
- A National Environmental Education and Awareness Centre to increase awareness and education, and for environmental advocacy should be established.
- Drawing from experience in leading least developed mountainous countries, seek a rightful place in the board of the ‘Green Climate Fund’ to influence policies for supporting mountainous LDCs. Nepal has opportunity to lead other countries given its strong experience with community based natural resources management, and
- Mechanisms for controlling unsustainable commercial exploitation of benefits from ecosystem goods and services should be instituted. A thorough exercise for creating a mechanism for putting people and the planet before profit, and for linking local environmental resources with the global environmental services and businesses such as the carbon trade should be carried out.

Major Recommendations and Key Messages for Sustainable Development

The need for recommitting the global resolve to attain sustainable development goals is pressing but there are many challenges that could impede the attainment of the goals. Multiple global

crises including the financial meltdown, climate change, food and energy crises, biodiversity loss and increasing frequency and intensity of natural disasters have added burdens of coping, particularly for vulnerable countries such as Nepal. Developing and Least Developed Countries face serious difficulties in realizing the minimum sustainable development objectives and more so in Nepal where rising social expectations and inequitable development have led to multiple conflicts and political instability.

Rio+20 presents an excellent opportunity for the international community to enhance global cooperation on sustainable development. This opportunity should not be wasted for only reviewing progress and discussing issues and challenges, but must be used productively and wisely for renewing political commitment, formulating concrete action plans and building an effective system of global governance to coordinate delivery on promises. The conference must result in an actionable and agreeable way to control both the growing greed, and for focusing on winning the war against poverty and environment degradation.

Green economy and poverty reduction

- The green economy should be an instrument for sustainable development, poverty reduction and inclusive and equitable growth. Economic growth must be sustainable with well functioning markets and preferential access to green products from mountains. These products must be given clear price signals that reflect their scarcity value. This must come alongside clearly defined property rights of stakeholders for encouraging optimal use of natural resources – both individually and collectively. The three pillars of sustainable development need to be strengthened, fully integrated and properly balanced giving particular attention to social equity and good governance.
- The international community needs to act in accordance with the principle of mutual long-term benefit and promote sustainable development for all while promoting the green economy. Such an economy should offer new trade opportunities to all countries, and not become a pretext for another form of protectionism or for introducing “green conditions” in international cooperation. The green economy should be an opportunity to promote and enhance the technical and institutional capacity in LDCs without constraining the policy space needed by them to pursue development that takes into account their situations and priorities based on the agreed principle of “common but differential responsibility”.
- There should be provisions for technology adaptation and transfer to LDCs, easy finance, capacity building and favorable terms of trade and transit for the economic transformation needed for sustainable development. The green economy path needs to prioritize substantial transfers as well as adaptation of new appropriate technology in LDCs and mountain countries with strong international support mechanisms for contributing to a “just transition”, productivity enhancement, clean energy generation and its use for public welfare, and for enhancing energy efficiency for leading the country towards low carbon growth.
- A proven and customized approach of greening the economy should be encouraged for adoption. Developing countries in general and mountainous LDCs in particular need to

be supported in adopting and customizing policies and strategies with additional financial resources, technology and capacity building support.

- There is a need to be conscious about the barriers a green economy may create in developing countries and those with low economic development in the context of obstacles in trade and investment, high costs and loss of jobs and/or limited additional job creation.
- The transition to a greener economy has to be inclusive of all stakeholders, and all Parties should share the unavoidable employment and social costs of the transition.
- It is necessary to respect and promote pro-poor community based and farmer-driven efforts in community forestry, organic farming, seed-banking, watershed management and on-farm improvement of crop varieties and animal breeds alongside the promotion of selected green enterprises such as biogas and solar energy through collective and GESI sensitive value chain approaches. A vulnerable, land locked and mountain country like Nepal would need support for instituting a multipronged approach to ensure inclusion of poor women and socially excluded groups from remote areas in the new development process.
- People-centered sustainable economies need to promote the rights of indigenous peoples and local communities in accordance with UN Declaration on the Rights of Indigenous Peoples (UNDRIP) including rights to land and resources, and free, prior and informed consent (FPIC). National commitment to enact suitable legal and policy framework is necessary to operationalize UNDRIP.
- National accounting systems need to measure the significant human welfare benefits, or the true value of ecosystem services that benefit national, regional and the global economy and environment. This would require the development of an economic yardstick such as the natural resources accounting index that is more effective than GDP, for assessing human wellbeing.
- Least developed and land locked countries face greater challenges of eradicating poverty and sustaining growth due to globalization and climate change. The transition to a green economy would require major structural adjustments. In this regard, developed countries and emerging economies need to take the lead in changing consumption and production patterns and assisting fragile and vulnerable developing countries with financial support, technology transfer, capacity building and market access.

Institutional framework

- There is a need to bring coherence and coordination in the MEAs, intergovernmental bodies, and the UN system and other international organizations. There is realization that the environment pillar is relatively weak compared to the three pillars of sustainable development because of its fragmented governance structure. Nepal sees the importance and relevance of establishing a specialized World Environment Organization as a global technical arm of the UN system on environment. This agency could focus support on implementing multi-lateral environmental agreements, building country capacity to address the on going and emerging threats of environmental degradation, and promoting environment conservation as a viable means for poverty reduction. The new international agency should have presence at both regional and country level.

- It is crucial to democratize ownership, control and decision making over productive resources and assets for addressing income inequality and poverty reduction sustainably, particularly in countries like Nepal. This would require moving towards an appropriate mix of more democratic and inclusive models such as cooperative, collective and community-based and driven approaches, and public–private joint ventures to ensure that the resulting economic activities provide sustainable livelihoods and help in meeting the larger developmental goals. This approach can also safeguard the economic and social rights of the poor and the socially excluded, and help prevent elite capture of the new wealth.
- It is necessary to strengthen planning mechanisms and processes and train/orient service providers at national and sub-national levels to ensure that the poor, women and the excluded groups are engaged in local level planning and are able to prioritize and access resources based on their needs. There is also a need to promote pro-poor and GESI friendly policies that have direct implications on green enterprises
- In mountainous countries, wellbeing of society depends on proper integration of the socio-cultural, economic and environmental resources of the uplands and lowlands. There is a need for global commitment to promote policy and institutional structures, funding mechanisms and international support systems that recognize highland-lowland interdependency and promote involvement of multiple stakeholders in managing trans boundary resources for the benefit of both up-landers and low landers.
- A global mechanism needs to be developed to assess the impacts of new technologies on health, biodiversity and environment. Such a mechanism should include resources for building capacity of countries and communities, especially, LDCs, in assessing and monitoring the impacts of new technologies.

Political commitment for sustainable development

- Renewed political commitment is essential for greater integration of all three pillars of sustainable development as well as for implementing the action plans. It should primarily come from governments, but other stakeholders also need to be included in decision-making and in assessing the fulfillment of commitments. All stakeholders need to be made accountable for fulfilling commitments. Partnerships between and amongst all Major Groups and financial, technical and specialized institutions should be strengthened internationally and at the national levels.
- For overcoming the implementation gaps and meeting new and emerging challenges, more coordinated, effective, integrated, and results-oriented international and national efforts are needed on: arranging adequate finances, ensuring suitable technology transfer, supporting capacity building, and promoting sustainable consumption and production patters. Other areas where support is needed are sharing of good practices, knowledge and experiences for replication and scaling up of successful models, empowerment of women, scientific and technological cooperation, including participation of LDC scientists in collaborative international research and development, and accelerated technology transfer and adaptation; and for enhancing capacities and participation of all stakeholders, through education and by closing the funding gap.

- Nepal supports renewing the call for commitment and political will of the international community on financing for development and national capacity building, particularly for mountain and least developed countries.

Addressing new and emerging challenges

Nepal is fully aware of new and emerging challenges that range from the food and energy crisis and the global recession to climate change. Add to this the challenge of poverty that is serious for Nepal where 10-15 percent of the population is at risk of facing hunger while one third of the population faces food insecurity. In Nepal implementation of commitments remains difficult. With many international commitments unmet, countries that have been least responsible have now been forced to face the most serious impacts of climate change. Growing economic uncertainty, market volatility and inequality have reached a point of crisis in Nepal that has recently emerged from a decade long conflict. Participants at Rio+20 need to agree on a framework of action that could include, among other things, a timeline for implementing sustainable development commitments and a set of action goals. Some of the actions recommended by Nepali stakeholders are:

- The poor and mountainous countries contribute least to global warming but are the most vulnerable to climate change and erratic weather patterns. They also have least capacity to address these problems. Therefore, the global community needs to support most vulnerable and poor countries in effectively addressing the adverse impacts of climate change and for using the opportunities created by it to improve livelihoods and achieve climate-friendly development.
- The ability of least developed and mountainous countries are limited for addressing the financial, food and energy crises and therefore there is need for a mechanism to help these countries to improve their resilience.
- Energy from hydropower is considered to be clean, green and safe. Therefore, Nepal should be supported for harnessing its hydro-generation potential to first meet the needs of local communities, then the national needs, and eventually the regional demand. Since Nepal can generate a surplus for regional consumption, there is need for instituting a fair terms of trade that accounts for the costs of maintaining good quality water supply in reservoirs, such as local development and safeguarding the rights of indigenous people, for their environmental stewardship.
- Nepal is among the countries worst affected by the global food crisis due to deteriorating quality of imported foods and rising costs. The world needs a second green revolution and mountains need an organic movement to address the problem of food insecurity and hunger.
- Poor, least developed and mountainous countries need new and suitable technologies, proper institutional responses, and above all, a global compact to ensure food and livelihood security. This will require transfer and adaptation of improved technology and schemes to support local innovations, and easily accessible financial support.
- LDCs need new technology, new institutional responses and above all a global compact to ensure food and livelihood security. This will require transfer of innovation and technology

from developed countries. LDCs also need support for developing location specific agricultural technologies that meet the need of the poor, women and excluded groups.

Sustainable mountain development

Mountain systems provide ecosystem goods and services that are essential for sustaining the local, regional, and global environments and the economy. About half of the world's population depends on mountains for fresh water, clean energy, irrigation water, minerals, forest products, recreation, and genetic resources. Half of the global biodiversity hotspots are in the mountains. However, providing these goods and services to the global community has high economic and social costs in the mountain countries. Nepal, with only 0.1 percent of the global landmass, has 2.5 percent of the global biodiversity (it has the 10th richest density of flowering plants; four percent of the global total for mammal species and 9% of the bird species), and its mountains supply water to the major Asian rivers. The opportunity costs of this natural capital have not been quantified, and the need to providing mountain people incentives for conserving the resource has yet to enter the global debate. Such concerns of the least developed mountain countries remain unaddressed in the green economy framework. This omission needs to be corrected¹¹ by:

- Recognizing the direct and indirect benefits derived from Himalayan mountains in policies/plans;
- Incorporating the value of ecosystems services in national planning, GDP accounting and decision making;
- Establishing global, regional, national, and local mechanisms to compensate and reward Himalayan mountain communities for the services they provide;
- Establishing favorable conditions for improving markets for mountain ecosystem goods and services, and inclusion of equity concerns in the green economy in the Hills and Mountains.
- Guaranteeing access to resources and inviolable property rights of mountain communities especially women, indigenous communities, and marginalized groups.
- Promoting community based resources management approaches and instruments such as community and collaborative forestry and leasehold agro-forestry. Nepal's experience in community forestry can serve as a model for improving livelihoods of mountain communities, mitigating and adapting to the adverse impacts of climate change, and in assisting to promote a low-carbon socio-economic development path.

Financing

The LDCs are lagging behind in sustainable development because international support measures have not been fully effective and adequate in terms of scale, scope and quality. Progress has slowed down for lack of proper and timely implementation of commitments made by the international community in earlier summits – Stockholm (1972), Rio de Janeiro (1992) and Johannesburg (2002). The development of LDCs has been constrained by low capacity, lack of enhanced financial support, continued marginalization in the international trading system, and the

¹¹ International Conference on Green Economy and Sustainable Mountain Development Opportunities and Challenges in View of Rio+20 5–7 September 2011, Kathmandu, Nepal

non-fulfillment of ODA commitments by developed countries. Other issues are lack of substantial debt relief measures, negligible FDI inflows, low technological support and absence of a holistic approach to development. Commitments of adequate financing (according to common but differentiated responsibility), cooperation for appropriate technology transfers, and needs-based capacity building from the North are important for enabling LDCs make a just transition to sustainable development pathways. Therefore,

- Developed countries need to fulfill their previous commitments, particularly the ODA commitment of allocating 0.15-0.20 percent of their Gross National Income as development assistance. The LDCs need to be prioritized in the allocation of financial support, and also for devising programs and plans for sustainable development.
- Developed countries must take concrete steps for providing additional financial support, transferring technology, reducing and cancelling debt, removing trade barriers and opening their markets, and building capacity in the LDCs for realizing the global sustainable development goals.
- Sizeable investment will need to flow to the green sectors as well as for “greening” other sectors in developing countries. While domestic resource mobilization will play a key role for many developing countries, access to new resources and international finance would be crucial for LDCs. There is also a need for greater synergy and complementarities between climate change funds and sustainable development financing.
- There will be costs involved in making the transition to a low carbon, green economy in the pursuit of sustainable development. Some countries are better able to bear those costs than others, and are more resilient to changes. However, the most vulnerable countries, mainly LDCs, need to be supported and protected – particularly small and land locked countries that must be provided access to appropriate financial and technical assistance. It is also important for citizens and communities from these countries to have access to new skills and jobs in emerging and developed economies, and
- Many developing countries have been receiving increased remittances that can be mobilized through improved investment policy and rural enterprise development programs that provide incentives to migrants to invest in productive sectors. This requires firm political commitment to assure safety of investment at the national level and capacity building, training and services at the community level. Nepal’s new development vision embodies many of the recommendations to governments that will complement the anticipated international support for sustainable development goals.

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