

Green Economy for Sustainable Development in Nepal: Role of Forestry Sector

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Abstract

Although there is no unified view among the policy makers and development experts on what represents and drives a Green Economy and there is also no clarity on what it means for the mountain countries like Nepal, the concept is however, very pertinent in the context of rapid climate change and unsustainable development. There is a general agreement that green economy provides opportunities for developing and forest rich country like Nepal as the fossil fuel-based and import oriented consumerism based economy cannot be successful today and in future. It is likely that green economy could be a good vehicle to reach sustainable mountain development (SMD). However, there is a need to develop specific and strategies and action plans to implement green and low-carbon economic activities. First and foremost, there is a need to develop a national policy and to use green economy to achieve poverty reduction and sustainable development. The economic growth rate has to be sustained while reducing poverty through sound development plans and programmes actively participated and managed by poor and enterprising rural and urban communities and supported by government, non-government and donor agencies. There are numerous challenges in adapting and adopting Green Economy policies in a poor country like Nepal. Capacity and skill development, technology adaptation, transfer, and retrofitting to suit Nepal's hilly and mountainous terrains, need for huge investment in processing and value addition, and of course adapting to and mitigating against climate change are some of the major challenges. Notwithstanding these constraints, green economic policies and programmes can be means to achieve sustainable development in the mountainous region. There is need to document good case studies for drawing lessons so that future green growth pathway can be charted in a flawless manner and scaling up of the success to create bigger impacts can be achieved. Finally, effective and outcome oriented implementation will require multi-disciplinary planning, interdisciplinary implementation, and effective and participatory monitoring and evaluation.

Key Words: Green economy, Community-based forest management, Green jobs, Green infrastructure, Community-based enterprises

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Introduction and Background

The UN Conference on Environment and Development held in Rio de Janeiro in 1992 popularly known as the Rio Conference came up with the Rio Declaration and the Agenda 21 that had endorsed the concepts and approaches of sustainable development as defined by Brundtland Commission (UN, 1987). The Rio'92 stressed that human beings can lead a healthy and productive life provided they learnt to live in harmony with nature ensuring environmental conservation while promoting affordable economic development. The member countries were called on to work together to eradicate poverty and while not harming the nature and to do so the Rio conventions stressed the need to work "in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem" (UN, 1992).

Recognizing the huge gap between rich and poor countries, the declaration also recognized "differing responsibilities" of member states which are at varying levels of development. Developed nations were asked to provide scientific know-how, technology, and financial resources to developing countries to help them achieve sustainable development. The declaration also recognized the "sovereign right" of states to manage their biodiversity and natural resources based on the principles of sustainable development including the responsibility to minimize transboundary impacts of their actions (UN, 1992). The Agenda 21 also for the first time introduced a chapter on Sustainable Mountain Development (Chapter 13) (UN, 1992) which recognized Mountains as important sources of water, energy and biological diversity as well as provider of minerals, forest products, agricultural products and recreation resources. It is also recognized that mountains are susceptible to accelerated soil erosion, landslides and rapid loss of habitat and genetic diversity. The prevalence of widespread poverty among mountain inhabitants and loss of indigenous knowledge was also mentioned. The document had called upon member states to follow an integrated action on the proper management of mountain resources and socio-economic development incorporating the stakes of different sections, interests and aspirations of mountain people.

Rio+20 Conference and its Outcome

As a part of taking stock of the progress made and activities carried out as a part of the implementation of Agenda 21 during the last 20 years, it has been found out that a large number of international conferences, formulation of new national policies and laws, numerous national and global initiatives, countless government programs as well as campaigns and advocacy work were carried out by GOs, NGOs and INGOs (Karki et al, 2011). We observe, in most initiatives, that the basic issue of economic development always got a higher priority compared to the core environmental issues. In particular, the progress in the implementation of sustainable development (SD) suffered a number of setbacks: a) the population growth in developing countries did not show the anticipated decline, b) poverty reduction although received the high priority of the poor countries, but the absolute number of poor people increased, c) a series of financial, health and economic crises hit the global economies, and d) environmental protection and biodiversity conservation remained

a low priority agenda of most governments. In order to put the SD agenda on track, the UN organized the Rio+10 Conference or the World Conference on Sustainable Development (WSSD) which reviewed progress since the Rio Summit but apart from taking routine decisions such as release of the Johannesburg Plan of Implementation (JPI) to build on the Agenda 21 and agreeing to undertake concrete actions and creation of multitude of new institutions including the Mountain Partnership (MP), it failed to bridge the widening gap between the commitment and delivery on the political, financial and technology transfer related agenda. Also, whatever decisions could be made on pushing the sustainable development and poverty reduction agenda also remained weak (UN, 2012).

This was the main rationale and reason that after 20 years of Rio'92, the UN again brought together the world leaders to the recently concluded Rio+20 conference by defining two main themes for deliberations: a) Green economy for sustainable development and poverty eradication, b) institutional framework for sustainable development. The Rio+20 came out with a declaration titled as 'THE FUTURE WE WANT' that was adopted by more than 196 heads of State/Government ministers and high level representatives of the member countries of the UN. The document has received mixed reactions from different quarters and major groups. While many have termed it as an important step in the right direction, many others have criticised it as being too weak, unexpectedly silent on reiterating past commitments such as on women's reproductive rights, indigenous peoples' concerns, and small farming community's needs and so on and so forth, others including the UN Secretary General Ban Ki Moon has termed the Rio+20 conference "a success," and said, "In Rio, we saw the further evolution of an undeniable global movement for change." None of the Rio+20 participants opposed the concept of Green Economy; rather they overwhelmingly appreciated the concept of Green Economy for Sustainable Development and Poverty Reduction.

However, the implementation approaches of sustainable development (SD), especially, the Green Economy approaches attracted divergent views and were much debated and even after Rio+20 evens have continued to attract diverse and multiple views. The argument put forward by developing countries was that the concept of green economy was good but in order to achieve the twin agenda of poverty reduction and economic growth, it will be facing numerous challenges and constraints, especially in the least developed and mountainous countries such as Nepal. First, the implementation of green economy is expected to encounter the challenge of maintaining high economic growth while reducing poverty which will be difficult since experiences gained elsewhere have shown that egalitarian approaches and welfare oriented development policies depress growth and discourage investment. Secondly, enhancing social and gender equity and reducing or decreasing carbon intensity and natural resources scarcity all at the same time is rather contradictory proposition. To achieve this goal developing countries will be needing new and/or appropriate technologies, finance and capacity building support which although were recognized by the Outcome Document as a pressing need for developing countries, yet the source and means form meeting these requirements remains ambiguous or unclear due to poor commitment by developed countries (UN, 2012).

The Rio+20 declaration has specifically articulated that the themes such as Climate Change, Biodiversity, Water, Forests, and Energy need to be given high priority while pursuing sustainable development. The priority given to both climate change and poverty reduction did strengthen the position of vulnerable and poor least developed countries, developing mountainous countries as well as small island nations to seek international co-operation in the post Rio+20 scenario, especially in the negotiations held under the COP11 of the CBD and COP18 of the UNFCCC. For example, the deliberations of the CBD COP11 has resulted into doubling of funding of biodiversity conservation programmes and the results of the UNFCCC COP18 called *The Doha Gateway* include the agreement of all the members to compensate – under the concept of Loss and Damage - the vulnerable developing countries for the losses suffered due to proven impact of climate change. Both are considered to be watershed decisions.

The Rio+20 declaration on Forests support REDD+ and sustainable management of forest resources involving local communities, especially poor and indigenous peoples. Regarding Food Security, the document lays stress on development of sustainable agricultural technologies developing value chains and agricultural co-operatives. On climate change, the declaration says: “adaptation to climate change represents an immediate and urgent global priority” which reinforces the voice of vulnerable countries of the Himalayan region”. Disaster risk reduction (DRR) has been rightly linked to food production, poverty reduction and climate change. The document recognizes the additional financial needs of developing countries to implement sustainable development goals and also commits the UN system to devise options on finance. The adopted policies on Green Economy affirms the existence of “different approaches, visions, models and tools available to each country, in accordance with its national circumstances and priorities’ and calls for working together to achieve sustainable development. Green economy has been recommended as one of the important tools available for achieving sustainable development and poverty reduction by sustaining economic growth, enhancing social inclusion, improving human welfare and creating opportunities for all while maintaining healthy and productive ecosystems in the World. The outcome document also mentions that policies for green economy should be guided by and in accordance with all the Rio Principles, Agenda 21 and the Johannesburg Plan of Implementation.

Green Economy, What does it mean to Nepal?

The global community including Nepal has accepted that Green Economy (GE) can be an important strategy to achieve the goal of sustainable development. However, so far there is no clear policy, strategy and action plan in Nepal. There is, at best, a mixed understanding of the concept of GE in Nepal. First, there is no single definition of a green economy. Second, although the central theme is that a green economy minimizes the human-induced carbon footprint in development activities while leading to sustainable poverty reduction, better social equity, mitigation of natural resource scarcities, and decreased environmental risks, but how to go about working on these possibilities is not clear. However, we can start by arguing that for Nepal, a poor and landlocked country, with a predominantly agricultural

economy dependent on forest-based biomass for both soil and animal nutrients, remaining low carbon is not a choice but a necessity. It has to remain low carbon since importing costly chemical fertilizers, pesticides, and limited efforts of industrialization have neither improved national economies nor conserved the environment. Nepal which was a food exporting country in 1970s has become a food importing country since 1990s. Furthermore, Nepal has failed even to initiate systematic adoption of more socially sound and economically viable green growth strategies that can improve resource efficiency, reduce poverty, and enable greater social inclusion (Karki, 2012). Forestry sector, led by its highly acclaimed community forestry has achieved more or less globally accepted conservation and social goals although the target or expectation of economic goals has remained unfulfilled.

There are some views that equate green economy with sustainable development which is not correct. Green economy should be considered only as one of the means to achieve sustainability. Especially in a mountainous country such as Nepal, it may be the most important mean but it cannot substitute the broader concept of SD or Sustainable Mountain Development. It can be argued that the common challenges mountain countries are confronting or will face in future are: How to document already practiced green economic solutions and learn lessons to guide the development of future green economic pathways? And, how effective have been the approaches already tried in similar situation in other regions and what lessons can be learnt from them? Striking a balance between social, economic and environment pillars on one hand, and dovetailing them within the prevailing institutional and governance framework giving a due emphasis on equity and inclusion on the other, will be a challenge to achieve success in transiting to green economy. Therefore, developing countries like Nepal need to come up with suitable national policies providing incentives to forest dependent people using available regional and global instruments and mechanisms such as REDD+ and PES. Nepal is particularly vulnerable to extinction of globally important floras and faunas and threat to her biodiversity is threatening the future supply of medicine, food and other non-timber forest products – all of which are essential for improving livelihoods of local people and harnessing green economic potentials of the country. Particularly, since many of the forest and biodiversity resources are affected on account of climate change, causing habitat degradation, loss of productivity and replacement by invasive species, improved management of forest will be required to promote bio-mass-based green economic strategies and policies in Nepal.

Challenges and opportunities in implementing Green Economy in Nepal

For Nepal – a largely mountainous, forest-rich, landlocked, least developed country (LDC) beset with political, economic and social changes and challenges, especially persistent poverty, glaring social and gender inequity, rapid climate change and failed governance–expectations from a transformation to green economy at both national and local levels are neither high nor clear. To the Nepalese policy makers and practitioners, green economy may not seem much different from what Nepal's millions of farmers, forest users, and landless people in rural areas already have been practicing for centuries. However, as is being observed at the international level, green economy should neither remain stuck in

intellectual debate suffering from different interpretations and prescriptions at national level, nor ambivalent of the need to recognize, support and built on countless of local level green initiatives and success stories. Instead, agencies under the Govt of Nepal and civil society organizations should develop minimum consensus among the key stakeholders based on the fact that a poor and climate vulnerable country like Nepal cannot achieve the twin goal of sustainable development and poverty eradication without making some hard decisions and wise trade-offs. Nepal has to adapt to climate change by integrating it fully in all its development policies and plans. Abandoning western model of consumption oriented development model altogether and adopting an low carbon, high-job, and modest growth development paradigm may be a choice. Of course there would be numerous challenges but there are also several opportunities for Nepal in operationalising the green economy policies. For example, Nepal can make a start by applying the GE principles in her broader agriculture and forestry sectors since as an old adage had said green forests can really be the wealth and saviour of Nepal' if our development can properly harness forest and associated resources as our traditional farmers had and made biomass-based rural economy sustainable.

How Forestry Sector can head-start Green Economic Activities?

“Forests are a critical link in the transition to a green economy – one that promotes sustainable development and poverty eradication as we move towards a low-carbon and more equitable future” says the UNEP report (UNEP, 2011). A feature of the green economy concept that is particularly relevant for mountainous, forest and biodiversity-rich Nepal is the international informal movement to do proper valuation of the use of natural capital and to compensate providers of ecosystem services by creating and implementing economic incentives, financial rewards, and transfer payments. Many countries are discussing creation of a national natural resources accounting regime based on the principle that the user pays for services provided by the ecosystem, including water and biodiversity, and that the polluter pays for their intended or non-intended harmful actions resulting in ecosystem degradation. This concept fits with the already ongoing trend of community forestry user groups charging for the water and eco-tourism goods and services outsiders want to use. Here the main question to answer will be: how the program such as community forestry can play a role in harvesting ‘low hanging fruits’ in green economic development and what are the so called green growth pathways?

Evolution of green economic thinking would a positive development in Nepal’s community forestry since the forest dependent communities who have conserved the forests, helped regenerate the natural water springs and/or enhanced natural storage of water, reduced the flood and landslide hazards and have improved the overall quality of the forest landscape can be better rewarded or compensated for their ecosystem services. This practice not only provides powerful incentives to the local forestry user groups to continue conserving the forests but also helps shift the economic dependency from forestry to services thereby reducing the pressure on forests. Also, the ecosystem service users such as downstream townships and villages get clean and reliable water supply and the nearby community get

quality recreation and nation as a whole gains in enhanced economic activities. Using the comparative and complimentary advantages Nepal has in terms of its high forest resources endowment and surplus human resources; it can start identifying proven, people-centred, pro-poor, sustainable, clean development green sector, especially forestry sector-led interventions such as in REDD+, watershed development, and community-based forest management (Karki & Karky, 2011). The first step in planning forestry sector-based green economy will be to develop and initiate green economy friendly forest policy reforms that can provide secure resource tenure, strengthen existing rights of local communities and indigenous people to forest resources including carbon, and redefine the existing institutional and governance framework that promote good forest governance and sustainable forest resource management. This would require strong national commitment and broad-based stake holder support. With an enabling policy and institutional framework, Nepal would stand a good chance to receive global support for customizing green economy-oriented forestry sector management strategies, and could also argue for special provisions to meet the financial, technical, and capacity building requirements essential for transforming Nepal's browning economy into a green growth pathways. In order to demonstrate and share the possibilities and opportunities, forestry sector related case studies were carried out by ICIMOD (Karki and Bhattarai, 2012; and Razal and Karki, 2012) as a part of its Asia Pacific wide assessment of the progress made by Nepal and other Himalayan countries from the Rio'92 to Rio+20 and beyond. Some of the Nepalese case studies indicate high potentials for achieving low carbon or green economic growth as described below:

Case Study: Community forestry and good governance opportunity

Since mid-2000, community forestry in Nepal has been in a process of transformation, focusing on more inclusive, equitable and integrated approaches to address the changing socio-political, economic and environmental issues at the national and global levels. The present national policy debates on community forestry have been dominated by commercialization of forest products, especially non-timber, and climate change adaptation and mitigation focusing on REDD+ and PES. Emerging carbon and other PES-related initiatives have increased the potentials of community forestry, and possibilities of local communities to contribute to attaining the national and global environmental goals. These new green mechanisms can create opportunities for mountain communities also. Also commercial utilization of non-timber forest products (NTFPs), especially medicinal, aromatic, natural dye, and nutritive plants and edible organisms such as *Yarsagumba* using community approaches and environmental services can generate organic and green products that can be marketed in the national and international markets. This can also expose local communities to larger socio-economic competition leading to improved quality and quantity of products. A 'multi-layer and multi-centric' institutional arrangement may therefore emerge to support the green economic transformation in Nepal through this process. However, some caution has to be also exercised in this regard. In the absence of proper institutional and policy safeguards, the community-market interface may generally benefit the 'most capable' at a cost to the 'most incapable' thus further increasing social inequity.

Over the years, the community forestry programme has evolved in focus from subsistence-based forestry to good green governance contributing to local democracy and sustainable rural development. The FECOFUN – the federation of Community Forestry Users Groups (CFUGs) is the largest and strongest civil society organization in Nepal and the community forestry initiative has been one of the most effective one as it has included marginalized communities in the rural socio-political processes. It has empowered thousands of rural women as important local development stakeholders. The CFUGs have been an important development engine at local level and in many mountain areas they have been contributing to local development by collaborating with at least 20 ministries. In many ways, the programme has been successful in tackling the three key constraints of SMD – marginality, poverty and environmental fragility. Evidences also suggest that all five important livelihood assets of mountain communities have improved after the implementation of community-based forest resources management. The programme has also been contributing directly towards the achievement of five MDGs goals: poverty reduction, environmental conservation, gender equality, primary education and partnerships for development. These outcomes are testimony that the community-based approach to resource management supports the goals of conservation of mountain ecosystems and improving the wellbeing of mountain communities (Karki et al., 2011; Karki and Bhattarai, 2012).

In future, a good forest management practice such as community forestry should focus on creating a sustainable green economy to further enhance the relationship between human beings and nature. New approaches and special efforts are necessary to address the issues of integration, inclusion, empowerment and enterprise, and also to cope with the changing and challenging national and international contexts (Choudhary, 2011). A whole new set of institutions, skills and knowledge would be required to manage climate change adaptation and financial mechanisms, landscape-based resource conservation, forest-based green economy, etc. The government and community forestry institutions should ensure that local communities in general and poor forest users in particular, are not deprived of a fair share of benefits from emerging green businesses in forestry. Since the level of future environmental and livelihood impacts of community forestry is expected to depend on the capacity and cooperation among government agencies, community forestry institutions and the private entrepreneurs in promoting Green economy and creating Green jobs in rural areas and communities, the role of service providers have to that of enablers, motivators, and capacity builders.

The experience of community-based resource management in Nepal confirms that the situation such as ‘tragedy of the commons’ (Hardin, 1968) results not from the sharing rights, but from the absence of well-defined rights, roles, responsibilities and resources (4Rs) of different stakeholders. Furthermore, it clearly shows that poor are neither bad resource managers nor agents of deforestation (Budhathoki, 2011; Ojha, 2009). Given proper incentives and tenure rights, they invest in, and can contribute to protecting their environments. This is highly relevant to green economic approaches as environmental resources are global commons and sustainable management of these resources requires reduction of natural resources scarcity and unsustainable consumption. The case study has

indicated that, subsistence agriculture alone will not provide food, energy and ecological security besides being bio-culturally inappropriate. A more sustainable solution is a community-based natural resource management strategy supported by enabling policies and strengthened institutions under which land and tree tenure is assured, access to technical and extension service is improved and communities are allowed to choose the crops, and trees, including agro-forestry practices in the community managed forest lands.

Case study : Transboundary ecotourism in the eastern Himalayas

Ecotourism, which aims to protect the natural environment and cultural diversity by attracting nature enthusiasts and generate revenue for local people without harming nature, has emerged as a successful mechanism for contributing to all three pillars of SMD in the Nepal. Most of the ecotourism assets are centred on forested landscape and protected areas rich in diverse natural floras and faunas. Tourism entrepreneurs and enterprises involved in mountain eco-tourism have witnessed an increase in tourist arrivals, longer length of stay, increasing visitor expenditure and retention if nature is conserved in harmony with local community's culture and livelihoods. Nepal has been a leading country in promoting ecotourism as one of the most promising means for attaining sustainable mountain development. In particular, Nepal's success in tourism is largely attributed to the existence of well forested green and snow/ice capped white landscapes. Having enabling policies and community-based institutions are also having major impacts on eco-tourism development in Nepal. Visitors experience a relatively safe environment and unique hospitality, with good local awareness about the opportunities that ecotourism presents. Visitors have also appreciated the quality and maintenance of the unique bio-cultural landscape. Nepal's highly distinctive natural beauty and rich Hindu and Buddhist culture are being conserved for retaining the unique bio-cultural resources for sustaining the mountain tourism wherein forestry plays a crucial role since forest-based products and services play a major component of the tourism business (Chettri et al., 2011).

Nepal has largely a subsistence agriculture with a typical mountainous terrain and predominantly biomass-based rural economy. Development has come to Nepal's rural areas through emphasis on specific niche products such as local agricultural products, fresh fruits and vegetables, medicinal and aromatic plants, wild mushrooms, and other non-timber cash crops as well as services. Also, development has come in different scales due to inaccessibility, marginality, and fragility. In recent years, a change in mindsets has been accompanied by the acceptance by the government of the need to accommodate local developmental aspirations, and inclusive approaches providing economic freedom and autonomy to manage the local eco-tourism resources, especially using forest and range lands. A good example is the success of community-based conservation and management of Annapurna Conservation Areas Project (ACAP) as the oldest community-based conservation programme in Nepal. ACA has been praised by donors and conservation champions throughout the World as a good eco-tourism cum development practice although in recent the responsible agency - the Nepal Trust for Nature Conservation (NTNC) has not been able to maintain the momentum and drive that are needed to make the ACAP as a flagship initiative to showcase to the

nation and the World how grass roots conservation movement could be developed and devolved to the communities concerned for their sustainable management. One of the lessons learned has been that any eco-tourism promotion, conservation, and development project must have a transparent and participatory management of the resources and revenue generated through eco-tourism and resource mobilization through project grants received from various donors. It is very important proper decentralized of decision making structures and devolution of authority related to community-based eco-conservation and tourism management are practiced in a professional, prudent and sustainable manner.

Requirements for launching green economy in Nepal:

Without enabling policies it is likely that the Green Economy like Green revolution could bypass Nepal as evidenced in Uttarakhand state in India. Tolia (2011) found that the plains-based economy benefitted from the fruits of green revolution in agriculture that pushed GDP growth by around 8-9 per cent a year while the hill economy remained at 2-3 per cent. Climate change and poverty eradication are at the centre of adaptation and sustainable development debate in Nepal. In the post Rio+20 discourses, while the global focus is on the Green Economy but the number one priority in developing countries like Nepal remains poverty reduction and economic development (CNI/HCI, 2012). Therefore, there is a need for developing mountain specific sustainable development indicators (SDI) like the Mountain Product Index (MPI) to draw attention to the increased economic costs and benefits of development in the mountains, instead of relying only on GDP. Some specific issues that need to be addressed relating to the Green Economy debate in the context of SD and SDI are: a) How to collect documentary evidence of national and regional/global influence or contribution of the ecological footprints of mountains? b) What specific roles can forestry sector play in transforming the “brown” economy of countries to Green Economy? The current perceptions and opinions of national policy makers is that forestry sector plays a marginal and negligible role in economic development. Further, the Green Economy focus on production should include the negative implications of mass consumerism. One pertinent question to ask will be: Can the Green Economy actually deliver in terms of changing ground realities for indigenous, local and poor people, particularly in terms of rewards (through PES, REDD, REDD+) for promoting good environment stewardship and helping in carbon sequestration through good forest management and use of indigenous knowledge for ecologically and socioeconomically sound forest management including agro-forestry-based farming?

Markets for mountain goods and services have been growing both in international and domestic markets. Global trade in herbal medicines, including pharmaceutical and nutraceuticals alone is estimated at USD 120 billion/year where China’s share is between USD 5-10 billion and that of India about USD one billion/year. Nepal’s share is approximately 20 million (Karki and Bhattarai, 2012). However, the share of mountain herbs and natural products marketing can be enhanced many fold through green economic policies and programmes. In the just concluded climate negotiations in Doha, there is global agreement that all countries have rights to develop based on the principle of equity

in carbon space utilization (UNFCCC, 2012). In Durban and Cancun conferences also, there have been global agreement on common but differentiated responsibilities (CBDR) according to the capability to address climate change issues. Pursuing low carbon economic growth paths is one of the most cost effective means to adapt to and mitigate against climate change that can also address livelihood issues in Nepal. The impact of global warming on the Himalayan mountains being one of the highest, it will be justified for Nepal to make a call for national and regional policies and financial and technical support to initiate green economy low carbon growth path to start transforming its brown economy oriented development that can reduce both carbon intensity as well as reduce poverty.

Conclusion

The forest-based green economy has ample opportunities in both the plain and the mountain eco-systems of Nepal but there also are risks and challenges. Green and low carbon solutions in Nepal have to create plenty of green jobs, help produce surplus green products for national and international markets, enable producers to better access regional and global markets and help alleviate poverty and inequality among different gender and ethnic groups. Further, the green economy transition in Nepal which is a least-developed country should not constrain the policy space to pursue its own chosen development path which best serves the interest of its citizens. There is also need for a better international policy support, especially through the UNCSD process to develop green growth pathways in Nepal that recognize, value, and realize the ecosystem goods and services produced by the mountains and plains of Nepal.

Nepal's forestry sector will face numerous challenges in adapting and adopting green economy policies. But there are also opportunities. Forestry sector has to take the lead along with other sectors of Nepal as co-leaders in translating green economic opportunities into concrete livelihood and environmental gains based on the reaping of 'low hanging fruits' such as community forestry, organic farming, ecotourism, forest-based livelihoods approaches, and renewable energy solutions such as bio-gas, bio-briquettes, and micro hydro energy to fuel the green growth engine of concepts and practices for sustainable development of Nepal. Nepal must invest in forest-based green projects such as watershed management, afforestation and reforestation, forest resource development and management, pasture management, eco-tourism in protected area networks, and, NTFP value chain development as well as carry out necessary policy reforms to provide incentives to forestry sector for promoting Green technologies and practices in the country. National coordination and international cooperation is necessary for promoting the green economy and good environmental governance since accessing markets, easy finance and technologies will be critical for the concept to take root for which working with neighbouring countries especially India and China to secure markets for Nepal's green products will be necessary. A nationally contextualized and country driven green economy process can provide opportunities to promote human wellbeing and intergenerational equity making the development both inclusive and sustainable. Nepal's hilly and mountains regions can contribute significantly to provide complementarity and synergy to make the transition to green economy happen

as smoothly as possible by using the rich green resources including forests, biodiversity and water of Nepal to its maximum potential.

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