

South Asian Consultation on Green Economy

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Report

Organizers

South Asia Watch on Trade, Economics and Environment (SAWTEE), Kathmandu

International Development Research Centre (IDRC), Ottawa

Abstract

In a green economy, economic growth is enabled, but by ensuring that the process of attaining growth does not inflict harm on the environment and social inclusiveness. Concept of green growth is of particular importance to South Asia due to the region's vulnerability to climate change, weak coping capacity, and the intertwined aspect of equity and inclusiveness with social, cultural and political values. South Asia Watch on Trade, Economics and Environment (SAWTEE), in collaboration with the International Development Research Centre (IDRC), Canada, organized a two-day regional consultation titled "South Asian Consultation on Green Economy" on 23-24 June 2013 in Kathmandu. The three main messages of the consultation are: i) South Asia cannot afford to take the brown path as it grows; ii) there cannot be a single definition of "green economy" and therefore, it should be understood in a pluralistic sense; and iii) South Asian countries should conduct research on some of the agendas identified by the consultation to help guide themselves follow a green growth path.

South Asian Consultation on Green Economy

Today, one of the biggest challenges all countries are facing is maintaining an astute balance between improving the well-being of their people and respecting environmental boundaries. In such circumstances, the concept of green economy seems an attractive option for both developed and developing countries. In a green economy, economic growth is enabled, but by ensuring that the process of attaining growth does not inflict harm on the environment and social inclusiveness. That is, the traditional method of measuring gross domestic product (GDP) is adjusted to account for pollution, resource depletion, declining ecosystem services, and distributional consequences of natural capital loss to the poor.

Of late, many multilateral and inter-governmental organizations such as the United Nations Environment Programme (UNEP), the World Bank, the Asian Development Bank, the United Nations Economic and Social Commission for Asia and the Pacific, among others, have been focusing on and emphasizing the pursuit of green economy or green growth by all countries, whether developed, developing or least-developed. Many consultations and workshops have also been organized focusing on green growth. For example, South Asian Network for Development and Environmental Economics (SANDEE), in partnership with the United Nations Regional Poverty-Environment Initiative in Asia-Pacific and UNDP Bhutan, organized a two-day regional workshop on 9-13 August 2012 in Paro, Bhutan to identify economic instruments to manage the environment. Similarly, the International Human Dimensions Programme on Global Environmental Change organized a week-long training workshop on Asian Development Pathways and transitioning towards a Green Economy in 2011 in China. The Asian Development Bank is currently in the process of organizing a regional conference on green growth in South Asia during the first quarter of 2014 in Bhutan.

A recent paper by the World Bank¹ argues that the first category of benefits that can be derived from green policies is the economic benefits from a better environment, including the amenities derived from it and the use of natural capital as a production factor. It argues that although most of the green policies are likely to have an economic cost over the short term, which create trade-offs between environmental protection and economic growth, they also yield economic benefits such as job creation and poverty alleviation, and contribute to growth in the long run by correcting existing sub-optimality and market failures. Accordingly, it recommends three policy instruments to green growth: i) pricing the externalities; ii) putting in place complementary measures along with pricing the externalities, where necessary; and iii) adopting activist policies such as innovation and industrial policies.

¹ Hallegatte, Stephane, Geoffrey Heal, Marianne Fay and David Treguer. 2011. "From Growth to Green Growth: A Framework", Policy Research Working Paper 5872. Washington, D.C.: The World Bank.

Green economy is especially relevant to South Asia as it not only includes important aspects of economic efficiency and policy reforms (taxes, economic incentives, and investment in green technologies); but also promotes a holistic view embracing social concerns of equity, inclusiveness, and the compatibility of changes with social, cultural and political values. Promotion of a pathway for green economic development on a collective basis is appropriate for South Asia's development because it offers insights and policy measures for sustainable transformation of socio-economic systems.

Green Economy and South Asia

South Asia is one of the most vulnerable regions to climate change. Its vulnerability is exacerbated by the region's geography coupled with high levels of poverty and population density. With climate change, the incidence of natural disasters such as erratic monsoon, retreating glaciers, frequent flood, drought, hurricane, and sea level rise are projected to increase in South Asia. These incidents are likely to have adverse effects, especially on the poor in the region, whose livelihoods depend largely on ecosystems. With over one-fifth of the world's population—making it both the most populous and the most densely populated geographical region in the world—and an estimated 600 million people subsisting on less than US\$1.25 a day, even small climatic variations can cause irreversible losses and push a large number of people into destitution in South Asia.

Although South Asian countries, barring India, are among the least emitters of carbon dioxide (CO₂), they are the ones suffering the most from the adversities brought in by climate change. The region is bearing the brunt of extensive use of natural capital and massive greenhouse gas (GHG) emissions by developed countries in the past. In the case of India, however, driven by high economic growth, its demand for energy and other resources has been increasing, thus exerting pressure on already stressed and largely degraded natural resource base. Still, its emissions remain well below that of the developed world in terms of emissions per capita.

South Asian countries are aware of the imminent catastrophe that climate change could bring to the region. Therefore, they have come together to find a way to reduce the impact of climate change through adaptation and mitigation. For instance, during the South Asian Association for Regional Cooperation (SAARC) Ministerial Meeting on Climate Change in 2008 in Dhaka, the governments adopted a SAARC Action Plan on Climate Change, which was later endorsed by the 5th SAARC Summit in August 2008 in Colombo. Similarly, the 16th SAARC summit held in Thimphu came up with a separate statement on climate change besides the regular Summit declaration. The statement emphasized the importance of reducing dependence on high-carbon technologies for economic growth, and stated that promotion of climate resilience will promote both development and poverty eradication in a sustainable manner.

India, the highest GHG emitter in the region, has started looking into greening its economy. Adoption of GHG protocol by many companies and increasing adoption of clean development mechanism projects in the country are some examples in that respect. Other countries in the region are also following suit. However, there has not been much debate on the subject at the regional level involving a large variety of stakeholders. An issue as important as this requires extensive discussion among policy makers, the private sector, research organizations, academia, civil society and the media to identify the different issues that should be considered for greening the region's economies. The issues thus identified would then form the basis for further extensive research on the subject.

Rationale for a Consultation

Despite being a “win-win” solution for all, green economy is still an evolving concept and will require global consensus on clarity of the end product and the process to achieve it. Developing and least-developed countries have some major concerns regarding the possible negative impacts of embracing a green growth path. For instance, they are concerned that taking such an approach could provide developed countries the leeway to impose additional conditionalities and/or other measures such as imposition of border taxes that would hinder market access opportunities for the former countries' products into the latter's markets.

In this context, SAWTEE, together with International Development Research Centre (IDRC), Canada, organized a two-day regional consultation titled “South Asian Consultation on Green Economy” in Kathmandu on 23-24 June 2013. The main objectives of the consultation were to identify research agendas on green economy for South Asia and create a network of like-minded individuals/institutions to work further on South Asian green economy. More than 40 participants from Bangladesh, Bhutan, Canada, India, Korea, the Maldives, Nepal, Pakistan and Sri Lanka participated at the event. The sections below cover major issues that were highlighted in each session of the consultation.

Opening Session

The consultation began with SAWTEE's Chief Executive Director, Dr Ratnakar Adhikari, stressing the need for a green economy in the region due to its high level of poverty and high vulnerability to climate change. Arjan De Haan, Programme Leader for IDRC's Supporting Inclusive Growth, Social and Economic Policy Unit, raised an important question of how to minimize the tradeoffs between economic growth and environmental conservation. He stated the need for the consultation to come up with policy prescriptions to balance these tradeoffs. Talking about green economy in the context of Nepal, Chief Guest of the Programme, Mr Yuba Raj Bhusal, Secretary of the National Planning Commission (NPC), Government of Nepal, informed about the government's plan of graduating Nepal from its least-developed country (LDC) status by 2022, and stressed the need to understand

how a green economy could aid in this transition. He further stated the need for Nepal to study the potential of small and medium enterprises (SMEs), hydropower and ecotourism, among others, in relation to green economy, and incorporate these issues in the country's next three-year plan. The keynote address by Dr Arbinda Mishra, Director, Earth Sciences and Climate Change Division, The Energy Resources Institute (TERI), New Delhi, focused on coming up with an operational definition of green economy for South Asia. He talked about how understanding the concept of green economy in a pluralistic sense is necessary and that it is important to talk about "green economies" rather than a single "green economy". He stated three major challenges to sustainable development in South Asia: promoting social inclusiveness, managing urban transition and building resilience. According to Dr Mishra, the way forward for South Asia is to develop international and regional cooperation, policy innovations (risks, flood insurance, etc.), and promote inclusiveness.

The participants also identified other challenges like identifying the sectors which could potentially contribute to a green growth agenda; designing policies, regulations and incentive structures at the domestic level; overcoming trade barriers in the international market; and accessing financial, technological and human resources to make the necessary transition towards a green economy. The ability to mobilize domestic resources as well as expertise is necessary to address some of the above-mentioned challenges.

Understanding Green Economy in the Context of South Asia

Green economy is a relatively new concept and is yet to be clearly understood by many. This session's goal was to understand green economy and explore the challenges and opportunities for green economy in South Asia. In his presentation, Dr Minhaj Mahmud, Research Fellow at the Bangladesh Institute of Development Studies (BIDS) provided a snapshot of challenges and what it entails to make a transition to a green economy. Citing examples from agriculture in Bangladesh, he stated how modernization of agriculture has attributed to increase in GHGs, and stressed on the need to shift agricultural practices to more conservative techniques. Dr Mahmud also highlighted the importance of SMEs and their role in promoting a green economy. He however stated that there is limited information on these SMEs and their contribution; so, we need to focus more on how to incorporate these SMEs into a green economy framework.

Dr Rucha Ghate, Senior Governance Specialist of the International Centre for Integrated Mountain Development (ICIMOD), posed the question of whether there is a market for green economy and whether people really want and demand green initiatives, especially in South Asia. Therefore, while a lot of resources and attention has been focused towards the supply side of green economy, there is also a need to study the demand side of it. Currently, people in developing countries have the smallest carbon footprint, but are suffering the most. They are also demanding more development without realizing how much it would contribute to environmental problems. Therefore, there is a need to increase the constituency of those that demand green economy. According to Dr Ghate, to

increase the demand for green economy, there is a need to change the mindset and attitude of the people. Mr Asheesh Shah, Policy Analyst at CUTS International, focused his discussion on the need to push the government on various policy aspects to promote a green economy. He also talked about the need to explore whether the existing laws and regulations are working. The need to link research and policy was deemed important in the discussion.

The session also discussed the role of the private sector and its contribution to fill the financial gaps for green economy. Similarly, the role of community-based institutions in transitioning towards a green economy was highlighted as an issue that needed to be explored more. The session concluded that there are challenges to a green economy. Collaboration at various levels and availability of finances would make the transition smoother in the case of South Asia. The chair of the session, Mr Ajay Dixit, General Secretary of the Institute for Social and Environmental Transition (ISET) Nepal, stated the need to nurture plurality when transitioning towards a green economy so that we do not get locked in a particular pathway. There is a need to allow flexibility to adapt to changing situations. The transition is neither a simple nor a clean slate; we need to build up on existing incentives and admit that the changes will be incremental.

Experience Sharing and Lessons Learnt

The chair of the session, Dr Dinesh Bhujju, Academician at the Nepal Academy of Science and Technology, talked about how countries like Cambodia, South Korea and Japan have already developed green economy frameworks, and stated that it is high time for South Asian countries to learn from these examples and work towards creating a green economy framework.

Dr Yong Sung Kim, Programme Manager at the Global Green Growth Institute, presented on South Korea's transition towards a green economy. Citing three reasons— climate change, energy insecurity and economic slowdown – for Korea's move towards a green economy, Dr Kim mentioned five pillars of green growth policy that Korea has adopted. He underscored that it was the strong political will and drive by the government that spurred private sector investment for green technology development and to create a market. He then talked about the need to keep in place adequate regulations necessary to regulate environmental woes, along with providing incentives and subsidies to induce the market and private sector to contribute to environment-friendly growth. The fourth pillar he mentioned was responding to negative externalities and making sure that costs and benefits for abatement were accounted for in the market mechanism. Lastly, he highlighted the importance of the need to enhance public and corporate awareness through different activities and education.

In response to a question of whether green growth would slow down development, Dr Kim said that green growth is not an obstacle to growth, but a means of exploring new engines of growth. He also said that green growth could create more jobs not only for the educated and elite class, but also for the poor and middle class. For South Asia's smooth transition to a green economy, besides a strong

level of political investment and government intervention, Dr Kim stressed the need for a shared vision and efficient coordination among relevant authorities. He also added that increased public awareness and changes in behavior, and sharing of knowledge among regional neighbours and global leaders are essential elements for green economy.

Mr Vivan Sharan, Associate Fellow, Observer Research Foundation, discussed about green economy in the context of India's energy sector since it is the largest utilizer of natural resources and also the largest emitter of GHGs. He stressed on the need to explore different energy options, and to enhance regional coordination. Taking into consideration the huge cost of transitioning to a green economy, Mr Sharan talked about the need for a robust mechanism in the capital market, and the need to allocate the available capital to its most productive use. Referring to the estimated need of funds to tackle climate change, Mr Sharan stated that the currently available funds are nowhere close to the requirement. According to UNEP, he said, about 86 percent of the funds necessary to transition to a green economy will come from the private sector, but the private sector in South Asia might not have been ready yet to make that investment. He accredited India's significant growth in investment in renewable energy to policy interventions and subsidies.

The participants discussed the need to get buy-in from the government and the private sector to move into a green economy. Creating incentive structures, focusing more on research and development, and revisiting existing rules and regulations and the roles of different agencies are important in that respect, they opined.

Sectoral Perspectives on Green Economy

Agriculture: The main objective of this session was to understand how agriculture in South Asia can aid the region in moving towards a green economy. The presenter, Dr Narpat Jodha, Senior Associate Scientist of ICIMOD, and discussant Dr KP Pant, Joint Secretary, Ministry of Agriculture Development, Government of Nepal, both stressed the need to encourage the use of traditional practices and farmers' knowledge for a green economy. Citing many problems with modern agricultural practices, they stated that there has been a shift from sustainable agriculture to unsustainable high yielding systems. They asserted that agriculture is an integrated system, having links with forestry, livestock, etc. But researchers and international projects today fail to understand these inter-linkages and look at agriculture in isolation.

Participants opined that it is not possible to revert back to traditional agriculture methods, but there is a need to devise alternative methods to make the agriculture system more sustainable. For that, it is necessary to develop careful policy measures. The policies should follow a bottom-up approach to integrate local-level learning. The participants also stressed the importance of attracting the private sector to move towards sustainable agriculture and green economy. Investment in the agriculture

sector is necessary to reduce GHG emissions, enhance energy efficiency, and prevent the loss of biodiversity and ecosystem services. Poor people are finding it difficult to sustain their livelihoods depending on agriculture. Therefore, securing people's livelihoods depending on agriculture is also part of moving towards a green economy.

Forestry: This session discussed the importance of the forestry sector for green economy not only from an environmental perspective but also largely in the context of how it could aid in meeting the livelihood needs of a large number of people in South Asia. Mr Athula Senaratne, Head of the Environmental Economic Policy Unit at the Institute of Policy Studies of Sri Lanka (IPS), presented on the total economic value of forests and the role of forests in promoting green economy. He mentioned that the most direct use of forests in South Asia has been for the conversion of forest land into agriculture, resulting in high rate of deforestation. The importance of involving community members and giving forest management practices in the hands of local institutions was highlighted as an important aspect of green economy. Dr Smriti Dahal, Senior Programme Officer at SAWTEE, highlighted the prospect of community forestry as a means of transitioning towards a green economy in South Asian countries. The session also discussed that projects like Reducing Emissions from Deforestation and Forest Degradation Plus (REDD +) have the potential to contribute to green economy. Participants also mentioned that issues of land tenure, land ownership, access to forest products, and knowledge contribution should also be looked into while discussing the role of forestry in green economy in South Asia. Specifically, the contribution of non-timber forest products to the region's economies and empowerment of women, while contributing to green economy, were also discussed in the session.

Tourism: With tourism contributing to a major portion of the GDP and government revenue in the Maldives, Mr Moosa Zameer Hassan, Deputy Director General at the Ministry of Tourism, Government of Maldives, focused his presentation on tourism development in the Maldives and how it can contribute to green growth. Due to its vulnerability to climate change, the Maldives has developed a tourism development master plan that focuses on resource efficiency and reduced emissions. For example, strict standards for hotels have been established. These standards include, but are not limited to, environmental regulations, water conservation, waste management and sewage treatment, operational service standards, carrying capacity standards and building standards. As a nation that is heavily dependent on import of fuels, it has also devised a carbon neutral plan for 2020 that aims to reduce electricity emissions by 80 percent, and generate 60 percent of its electricity by solar and the remaining 40 percent by wind and biomass. Not only does the Maldives has a conservation target; it is also working to generate income for the community by selling local products.

Mr Tashi Tenzin, Infrastructure Development officer at the Tourism Council of Bhutan, talked about his country's policy of catering to low-volume and high-value tourists. Bhutan does not allow mass

tourism due to its limited infrastructure and carrying capacity. Mr Tenzin also talked about gross national happiness, a concept developed by Bhutan, four pillars of which relate to green economy: equitable socio-economic development, preservation of culture and tradition, conservation of the environment, and good governance. Mr Tenzin stressed on the need for political will and people's initiatives for a move towards a green economy.

Energy: Energy consumption plays an important role in environmental degradation; and a move towards a greener economy requires innovations in clean energy techniques. Making a presentation on the energy sector from a green economy perspective, Mr Muhammad Zeshan, Research Economist at the Sustainable Development Policy Institute (SDPI), Pakistan, stated that countries in South Asia are currently experiencing high economic growth rates, fuelled by high energy consumption and thus an increase in carbon dioxide (CO₂) emissions. He recommended that there is a need for South Asian countries to invest in more environment-friendly technologies, and set regional environment protection targets to mitigate the increasing environmental damage in the region. The need for regional collaboration was also highlighted, stressing that South Asian governments should meet at least once a year to discuss devastation impacts of rising levels of CO₂ emissions and to devise strategies to cope with these environmental challenges. Establishing a system of regional trade in energy to secure energy supplies in South Asia was an option that was mentioned in the session. This would not only result in energy security, but the regional interdependency that would be created by this system would also likely reduce conflicts in the region.

Mr Moogdho Mim Mahzab, Research Associate at BIDS, talked about the need to further study in detail the relationship between GDP, energy consumption and carbon emissions. He also felt a need to learn from Sri Lanka on the measures it has taken to ensure low carbon emissions. Mr Mahzab stressed on the need to consider the heterogeneity between and within countries in the region prior to developing regional policies on energy.

Transportation: The objective of the session was to understand the relationship between transportation and green economy. Ms Chhavi Dhingra, Programme Manager at EMBARQ India, talked about cities' roles as engines of economic growth and the close link that exists between a city's sustainability and its transportation system. Stressing the need to move towards sustainable models of transportation, Ms Dhingra recommended learning from developed countries that have well-developed public transportation systems. More dependence on public transportation would lower transportation costs, result in cleaner air, generate more jobs, decrease road accidents, and so on. There is a need to develop an efficient push and pull system where people are pushed out of their personal vehicles and pulled into public transportation systems. Adding to Ms Dhingra's points, Mr RB Rauniyar, Managing Director of Interstate Multi-modal Transport, talked about a need for a paradigm shift in the travel mode of travelers. He also identified ways of mitigating traffic congestion by the use of public transportation, decreasing the number of trips and shifting towards the use of

efficient vehicles like hybrid. Focusing on Nepal, he talked about the lack of fuel quality checking mechanism and poor road conditions as the main problems in transportation. He recommended fuel quality checking and the need for road contractors to guarantee the maintenance of newly built roads as necessary steps towards a green economy. The participants also discussed the need to have collaboration between different ministries to ensure improvement in transportation and to design a low-carbon economy.

Infrastructure: Dr Jiba Raj Pokharel, Professor at the Institute of Engineering, Nepal, stated that one of the main inter-linkages between green economy and infrastructure construction is the use of renewable energy and minimization of conventional energy. Stating that most city planners do not take green concepts into consideration while planning cities, he highlighted the importance of zoning in infrastructure development. Giving examples of different cities around the world, Dr Pokharel stated the need to have mixed usage cities to move towards a green economy. Mr Chatura Rodrigo, Research Economist at IPS, focused his talk on the Sri Lankan experience and stressed that policies and regulations are important in infrastructure development. He recommended that instead of conducting an environmental impact assessment for infrastructure, there is a need to conduct strategic environmental assessment that integrates the assessment of the whole city and not just a building. Talking about social inclusion, Mr Rodrigo raised the issue of uprooting marginalized people while constructing cities and how this affects their livelihood. The participants also discussed the need for different ministries related to infrastructure development to work in collaboration and develop integrated policies for infrastructure development. One of the important questions raised in the session was how to increase or enhance the resilience of existing infrastructure against climate change. This was an important issue for countries in South Asia as they cannot afford to lose what they already have.

Creating Green Jobs in South Asia

This session highlighted the various challenges in sustaining green jobs. Dr Edgard Rodriguez, Senior Programme Specialist at IDRC, Canada, stressed the need for social inclusion in the face of widespread informality and low-productivity jobs among women and the young and posed the question how economic growth could be made more inclusive for these groups. He talked about the need to define better what consists of green jobs in South Asia and the different kinds of jobs that will be created when the region makes a transition towards a green, urban economy. There exists a need to explore whether new technologies for a green economy demands more or less unskilled workers and favours pro-poor growth, especially in South Asia's rapid urbanization. Ms Shyama Salgado, Former National Coordinator of the Green Jobs Project, International Labour Organization, Sri Lanka, laid the basic requirements for a decent job and agreed that there is a need to explore potential for green jobs in South Asia. Dr Bharat Pokharel, Deputy Country Director of HELVETAS Swiss Interco-operation Nepal, talked about the challenges of understanding green jobs for Nepal. He also highlighted opportunities for green jobs in the forestry sector. Mr Hamza Abbas, Research Analyst at

SDPI, talked about the issue of social justice and green jobs. It was stressed that green energy will help women in rural areas find proper and affordable energy sources and also help in income generation.

Financing the Transition towards a Green Economy

This session addressed issues related to financing the transition towards a green economy. Making his presentation in the session, Mr Tirthankar Mandal, Programme Coordinator at Climate Action Network South Asia (CANSAs), stated that financing for green economy should come from the private sector; government intervention is critical in mobilizing resources that come from the private sector. He also talked about the need to explore new mechanisms for financing. One of the problems identified by Mr Mandal was the duplication of green economy efforts in South Asia and the need to fill existing gaps with regional collaboration. Mr Puspa Sharma, Research Director at SAWTEE, identified the need for a huge amount of money for financing a green economy and suggested that South Asian countries should take incremental steps in transitioning to a green economy. Mr Sharma also suggested on exploring banks and other institutions that provide investments to promote renewable energy in South Asia and to learn from their business models. Furthermore, he highlighted that currently major allocation of funds against climate change has been for mitigation rather than adaptation. Financing for green economy would entail more focus on mitigation and less on adaptation. Therefore, in their efforts to tread on a green growth path, South Asian countries should be cautious that the funds they would receive for climate adaptation is not channeled for mitigation in the name of green growth. The participants stressed that financing for a green economy is a major challenge and that accessing finances through international sources should be strengthened.

Technology Transfer for Green Economy

The session stressed the importance of both forms of technology transfer—north-south and south-south for South Asian countries' transition to a green economy. Dr Vishaka Hidellage, South Asia Director for Practical Action, Sri Lanka, emphasized the existence of traditional and indigenous technologies in countries of the region and the prospects of sharing such technologies among the countries. She identified capacity building at the local level, innovative public-private partnership, and mobilizing local and regional research institutions as some of the initiatives that were occurring in the region under technology transfer. Dr Hidellage highlighted some of the good examples of technology developed at the local level, for example, pico hydro in Sri Lanka, floating gardens in Bangladesh, gravity rope-way in Nepal, etc. On the other hand, she said, technology developed by the private sector is marketed more towards a certain target market, especially the one that has money. Also, technology transfer of many developed countries does not necessarily match the needs of the masses in developing countries. Hence, she argued that for technology transfer to be successful, it needs to correct the mismatch that currently exists and efforts should be made to combine technology with existing local knowledge at the community level.

Dr Ratnakar Adhikari, Chief Executive Director, SAWTEE, stressed that south-south technology transfer should be considered more viable compared to north-south technology transfer due to low cost of acquisition and the prospects of faster diffusion. Dr Adhikari stressed that South Asian countries have very low investment in research and development; therefore, there is a need to address this issue. One way of doing that would be having more collaboration between universities and the private sector. Dr Mahfuz Kabir, Senior Research Fellow at the Bangladesh Institute of International and Strategic Studies shared Bangladesh's experience of how microfinance has played a role in getting rural people access to technology. He highlighted the different cost barriers that were present in technology transfer and the need to explore affordable financing that encourages technology transfer. The participants emphasized that for technology transfer to be successful, there are various pre-conditions such as capacity building at local level, research and preparation for the transfer, study of the sustainability of the technology, etc., that need to be addressed.

Research Agendas

The last session of the two-day consultation was a group-work session, in which participants were divided into four groups (agriculture and forestry, energy, infrastructure and transportation, and tourism) to discuss possible research agendas in the six sectors discussed earlier. Each group was asked to come up with three research agendas. The research agendas identified by the groups are provided below.

Agriculture and Forestry

1. Document local knowledge, for example, indigenous knowledge, perceptions, beliefs and technology, with a particular focus on understanding of climate change and how they are coping with extreme events.
2. Research financing options for agriculture and forestry. Some of the issues to be looked within the sectors would be to understand the role of monetary policies, financing institutions, generating funds at the local level, etc.
3. Explore and identify decent jobs in agriculture and forestry.

Energy

1. Conduct an integrated energy plan analysis.
2. Conduct comparative analysis of incentive structures for the private sector in renewable energy. The analysis should study large-scale and small-scale projects, financing issues and national and international financing mechanisms.
3. Study the subsidy structure of fossil fuels in South Asia and its impact on renewable energy growth.

Infrastructure and Transportation

1. Develop a 'green city' index for South Asia. The four indicators for the index would include: access to public transportation and other services, participatory planning, industrial performance, and budgetary allocations for infrastructure.
2. Quantify the cost of local time, health, opportunity, access due to congestion and lack of availability, accessibility, affordability and quality of existing transportation services.
3. Conduct a benefit-cost analysis of industrial clustering and green freight corridor.

Tourism

1. Identify the cross-sectoral linkages of tourism at the national and sub-national levels by applying the UN methodology of Tourism Satellite Accounts (TSA).
2. Conduct an economic valuation of tourism services, particularly non-market services.
3. Study appropriate policy mechanisms for low impact and inclusive tourism.

These agendas were presented at the 6th South Asia Economic Summit (SAES)² held in Colombo on 2-4 September 2013. The participants of the 6th SAES provided inputs and validated these agendas. SAWTEE and IDRC will collaborate with each other in taking these agendas forward by further prioritizing them in the context of South Asia.

Conclusion

There is a consensus on the need for green economy in South Asia. The challenge, however, is to find ways and means to minimize the tradeoffs between economic growth and environmental conservation. Green economy in South Asia should be looked at in a pluralistic way, and countries should not get locked into a particular pathway to attain green economy. Social justice and equality are two of the major requirements of green economy. Involvement of local people in all sectors and ensuring social inclusion in green jobs is also necessary for green economy. Since green economy is a relatively new concept and people across different sectors lack adequate understanding of the issue, there is a need for formal and informal education and awareness programmes. This will not only generate adequate knowledge but will also aid in changing the mindsets of people to adopt green initiatives. Technology transfer, not only north-south but also south-south and within communities, is a pre-requisite for green economy. Importantly, as has been seen in other countries, high level political will and engagement is necessary for every country's transition towards a green economy.

²Started in 2008, the SAES engages policy makers, representatives of political parties, business community, international and intergovernmental organizations, development partners, civil society, academia and media from South Asia. The annual event has become an appropriate forum to discuss regional approaches on issues of mutual concern and also learn from home-grown solutions to common predicaments that can be replicated elsewhere in South Asia. The theme for the 6th SAES is "Towards a Stronger, Dynamic, and Inclusive South Asia".

In-depth research on different aspects of green economy would help in the preparation of public policy and convincing the private sector to promote a greener and more prosperous South Asia.