

# Report on Natural Capital for Inclusive Growth: Options and Tools for South Asia

A High-Level Policy Dialogue for Senior Policy Makers

17–19 December 2014  
Oberoi Grand Hotel, Kolkata, India



# About ICIMOD

The International Centre for Integrated Mountain Development, ICIMOD, is a regional knowledge development and learning centre serving the eight regional member countries of the Hindu Kush Himalayas – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan – and based in Kathmandu, Nepal. Globalisation and climate change have an increasing influence on the stability of fragile mountain ecosystems and the livelihoods of mountain people. ICIMOD aims to assist mountain people to understand these changes, adapt to them, and make the most of new opportunities, while addressing upstream-downstream issues. We support regional transboundary programmes through partnership with regional partner institutions, facilitate the exchange of experience, and serve as a regional knowledge hub. We strengthen networking among regional and global centres of excellence. Overall, we are working to develop an economically and environmentally sound mountain ecosystem to improve the living standards of mountain populations and to sustain vital ecosystem services for the billions of people living downstream – now, and for the future.



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Internal Report

Report on

Natural Capital for Inclusive Growth:  
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## Rationale and background

A large variety of environmental resources are being degraded at alarming rates, and with them, the capacity to support and sustain human well-being. Studies undertaken in different parts of the world over the last two decades or more have highlighted the diverse impacts of human activity on the environment. Since the mid-1980s, one of the primary motivations for these studies was the concern that rapid economic growth in some countries was being achieved through the liquidation of natural capital – a temporary strategy that erodes the potential for future sustained advances in wealth and human well-being, unless the natural capital is converted efficiently into other forms of wealth. Further, the Millennium Ecosystem Assessment (2005), an in-depth assessment of the state of ecosystems throughout the world, revealed that approximately 60 percent of the ecosystem services that support life on Earth (such as freshwater capture, fisheries, air and water regulation, the regulation of regional climate, and the control of natural hazards and pests) are all being degraded or used unsustainably. Scientists warn that the harmful consequences of this degradation could grow significantly worse in the next 50 years. “Any progress achieved in addressing the goals of poverty and hunger eradication, improved health, and environmental protection is unlikely to be sustained if most of the ecosystem services on which humanity relies continue to be degraded,” said the study (MA 2005). Over the intervening decade, considerable progress has been made in the measurement and valuation of ecosystem services. The recently concluded study on ‘The Economics of Ecosystems and Biodiversity’ (TEEB) pulled together much of the work in this area and succeeded in focusing international policy attention on the economic contribution of ecosystems and biodiversity. Valuation has been widely accepted in the environment community, but engaging finance ministries and economic planning agencies in dialogue about growth and ecosystem services remains a challenge.

One part of the solution to this challenge lies in policy making that takes into account the full value of ecosystem services. Another part lies in the regular production and dissemination of macroeconomic aggregates which report environmental changes. Both these strategies are vital and complement each other. Valuation is not only an integral part of accounting it also has an independent role to play in supporting informed decision making. Robust valuation of ecosystem services, with an understanding of its limits, is important for designing projects.

There is ample scope for strengthening the understanding of the value that ecosystem services play in policy choices. In view of all these developments, we proposed a high level policy dialogue that will use the two starting points of valuation and accounting to initiate a dialogue with statisticians, economists, and ecologists on how natural capital can be centre stage of a green growth strategy.

## Objectives of the policy dialogue

This policy dialogue brought together senior policy practitioners of the provincial governments of the states of North-East India, Bhutan, Myanmar, and Nepal. These states combined form one of the richest bases of natural forests and centres of mega bio-diversity in the world. The dialog was in partnership with experts on environmental policy, macro-economists, and natural scientists, who together with the senior practitioners explored approaches to augment existing macroeconomic aggregates.

The policy dialogue aimed to:

1. Evaluate the role of natural capital in economic growth;
2. Illustrate and exemplify how inclusive wealth defined to include natural capital should be an integral part of a country’s system of national accounts;
3. Elucidate current efforts at the international level, both within the UN system and in specific other countries who already integrate environmental considerations into their development policies and growth strategy;
4. Illustrate how the valuation of ecosystem services can improve public policy decision making;
5. Review methods for valuing ecosystem services and identify policy and capacity needs for valuation; and
6. Identify ways to develop valuation skills and macro-economic aggregates, other than GDP, to measure progress at the country level.



## Format

This two and a half day event was purposely designed to allow ample time for each session to be interactive and to provide an opportunity for everyone to participate. The sessions covered all aspects of the relationship between natural capital and economic growth including the use of tools like valuation of environmental goods and services and how these could be integrated into national accounts. Day 1 focused on the green economy and natural capital in general; whereas Day 2 focused on accounting and valuation in particular with a special emphasis on how these tools could be used in mountainous and hilly regions.

## Participants

The 50 or so participants included representatives from both the small and large provinces of India (i.e. Assam, Nagaland, Manipur, Mizoram, and Arunachal Pradesh) and from the countries of Bhutan, Myanmar, and Nepal. Participants included forestry experts and statistical officers, as well as specialists in economic planning and representatives from influential NGOs. Planning for, and obtaining the right mix of participants was critical to the success of the policy dialogue.

## Resource persons

Resource persons for this dialogue included experts on macroeconomic policies, natural capital, environmental valuation issues, and national accounting; as well as a small team of policy makers, economists, ecologists, and national accounts specialists.

## Partners

The two co-organizers for this dialogue were: the United Nations Environment Programme (UNEP) and the International Centre for Integrated Mountain Development (ICIMOD). The two supporting, associated partners, were: the South Asian Network for Development and Environmental Economics (SANDEE) and the United Nations Educational, Scientific and Cultural Organization (UNESCO).

The intent of the partners was to bring together these experts for a dialogue which would include ample time for break out groups to discuss how the learnings could be implemented and how the challenges to implementation could be overcome. For this reason, the participants were advised ahead of time to come prepared to discuss their own country's system of national accounts and how environmental considerations could be incorporated.





# Policy Dialogue Day 1

## Opening Session

The event started by setting the context for the policy dialogues. The Eastern Himalayas are a unique region that is rich not only in biodiversity, agro-biodiversity, and water resources but also in terms of its unique cultural diversity. Despite this richness in natural capital, it houses some of the poorest people in the world, and many of them even experience chronic poverty. In addition to this already deplorable situation, since this region encompasses the two ends of the terrestrial ecosystem (both coastal regions and mountains) it is, in recent times, particularly vulnerable to climate change and other changes.

It may be possible to reconcile this apparent disparity by using systems that account for natural capital. Natural capital accounting systems, which take into account the stocks and flows of natural resources, are a good way of informing policy makers, consumers, and the society at large, on the best ways to decide on the use and consumption of these natural resources. These systems stand in sharp contrast to more traditional systems (such as those based on GDP) which only account for flows and do not report on the depletion of the natural resource base.

It was against this backdrop, that there appeared to be an urgent need to bring together politicians and policy makers in a policy dialogue which would sensitize them to the role that natural capital can play and how best to account for it.

In 1987, the Brundtland Report defined 'sustainable development', but a conceptual framework and appropriate indicators were not articulated. During the course of the next few days, we will try to explore how it may be possible to go beyond GDP as a traditional indicator since it is limited to measuring social progress but fails to account for well-being and sustainability. This approach is particularly relevant to the population of the Hindu Kush Himalayan region, since it is generally accepted that here natural capital contributes significantly to the mountain economy but there is no good way to estimate the extent to which it does so. Accounting for natural capital should highlight the importance of mountain ecosystems and also helps to redefine sustainable mountain development in the post sustainable development goals context; it should also help to justify investment and management of natural resources for the enhancement of livelihoods and the preservation of the environment.

The keynote speech helped to clarify how the human economy is embedded within the natural economy; whereas, traditionally the situation has been viewed the other way around, and the natural economy has been seen to be part of the human economy. Even though the society at large profits from the ecosystem services that are derived from natural capital in its various forms; it has consistently failed to conserve and manage them because there is no recognised way to account for the value of these goods and services. The conservation and management of resources has other spin-off benefits that can be tallied in terms of goods and services. One instrument that has been proposed to take on the challenge of this tally is that of 'payment for ecosystem services'. While this particular instrument is location-specific, it is nonetheless a starting point and can be used to contribute to the sustainable utilization of natural capital.

## How natural capital can contribute to the economy of the region

Consider the provisional services provided by the underground water resources in Punjab. At present, factor accounting data is not available; but this is an essential starting block and needs to be generated. Based on empirical studies, it was possible to generate a table showing the factor price for producing rice, wheat, and processed produce where the contribution of water resources is clearly evident. Since water is essential to the state's economy, it is clear that appropriate policy and instruments need to be designed to maintain its sustainability over time. If used unsustainably, the wealth value of water decreases.

Natural capital can be defined based on the socio-economic-ecosystemic interactivity conceptual framework. This definition uses the stock concept whereby maintaining the natural capital stock depends on sustaining ecosystem structure and functions. However, since natural capital has weak linkages to market pricing and growth, a conceptual breakthrough is required.

Natural capital can also create jobs and other benefits. The example of a coastal ecosystem showed how ecosystem services are derived and how new sets of economic activities can take over from traditional activities. Changes in how ecosystems services are used leads to changes in how the population that reside in the coastal areas value them.

## The Inclusive Wealth Report (IWR) 2014

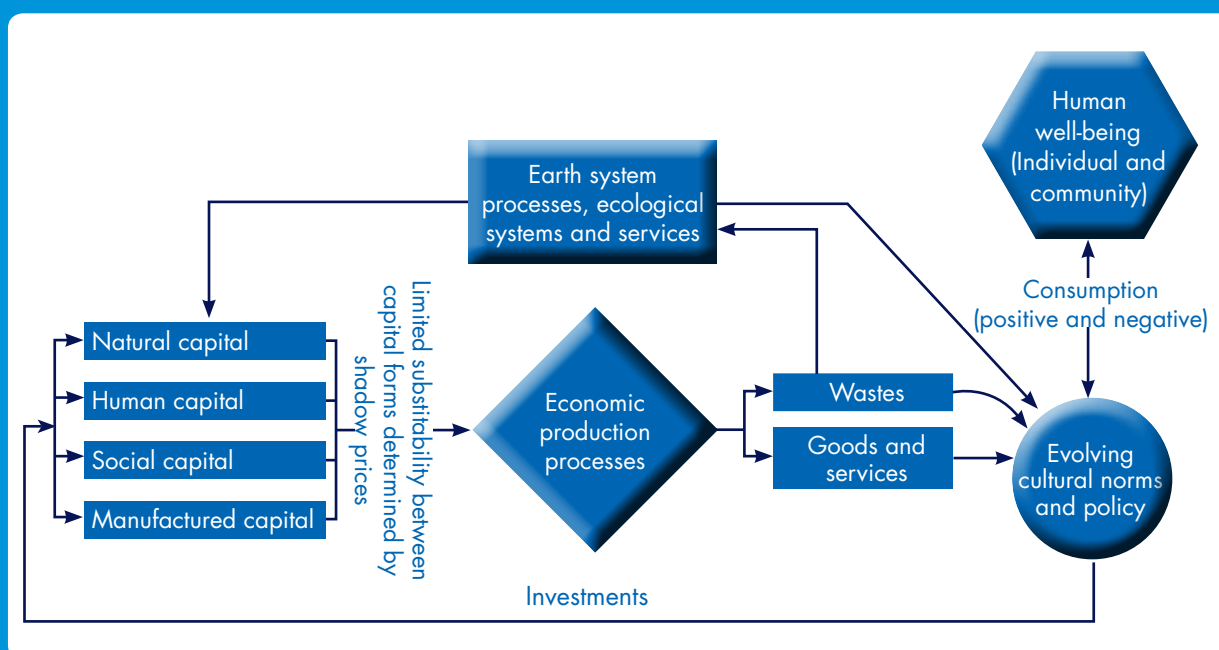
This event launched the IWR 2014 and helped to introduce the concept behind some of the results. The IWR is not a replacement for the GDP, but rather, complements it by focusing on three capitals: natural, production and human. The IWR 2014 is a dashboard that shows the capacity of a country and how it is utilizing its stocks.

The IWR is more comprehensive than the GDP in that it takes account of the stock of wealth of a nation. Since these are early days for the IWR approach, practitioners are still debating how best to collect the data, how to determine the reliability of the data, and how to assure its compatibility with other systems of national accounting. When countries begin generating data for such a report they also begin taking ownership of the concept.

The countries of Bhutan, Myanmar, and Nepal have not given a date for producing an IWR and there is scope to develop baseline data on natural capital for these countries.

The forest accounts in the IWR have some very interesting and highly relevant findings for the states of the Eastern Himalayas. Ecosystem values within an accounting framework confirm that forest capital is a significant component of their natural wealth. However, many countries are mining a significant proportion of this renewable capital because of socioeconomic and demographic pressures. This situation leads to the classic question of “development at what cost?” With the help of an IWR, a state will have the figures to help it make a more informed choice.

Diagram 1: The productive base and human well-being



## Natural capital in accounting in practice from countries

Presentations from different countries all illustrated that they already have some form of accounting beyond the GDP. For instance, Bhutan has the Gross National Happiness index based on the four pillars of: equitable and balanced socio-economic development, preservation/conservation of the environment, preservation of culture, and good governance. India has established a framework for environment statistics based on the UN Framework for Development of Environment Statistics (FDES) and it has published a 'Compendium of Environment Statics India' every year since 1997. In addition, with the recent progress related to the preparation and implementation of REDD+, India now has the capacity for state of the art remote sensing based technology that allows it to conduct measurements, report, and verify; all of which will also definitely compliment its ability to implement a natural capital accounting system.

While many states have expressed an interest in the system of natural capital accounting, the region still faces a shortage of trained manpower to implement it. Capacity development and trainings will be a key input that is required.



# Policy Dialogue Day 2

## Highlights from the opening session

The panel consisted of two parliamentarians, one from Sikkim and one from Nepal. The fact that these two countries participated by sending such high level representatives indicates the keen level of interest that political leaders have for making use of natural capital to address the growth and well being of a wider range of the population, particularly those who are poor and dependent on natural resources.

The presentations showed that natural capital does not feature in the financial discussion of parliamentary committees. This neglect translates into mountain areas not receiving adequate recognition for the natural capital that they provide and consequently these areas do not get sufficient attention in the public policy discourse and do not attract adequate financial budgetary support. Governments still use GDP, stocks market index and other economic indicators to monitor their performance. For instance, Sikkim who land is 83% under forest and who has extensive wetlands, gets no additional support even though its territory renders national and global benefits. Institution like ICIMOD and Globe India have to start working overtime in order to highlight the value of the region's mountain areas and to explore how to better address the management of natural capital.

The GDP of non-industrialized countries like Bhutan and Nepal is based on their natural capital: agriculture, forestry, hydropower, and tourism. The out migration of the population from rural areas to urban centres is one agent for change. While this migration can increase the gap between rural and urban areas, fallow agricultural lands can also be converted into tree farms. Both countries are adopting green growth as a major development strategy. Myanmar, like any other LDC, is also under chronic environmental stress and its forest resources are degrading. They struggle to balance development with preservation of the environment especially since there is a dearth of trained human resources. In India, natural capital accounting has been initiated mainly through the environment accounting and reporting framework. Environmental statistics support for evidence-based policy making by providing supporting data for environmental policy issues and by providing the objective quantification of measures and impacts that are the result of policy initiatives. A key message is that this region has a high potential to design for a green economy as it is rich in natural capital and a large portion its population depends on this natural capital for survival and subsistence needs.

Natural catastrophic events are a drastic reminder of the need to take measures to conserve the environment and to preserve forest cover. The states of J&K, Uttarkhand, Sikkim and Arunachal in India and the country of Nepal are all prone to flash floods and landslides in their mountain areas while the low lands are prone to floods from siltation. The focus on natural capital calls attention to the need for taking a regional approach since disasters usually have transboundary implications. However, as a cautionary note, it is necessary to point out that since no country has yet formulated a green accounting system and linked it with growth, there is no concrete evidence of what the consequences will be when states adopt the natural capital approach to accounting.

## A Need for science-policy interface

A better science-policy interface is needed to support informed decision making especially in order to bring about a paradigm shift in the way we view our environmental assets. Changing the way a country views its natural assets takes a lot reorienting and informing the public to sensitize them to the issues. The involvement of both the media and the judiciary are critical to help arouse public interest, participation, and cooperation. For this, also scientific research should be enlisted to make it useful to the society and responsive to its demands. Similarly, policy makers and politicians need to be involved right from the conceptualization of the research. Results need to be simplified and communicated efficiently and effectively so that they can be understood and applied.

The United Nations Framework Convention on Climate Change (UNFCCC) process is a good example of an exercise where the scientific grounding was rigorous, but where there was no buy-in from politicians and policy makers. So, while science rigour is necessary it alone is not sufficient; what is required for an informed political debate is an electorate that is conscious of the essential scientific facts.

Policy analysis requires a broad approach as policies and regulations can have both direct and indirect effects. An example from wetland conservation illustrated how ecosystem-based approaches need to be mainstreamed into development processes in order to make conservation of the natural capital both cost effective and sustainable. In a global context, the HKH region is still considered to be a data deficit area as well as one that is underreported when looking at successful payment for ecosystem services (PES) case studies.

## Forests: natural capital for inclusive growth in the region

The country presentations showed both how countries are preparing for REDD+ what ground-level solutions they have come up with. Irrespective of whether REDD+ is eventually implemented or not; the activities affiliated with it will help to enhance sustainable land use practices. REDD+ is a good example of how natural capital accounting is being initiated. In addition, it also shows the extent to which there is an increasing acceptance of the value of carbon and of the ecosystem services rendered by forests.

## Group Discussion: mainstreaming natural capital in inclusive growth

Country-led groups focused on five questions based on their own national circumstances. Their answers to the following questions were presented at the plenary session on Day 3.

- Where are your most promising current examples of natural capital in policy? Such as, payment for ecosystem services, accounting, land use decisions?
- Why is inclusion of natural capital not more commonplace? Identify specific bottlenecks
- What practical strategies can be used to address each bottleneck?
- Are there 'low-hanging fruits' for the inclusion of natural capital?
- What messages will be most effective for key groups to adopt natural capital approaches?



# Policy Dialogue Day 3

The tables below summarises how countries already acknowledged the contribution that natural capital plays by yielding both direct and indirect benefits. Table 1 illustrates that all countries already have some sort of forest and environment policy that recognizes the benefits provisioned by ecosystem services and the regulatory policies are there to ensure the sustained flow of these services.

**Table 1: Where are your most promising current examples of natural capital in policy?**

Bhutan	India	Myanmar	Nepal
<p>Water Use Decision (plough back mechanism)</p> <ul style="list-style-type: none"> <li>The Bhutan Water Policy 2008- assures that 1% of the revenue from hydropower will be used for catchment and forest resource management.</li> </ul> <p>It is one of the pillars of the GNH (Gross National Happiness) Index and a policy screening tool</p> <ul style="list-style-type: none"> <li>Preservation of the environment</li> </ul> <p>The Constitution mandates:</p> <ul style="list-style-type: none"> <li>60% forest cover for all time to come</li> </ul> <p>Construction is prohibited in wetland agriculture areas.</p>	<p>National Forest Policy 1894, 1952, and 1988</p> <p>Maintenance of environmental stability</p> <p>Restoration of the ecological balance</p> <p>Conservation of natural heritage by preserving the forests and their biodiversity</p> <p>Checking soil erosion and denudation in the catchment areas of rivers, lakes, and reservoirs in the 'interest of soil and water conservation for mitigating floods and droughts and to help retard the siltation of reservoirs.'</p> <p>Increase forest/tree cover through massive afforestation and social forestry programmes.</p> <p>Meeting the requirements of fuel-wood, fodder, minor forest produce, and small timber of the rural and tribal populations</p> <p>Forests should not be looked upon as a source of revenue, and derivation of direct economic benefits must be subordinated to this principal aim</p> <p>Forests are national assets to be protected and enhanced for the well-being of the people and the nation</p>	<p>Valuing forest ecosystem services in Myanmar (MOECF and EU-IMG); in 2013; 8 ministries engaged in the process; MOECF being the focal ministry; takes about 4 months</p> <p>Operation of mines have a compulsory reservation (as a percentage of the net profit) which is utilised for rehabilitation measures</p> <p>Environmental Conservation Law 2012 includes provisions for Environmental Impact Assessment as does the Mines Law which covers the extraction of copper, oil and gas, gems, and the like.</p>	<p>Payment for ecosystem services (PES) in areas such as hydropower</p> <p>Social profit (capacity-building, empowerment and entrepreneurship)</p> <p>REDD +; (result based payment)</p> <p>Community forestry accounting:</p> <ul style="list-style-type: none"> <li>Forestry sector value added</li> <li>Environment statistics</li> <li>Supply and use tables (physical/monetary)</li> <li>Satellite accounts</li> </ul>

While it is widely acknowledged that natural capital plays a role in overall development, Table 2 enumerates the copious reasons why it is not yet included in planning. Some of the major bottlenecks are related to the low level of awareness of the importance of natural capital, to the dearth of capacity and the lack of expertise in knowing how to account for natural capital, and also to the weak methodology and the numerous policy and data gaps.



Table 2: Why is inclusion of Natural Capital not more commonplace?

Bhutan	India	Myanmar	Nepal
A general lack of understanding and awareness on the part of policy makers.	Policy	Identification of specific bottlenecks	Institutional/organizational <ul style="list-style-type: none"> <li>• integration</li> <li>• policy gaps</li> </ul>
	Open access to communities	The government has traditionally focused mainly on the value of extractive capacity, or commercial land and resource use which ignores some of the most important biodiversity and ecosystem values and means that decisions are made based on incomplete, and flawed, information resulting in missed economic opportunities. As a result, it has led to resource misallocations which have incurred substantial costs and losses and has led to serious under-funding of the agencies mandated to conserve ecosystems.	Lack of legal provisions for enforcement
To date, no accepted reference or guidance on the use and valuation of natural capital.	Tangible benefits All values not monetized and reflected in the economy		Lack of adequate skilled human resources
Policy makers are still asking, 'why should we do it?', 'what are the benefits?' and 'who would pay?'	Conduct of business: The Ministry of Environment & Forests, The Economics of Ecosystems and Biodiversity, Government Department		Information management remains a challenge since there are numerous data gaps, and moreover, data sharing protocols are poor. The use of IT, satellite imagery, GPS, and remote sensing are limited.
CBDR (Common But Differential Responsibilities)			
There is a shortage of trained manpower such as resource economist and the like.	Intangibles: water recharge and purification; soil conservation and prevention of landslides; flood control; pollination services, and biological control.	Bottlenecks <ul style="list-style-type: none"> <li>• Lack of market, insufficient awareness and capacity.</li> </ul>	

Table 3 summarises the strategies that representatives from the four countries identified to strengthen the extent to which the value of natural capital is acknowledged and used to mainstream natural capital accounting into the development process. For the most part, these strategies entail capacity building by UNEP and ICIMOD that would promote know-how for natural capital accounting, and greater awareness among policy makers and decision makers.

Table 3: What are some practical strategies to address each bottleneck?

Bhutan	India	Myanmar	Nepal
Science-based evidence, tools, and approaches supported by appropriate data collection and analysis.	Sensitization	Problem 1: Lack of market. A market can be initiated and develop by the government using an incentive structure, subsidies, PES, REDD+, and the like.	The monitoring and evaluation of policy implementation could be a challenge.
Capacity building to mainstream natural capital accounting in developmental planning and national income accounting.	Capacity building		Endorsement of natural capital accounting could help to promote the development of clean energy.
Providing long term and short term training. Increasing awareness on the importance of natural capital.	Methodology	Problem 2: Lack of Awareness. Awareness raising on the value of natural capital over the entire gamut from academia to policy makers	Capacity building is needed at all levels.
UNEP and/or ICIMOD to take the lead on promoting natural capital accounting in the region.	C- accounting		
	REDD+	Problem 3: Insufficient Capacity. Capacity needs to be built among politicians, administrators, and other practitioners.	Information stems need to be institutionalized.
A global consensus that this is the correct way forward would help to convince many non-believers.	National Working Plan Code		

The representatives from the four countries were asked to identify ‘low hanging fruits’ i.e. areas to which the concept of natural capital accounting could be more readily applied. Table 4 shows that many identified forestry sector and REDD+ as the main areas where this methodology can be applied. Water resources and hydropower are two other areas that lend themselves to natural capital accounting.

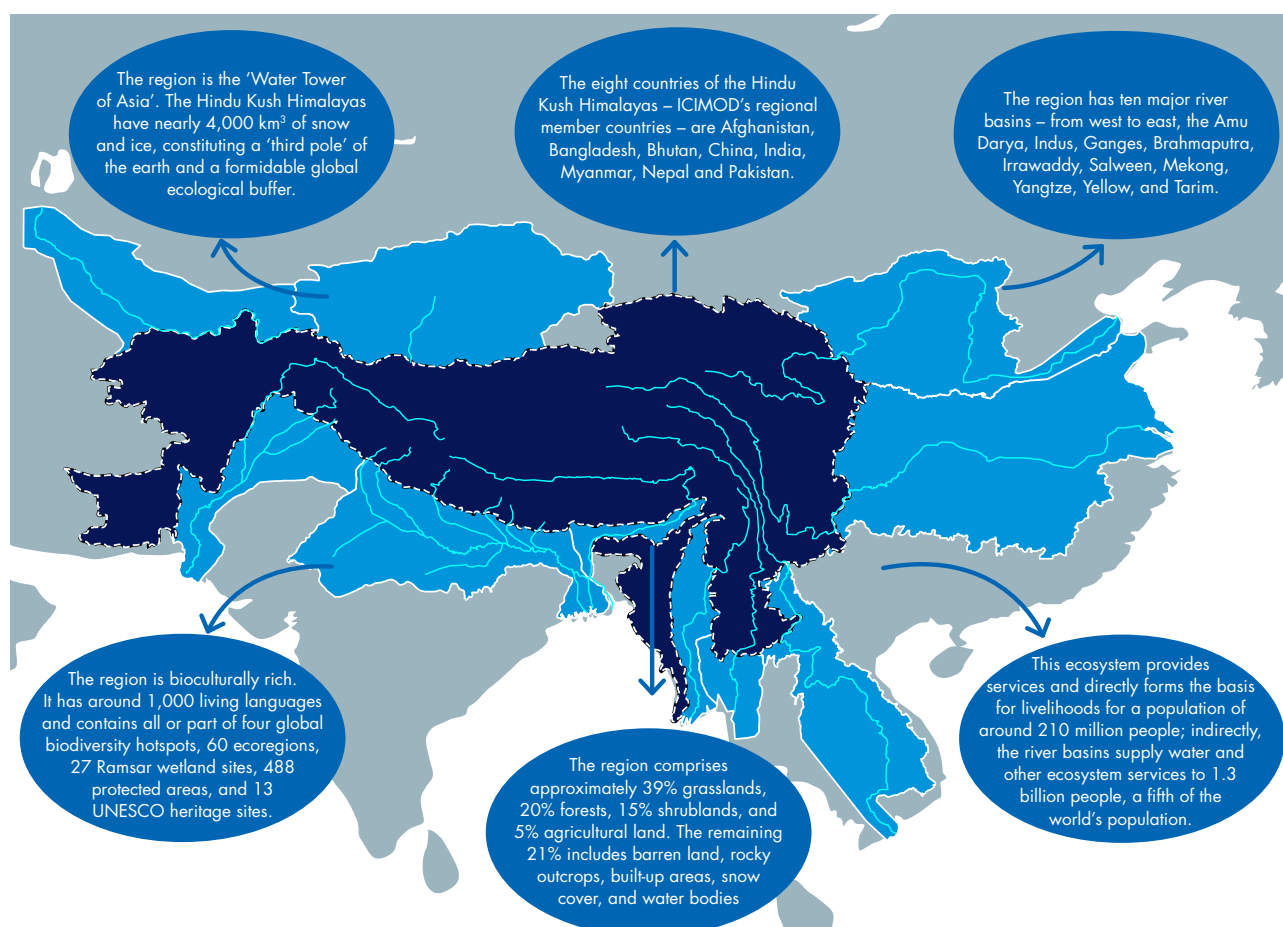
Table 4: Are there ‘low-hanging fruit’ i.e. areas where the introduction of natural capital accounting could be relatively easier?

Bhutan	India	Myanmar	Nepal
Watershed accounting to assess the value of water regulation and soil protection in areas that produce hydro power.	Water recharge and purification Prevention of soil erosion	Inclusion of natural capital considerations in the environmental impact assessments	Low carbon economy development strategy (LCEDS) Forestry sector accounts-concept note prepared
Forest accounting to assess the contribution that forests make to the state’s GDP; REDD+, and the like.	Pollination services  Air quality improvement through the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) and the annual interest is Rs. 3000 crores		Buffer zone, REDD, and community-based resource management; Digitization of cadastral survey data.
Mineral accounting to identify which rents are being captured.	NAP	Inclusion of natural capital in national (green) accounting	Transaction of water resources at local level for irrigation, drinking water, and hydropower;
Tourism accounting to inform policies in the tourism sector.	Finance commission grant and corporate social responsibility?		Put web portal for open source forest information system in place.

In order for the countries to adopt natural capital approaches, awareness, capacity building, and a greater recognition of the contribution of ecosystem services is required. This will necessitate focused and tailored-made capacity building trainings for officials in relevant ministries. There are already many elements of natural capital accounting used in some of the existing instruments as indicated in Table 5, and these areas are important for promoting the concept.

**Table 5: Which messages will be most effective in helping key groups to adopt natural capital approaches?**

Bhutan	India	Myanmar	Nepal
Creating awareness through policy dialogues with policy makers and politician	Key stakeholders and communities.	Policy makers and the administration need to understand that natural capital adds value and saves costs for many different groups and sectors, such as: rural livelihoods, urban settlement, infrastructure, industry, energy, water supply, fisheries, tourism, agriculture, climate adaptation, and disaster risk reduction	Low carbon economy as a development strategy
Information how important natural capital to be managed- state of resource and change, natural resources ( Ecosystems services) affected by policies	Government departments Policy makers Success stories for developing effective institutional mechanism for payment for environmental services (PES) for different environmental services in different states	Natural capital creates income and employment	It is a sustainable development strategy



## Major topics for discussion

This policy dialogue opened new insights into planning mountain-specific sustainable development based on natural capital. The following topics were discussed during the question and answer session.

### Inclusive growth

The HKH region, and in particular the eastern part, which consists of Nepal, Bhutan, North-East India and Myanmar, are biological hotspot and they are rich in water resources. To a large degree, the local economy is based on natural resources; however, exactly how much is contributed by natural resources is not yet known since the valuation has not yet been conducted. The poorest of the poor, those whose welfare derives from the subsistence economy, are the ones who are most dependent on natural capital, since they lack most other means of capital. Sustaining and managing natural capital will promote inclusive growth and will lift out of poverty a group which has to date been left out of the neo-liberal economic model. Participants from the four countries said that a more explicit framework needs to be developed to ensure that natural capital accounting will promote inclusive growth for each of the countries based on their particular national circumstances.

### Capacity building

A dearth of capacity was regarded as one of the main constraining factor limiting the widespread use of natural capital accounting in this part of the world in spite of the fact that so much of the population depends to a great extent on the use of natural resources. Like all other forms of capital, natural capital also requires investment and management to prevent it from eroding over time. There is an urgent need to build capacity so that innovative solutions can be sought based on sound economic methodologies. A regional level platform may be useful in facilitating the exchange of knowledge and in helping to build capacity. Such a regional platform could also help to foster South-South learning and could be an effective way of identifying sustainable trends applicable in the region.

### Mainstreaming natural capital

A first step is ecosystem valuation. Methodologies for valuation are available but these need to be customized to take into account mountain specificities. In the mountains, natural capital forms a significant portion of the wealth available but there has been little recognition of this. There is a need for policy measures and innovations to recognize the contribution that mountain ecosystems make and to quantify it so that the role of natural capital is mainstreamed into the development processes. An initial step in this direction was recently taken by UNEP and ICIMOD who have recently undertaken a valuation study of forest in Nepal; this study, which was started in 2015, should come up with methodologies to help with natural capital accounting.

### Lack of vision

There is lack of leadership and clear vision on how to go about implementing natural capital accounting. Since it is such a new and innovative idea, there is understandable reluctance on the part of finance ministry experts to embrace it and look beyond GDP. Nevertheless, policy innovations will be needed to implement natural capital accounting for inclusive growth. There is a need for awareness programmes that will target the political leadership, planners and bureaucrats, civil society, academics, and independent researchers, all of whom can help in the quest to develop a vision around natural capital.

## Closing Session

In the closing remark, all agreed that this policy dialogue had been a success in so far as it had been able to gather together so many relevant policy makers and researchers to explore how natural capital could best be used for inclusive growth. The parliamentarians who attended said that they had been glad to learn of a new approach to sustainable development.

Natural capital and inclusive growth is a major thrust area for UNEP at the global scale. ICIMOD will continue to work with UNEP on this topic in the Hindu Kush Himalayan region in partnership with the governments of Bhutan, India, Myanmar, and Nepal.

The HKH region, widely known as the third pole, ranges from the summit of Mt Everest to the Sundarbans basin; within this enormous spectrum of physiography and ecology the region harbours many biological hotspot of global significance. The national economies of the four countries of the eastern Himalayas are highly dependent on its rich natural capital and most of the people who live here derive their livelihoods directly from it by exploiting venues in the areas of tourism, hydropower, forestry, agriculture, and mining. However, in spite of the rich natural resources, this region houses almost half of the world's poorest people.

This policy dialogue clearly underscored the need to integrate natural capital into the development discourse for a more sustainable approach to economic development and to safeguarding the long term prosperity of the populations in the region. We now need to think beyond the GDP to account for the sustainable wellbeing of the population. For ICIMOD, taking account of natural capital will show the importance of mountain ecosystems and also help to redefine 'sustainable mountain development' in the post-SDGs context.

Based on the situation analysis conducted by the four countries, it is evident that some of the notions of natural capital accounting are gaining wider attention albeit with slow progress. The countries of the eastern Himalaya region have been less successful in ending poverty, as they harbour many isolated pockets where poverty, destitution, and hunger are chronic. It is now widely accepted that the economic growth and trade liberalization of the last few decades has done marvels for select segments of the population, mainly the urban ones; on the other hand, rural mountain population have not seen as good an improvement in the quality of life. A continuing decline in natural capital will hit the poorest of the poor the hardest, and as such, there is a need to revisit the development paradigm. The four countries who have participated in this programme agreed that urgent action is needed to reorient development plans in order to account for natural capital and inclusive growth. The first steps for this inclusion are through capacity building and awareness raising.

The four countries who participated in this policy dialogue clearly want to work on this topic and have requested ICIMOD and UNEP to continue to help them by conducting more such policy dialogues and by helping to build capacity that will mainstream natural capital accounting into the planning development processes.



## Annex 1: Quotes from participants



### Prem Das Rai; Member of Parliament, Gangtok, Sikkim

It is very timely that ICIMOD and UNEP have organized a three day conference on what policy dialogue and green accounting means for the people of the region. It could not have come at a better time because Prakash Jadevkar, our honourable Minister for Environment, Forest and Climate Change, has just returned from Lima where he has in fact stated that climate change legislation would be one of the most important things that we need to do for going forward as far as India is concerned. This dialogue is actually very historic because climate change legislation is one way that we will be able to get all

the states on board on all of the national programmes to mitigate and to adapt to climate change. It is especially important for a very diverse country like ours: we have mountains, we have coastal systems, and we have deserts. I for one, come from the mountain state of Sikkim, and I am passionate about how the mountains and especially the Himalayas are fast being depleted of their water resources. We should take urgent and immediate steps in this direction but for that we need to have effective policy and this policy dialogue therefore was definitely very much in order.



### Hon Janak Raj Chaudhary; Constituent Assembly Member and Environment Chair, Parliamentary Environment Committee, Kathmandu, Nepal

This dialogue brought together senior policy practitioners, statisticians, economists and ecologists from the governments of North East India, Bhutan, Nepal, and Myanmar, with experts on environmental policy, macroeconomists and natural scientists to discuss approaches which will help to augment existing macroeconomic practices.

As a participant and politician, I was really impressed with the presentations which covered all dynamics of the relationship between natural capital and economic growth. The programme, which included talks by eminent scholars and deliberations by policy makers and practitioners, helped to demonstrate how tools like the valuation of environmental goods and services could be integrated into a system of natural capital accounting.

### Hon Tukraj Sigdel; Constituent Assembly Member, Kathmandu, Nepal



प्राकृतिक सम्पदाले भरपुर दक्षिण एसियाका मुलुकहरु (नेपाल लगायत) अहिलेपनि भोक, रोग, अशिक्षा, बेरोजगारी जस्ता समस्याबाट मुक्त हुन सकेका छैनन् । उपलब्ध स्रोतहरुको समुचित ढङ्गले प्रयोग गर्न नसक्दा बाढी, पहिरो, नदी कटान, डढेलो, अतिबृष्टि जस्ता प्रकोपहरु निम्तिन पुगेका छन् । यस क्षेत्रको प्राकृतिक पूँजिलाई व्यवस्थित रूपमा सदुपयोग र संरक्षण गरि संम्बृद्धिको नयाँ अध्याय प्रारम्भ गर्न अब विलम्ब गर्नु हुँदैन ।

यसको निम्ति उपयुक्त निति निर्माण र कार्यान्वयनमा प्रतिवद्धता आजको आवश्यकता हो ।





### **Priya Shyamsundar; Programme Director, SANDEE, USA**

I thought this dialogue was quite useful, particularly because it brought together the policy and research communities of the North Eastern states of India with those of the countries that surround these states. I was intrigued by the kind of interest that was shown in the policy domain on natural capital accounting and the valuation of ecosystem services. I think there is still a lot of confusion about valuation and natural capital accounting. While both these areas need more discussion, this was the beginning of that discussion. I think to the extent that

we can reach out to policy makers and help them with the answers that they are seeking it will be great. But I hope we can have a little bit more of this in order to really figure out how to change policy as it is required. Thank you.



### **Indrila Guha; Associate Professor, Vidyasagar College of Women, Kolkata, India**

This dialogue was an excellent opportunity and a very good introduction to the work done by ICIMOD, UNEP and also by SANDEE. We are researchers and academics, we do research on different aspects but we don't often get enough scope to actually convey our message (based on our research findings) to the policy makers. So, this was an excellent platform in which to do it. There are two parts, one is that we were able to convey and communicate our research findings and the other is that we were able to get to know people working in

the same areas in different countries and exchange views from one country to the other. In doing so, maybe we can build a network in the South Asian region so that all our findings can possibly lead to a comprehensive report which may convey some good statistics and results to the other block of the whole world. So, as far as the ecosystem services are concerned, now it's a burning issue, it's everywhere. So I think that this was the right time for these organizations to have a high level policy dialogue and I am really enriched by attending this workshop.



### **Joyashree Roy; Professor of Economics, Coordinator for the Global Change Programme, Jadavpur University, Kolkata, India**

So basically, the take-away message was what the policy makers really expect from the researchers. As researchers we got a good view of that what we can deliver and what more we can do. This was a very good platform for us academics. Secondly, I just really hope that we can take this whole research agenda forward and that we can develop an alternative development model

which is led by natural capital. So far we have only been looking for a development model. For me, this was a very useful meeting because I think we have really deliberated on the challenges; on how we can come up with alternative development models and develop a policy frame so that we can have natural capital led growth in the coming decades and centuries without having to look for physical capital led development. Also, it was very useful to get the parliamentarians, the policy makers and the academicians together so they could share and deliberate on their own challenges. Through this platform, as policy researchers we came to know what the policy makers are really looking for. We often think that we are working for policy research, but over the past few days we were made aware that there are many other things which really need to be incorporated into our research to make it more useful to policy makers. Looking into the other side, for the policy makers, they also could see that it's just not looking for a silver bullet policy or just a one-size-fits-all kind of policy; they hopefully can now better appreciate how researchers come up with alternative development policies, frames, and landscapes which can be applicable to different local contexts. This forum really provided a huge possibility for thinking ahead and taking the agenda forward to generate the research which is needed by making the research more compatible with what the policy makers require.



**Prof. James E. Salzman; Samuel Fox Mordecai Professor of Law, Nicholas Institute Professor of Environmental Policy, Duke University**

My name is James Salzman, I am a professor of environmental modelling at Duke University in the United States. I am here with this high level dialogue to talk specifically about the importance of mainstreaming natural capital. The basic idea is that we get great benefit and value from the natural environment. But normally, since there is no market for that, and because we don't pay for

it, we assume it to be worthless. Yet, when there is large-scale destruction of mangroves or wetlands, we suffer because the result of that destruction is the potential for increased storms and flooding, for example.

The specific areas that I have been talking about at this conference surround the idea of payments of ecosystem services. The basic idea there is to try to create some type of relationship which transects between those who benefit from ecosystem services and those who provide them. A typical example would be that those who live downstream (from upstream watersheds) benefit from improved water quality and improved watersheds, but the problem at the moment is that, since they do not pay for these ecosystem services those land owners in the upper watersheds (who provide the services) have no direct incentive to maintain the forest. And so, with no economic incentive they are more likely to cut down the forests which will really harm downstream areas as a result. The idea of payment for ecosystem services essentially ties together downstream beneficiaries with the upstream providers. Now that said, it can be difficult to set up. There are examples from throughout the world, but they can be challenging. The most important challenge that I talked about in my remarks, is the importance of so-called perceived scarcity. The fact is that downstream beneficiaries would have to not only recognize the benefits provided by the upstream watershed, but would also have to pay for them (if they are concerned that they are going to lose those benefits). Sometimes the payments don't need to be monetary, there are examples of barter. There is one example from Latin America where beehives were given from the lower watershed beneficiaries to the upper watershed land providers. It doesn't have to be money, and of course, in areas with high poverty, as in many parts of North East India and South Asia in general, that aspect can become particularly important.



**Prof. Rodney Smith; Associate Professor, Director of Graduate Studies, University of Minnesota**

Hi, my name is Rodney Smith, I am a professor of applied economics at the University of Minnesota. For the past two days I have been in Kolkata, India, attending a conference and workshop on ecosystem services, the design of policy on ecosystem services, and the design of policy in macroeconomic statistics. The dialogue is of great venue for they have brought together policy makers, scientists, and economists. I think the major advantage of a workshop like this is that often economists don't really understand what's important

to policy makers. Policy makers tend to not necessarily have a clear idea of what economists can actually do. Incorporating ecosystem services into policy really requires an interaction between policy makers, lawyers, scientists, and economists to come up with long-term solutions to problems. I believe that we are beginning to see the impacts of that today. I would like to thank UNEP, ICIMOD, and SANDEE for bringing us all together; it's been a great experience for me.



### **Tshering Wangmo; Programme Coordinator for the Gross National Happiness Commission, Bhutan**

Hi my name is Tshering Wangmo, I work for the Royal Govt of Bhutan's Gross National Happiness Commission. I think this two-and-half day workshop, a high-level policy dialogue on natural capital for inclusive growth is actually providing a good opportunity for people from diverse backgrounds to come together for a common understanding on what really is important. Now we are beginning to realize that our GDP is not enough, and that accounting based on

GDP alone, as in conventional national accounting systems, is not enough for us to have sustainable development. In Bhutan we have focused on GNH since the early 1970s and this kind of forum actually gives us a stage where we can learn from other countries as to what they have done until now. From this two-and-half day workshop I have realized that countries like Myanmar, Nepal, and India are way ahead of us in terms of natural capital accounting. In Bhutan we have always considered the environment as an important aspect in our policy and decision making but we have not been able to do so in terms of accounting. This workshop has provided us with a lot of information and some options and tools on how to go about it.



### **Raghunandan S. Tolia; NTPC Chair and Professor, Centre for Public Policy School of Social Sciences, Doon University, Dhradun, Uttarakhand, India**

I am RS Tolia, former Chief Secretary and Chief Information Commissioner from India; I have come here to attend this consultation on natural capital for inclusive growth. Natural capital for inclusive growth I think is an idea, as I say whose time has come. Because, when you look at the wealth as such for wellbeing, we have so far been looking at the gross domestic product and such

concepts which are basically economic terms. These have to be further deepened and I think that natural capital is the concept which has to be emphasized and it has to be linked further with inclusive growth. So there are basically two concepts, first, how do you look at the wellbeing of the region, of the community, of the group; and at what scale? and second, how does this impact inclusive growth.

For the time being, let us leave natural capital apart for a moment, and let us focus on inclusive growth. In India, where I come from, inclusive growth has been considered a major objective of our planning process. In fact, the 12th Five Year Plan, which is presently in its third year of operation, emphasises not merely inclusive growth but rather, more inclusive growth. The 11th Plan was just inclusive growth, then we realized that to understand inclusion you need more time. Whereas growth can be measured over a short period, measuring inclusion is a time consuming process. So when you look at the inclusion part of growth, you are looking at the policies which are going to bring about inclusion, and this takes more time. The first thing that I would like to emphasize is that measuring inclusive growth means waiting for some time to see whether the policy interventions (which were put in place after understanding the context) have indeed yielded results and whether inclusion has taken place or not. Growth can be measured more readily, in a five or six year timeframe, but measuring inclusion can take a much longer time. For example, consider a policy aimed at including groups of pupils who have previously been deprived of education; it will be some time before one starts seeing whether the groups have been included or not, and whether they have benefited. So that sums up what I would like to emphasize in terms of the objective of this consultation. Inclusive growth, particularly in developing nations, can best be understood by those who get excluded in the process. When an economy is growing, you have to take care of what is getting excluded, meaning those segments of the society who do not have access to the benefits of growth. For example, inclusion could be of community, inclusion could be of gender, inclusion could be of regions, inclusion can also mean of classes. So the term 'inclusion' encompasses many facet; and it is essential to specify whether it is intended in terms of class, groups of people, classes of people, and also physically, in terms of regions.

Now I speak in the context of mountains and more precisely, of mountains development. Mountains have been excluded from the growth of nations. In our Asian region, the mountains are typically the most backward and excluded regions. So, here, inclusive growth naturally means paying more attention to what has not been included so far, and mountains are such a geographical region. In the Indian context, more inclusion also means (in geographical terms) paying more attention to mountains. So I am particularly happy that in the national context when you are talking about inclusive growth that your attention goes immediately to the neglected mountain regions. It automatically brings to the fore issues of access, eligibility, flow of funds, flow of technology, and a whole host of interventions that automatically accompany growth. In that context, when we talk about capital investment, how to bring in the benefits coming from, let us say natural capital, to the region which has been divested of it. It so happens that when we discuss natural capital, surprisingly and interestingly, the mountain regions are very rich in terms of natural capital. You look at the forests, you look at the minerals, you look at all kinds of resources and also water. So while on one hand, we are rich in resource, plenty of natural capital, the question is whether this natural capital has benefited the region which is the source of it. So, I think that this is a major dilemma of development: how do we ensure that the regions which are endowed with rich natural capital get the benefits associated with it? The whole discourse centres on how to fold natural capital into the system of national accounting; what are the policy parameters? policy interventions? and what administrative architecture is being considered in the various states and regions who are looking at it. I consider this discourse very relevant in the context of including the areas which have remain excluded so far, especially for the ethnic groups which are in the mountains and/or for the people who have been living in the forest areas. How should we link natural capital directly for the benefit of the groups in the regions that have been excluded so far; I think that this is a major exercise.

I am very happy that this programme has been convened by ICIMOD and I am sure that in time as we continue to discuss further, and as we look at the possibility of mainstreaming natural capital for the benefit of hitherto excluded areas and excluded groups, that there will be a major connect. This is a major undertaking for policy makers who will need to connect the knowledge which is coming out of science and out of best practices, and mainstream it so that it can be used for policy in these underdeveloped regions. This is a major exercise for scientists, development practitioners, and policy planners, who will all have to sit together and examine why regions that are richly endowed with nature capital are nevertheless the most neglected. How do we include them in the process of development so that the whole region can move forward.



**Ba Kaung; Deputy Director, Dry zone Greening Department, Ministry of Environmental Conservation and Forest, Nay Pyi Taw, Myanmar**

My name is Ba Kaung, I am from Myanmar where I am the Deputy Director of the Ministry of Environmental Conservation and Forestry. It's my real pleasure to attend this policy dialogue on inclusive growth and ecosystem valuation. My country, Myanmar, is still at the early stages of implementing these concepts. Nevertheless, we have already started the REDD plus programme; we are

looking at the payment for ecosystem services schemes, we are discussing a state of the environment report, and so on and so forth. We are trying to evaluate the natural capital resources that are found in our forests, our water and our land but we still need some kind of technical and capacity building in these areas. By attending this dialogue I have learnt a lot from more experienced countries and also from the world experts, technicians, and academicians. I think that by attending this dialogue when I go back home I can effectively contribute to my country's ecosystem valuation and resource management. With a full and more comprehensive knowledge on the value of ecosystem and on the value of natural capital we will be able to better consider how we can use wisely use this natural capital for the wellbeing of the country and not only for the developers. We have to consider the rural poor and the development of the poor (who constitute about 70% of the population). With this knowledge and background we can persuade the policy makers and decision makers on how they can incorporate these ideas in their decision making for the wise management and wise distribution of the country's natural capital.





### **Krishna Kumar; Deputy Director, Social Statistics Division, Central Statistics Office**

Ministry of Statistics Programme Implementation, Delhi, India

This workshop convened by ICIMOD and UNEP has been beneficial for us experts; this forum has discussed about natural resources, what inclusive growth is, and what accounting tools are. We have given our views on so many things and have heard about the experiences and perspectives that different countries have had on inclusive growth and what they intend to do for their countries to

benefit the poor and societies living on natural resources. This policy dialogue will certainly improve the capabilities needed for going to natural resource accounting and will help us to meet the needs prescribed by the SDG to be agreed to by the general assembly in September 2015.



### **Shri CP Marak, Chair, Meghalaya State Pollution Control Board, Shillong, India**

My name is Shri CP Marak, I am Principal Chief Conservator of Forests, Social Forestry and Environment for Meghalaya, and also Chairman of the Meghalaya State Pollution Control Board. We take things obtained from nature for granted. We take nature as God's free gift and if natural resources (particularly renewable natural resources) are not monetized, then they are not quantified and don't get reflected in the gross domestic product. It is necessary to ensure a

proper picture of the contribution that natural capital makes to the economy. I think that once this value is realised, we will definitely have a clearer picture of how large a contribution natural capital makes to the economy of the country or of a particular state, district, or village. So, while the message of the need for recognising natural capital has not yet been spread or broadcast, we recognise that it probably will play a big role in the new millennium when we talk about development and when we talk about the economy. A green economy becomes all the more important when we talk about natural capital. So it is this issue that this particular policy dialogue has brought to the fore and I do hope that the recommendations, the findings, and the recommendations of this policy dialogue will help the countries, and particularly the developing countries in South Asia to incorporate this into their national accounting system.



### **T.P. Singh; Deputy Director, Biodiversity and Climate Change, Indian Council of Forestry Research and Education, Dehradun, India**

I am Dr T.P. Singh, Assistant Director General, Climate Change at the Indian Council of Forestry Research and Education, Dehradun, India

This policy dialogue on natural capital for inclusive growth was indeed very meaningful because it combined the experiences from the four countries of India, Nepal, Bhutan, and Myanmar. Senior people involved in policy

making in this area came here and we really had an opportunity to interact with them and share experiences. The issues relating to natural capital were deliberated; and the discussions were of very high relevance specifically for developing countries like India. With the current mechanisms on climate change, biodiversity, combating desertification in place, we really need to evaluate our resources, we need to have an assessment of what natural resources are available because the growth path really depends on the availability of natural resources and their assessment. Not only that, we need to strike a balance between environment and development. To strike this balance, we first need to know what is in our hands and what is in our domain; on the basis of that, then we can really plan for the short term as well as for the long term. A very important take-home message for me is the focus on poverty and inclusive growth. Most of the discussions targeted the elimination of poverty; in this region we have

huge areas (under the Himalayas and others) which are infested by deep poverty. This was a good platform to interact on natural capital with poverty alleviation; I think that when all the policy makers go back home they will be able to really translate these ideas into actual practice in their respective countries and in their respective places.



**Lungten Norbu, Ministry of Agriculture and Forests, Bhutan**

My name is Lungten Norbu, I am from Bhutan, and I work at the Ministry of Agriculture and Forests. Attending this policy dialogue in Kolkata has been very interesting also for the programme in Bhutan; it is timely and relevant. This is mainly because in Bhutan we are presently working on grading some of the natural high capital. This dialogue is also going on in the Ministry of Agriculture. The experience and the knowledge that I have gain attending this workshop has given me a better perspective of the knowledge and experience

gathered by those working in different other countries in the region. What I have learnt here will be useful for developing programmes or even mainstreaming ideas from this natural capital approach into the programmes back home.



**Eklabya Sharma, Director of Programme Operations, ICIMOD**

(excerpt from the closing speech on 18 December 2014)

We need to work locally and nationally but we also need to have a regional perspective and a global overview of the topic, otherwise, we will not be able to link global thinking with regional issues and then work at the national level. I think that we need to consider the scale at which we have to work: local to national to regional and to global. Here the involvement of partners such as

UNEP helps to bring in the global perspective, ICIMOD helps to bring in the regional perspective, and our country partners bring in a national and local perspective. I think that this is the big message.

The other very important thing, that I recall from the first day of discussions where we talked about Everest to Hkakabo Razi and also to the Bay of Bengal, is that our concern should not only be with the mountains, we have strong links between mountains and the downstream. We need to work together because the upstream and the downstream are linked. Ecosystem services flow downstream, but policies such as those on food security flow from the plains to mountains, the links are very important. Bringing in natural capital accounting will require a lot of work from all of us. Dr. Tolia reminded us that we somewhat lost the mountain focus. Although the dialogue started with a good deal of mountain based arguments on the first day, during the deliberation we somehow lost a little bit of that focus. Nevertheless, although we didn't say much more on mountains per se, the presentations from Nepal and Bhutan are obviously mountain-related because these countries are almost exclusively mountainous. The mountain perspective was still there even if it was not explicitly expressed. In my opinion, countries like India and Myanmar need to start thinking about including mountain perspectives and specificities otherwise natural capital accounting related to ecosystem services will be skewed.

I see that the need for capacity building is a big take-home message. Dr Pushpam Kumar reminded us that natural capital accounting is a new topic and that while this dialogue brought together experts and policy makers, we need to come to a common understanding and for that capacity development is quite important.

The last message is on inclusive growth. Perhaps this is something which we didn't dwell on and something that we take it for granted: that if we use natural capital accounting that inclusive growth will naturally take place. I think that this is something that we did not explicitly look into. So I would like to say here a few things on inclusive growth. What are some good examples from this region? Dhrupad mentioned about community forestry and leasehold forestry; I think there is a very good intention but somehow if you just compare the two systems we have just not



done very well in leasehold forestry. There are constraints in spite of the intention for inclusiveness. Bhutan is a good example, it has a focus on the poor who are dependent on forests, and it's a good inclusive approach to forestry in Bhutan. Then let me take you to another example, this one involves tourism in Zhongmin in the Yunnan province of China where they have a beautiful lake which was almost completely degraded. Here, the tourism sector, driven by travel agencies, the state, and the provinces also involved the local community who now manage all tourism at the local level and they get incentives. There is inclusiveness in tourism. There are also many examples of high-value production. There are examples where ICIMOD has helped with common facilities for communities in Nepal as well as Bhutan. These facilities help give access and opportunities to the poorest of the poor by giving them a place where they can bring their goods to market. These are a few good examples but I think that there can be more. There are good intentions but somehow still have not been upscaled, and we have not been able to capitalize fully on the good intentions. There are a few examples and we need to continue to bring such good practices for inclusive growth in this region to the mainstream. With regards to natural capital accounting, I think that if we are not able to bring it about we will be actually losing a very important part for these people because they depend on the natural resources in their areas.

One big irony, which perhaps we didn't discuss, is that much natural capital is situated in protected areas. To date, as much as 39% of the Hindu Kush Himalayas is under protected area coverage, this is a huge area. The ongoing discussion is that the people who are on the fringes of these protected areas do have access issues and benefits issues; all these need to be addressed because the capital and services come from within the protected areas. But in that regard, we have also made good progress; historically, the original emphasis was very much on the strict preservation of nature type of protected area management; but, more recently, we now focus more on people-managed protected areas. One good example is the Kanchanjunga Conservation Area in Nepal that is now managed by the people who live there. So we have a whole range of models and more and more they are people-centred. Insofar as inclusive growth is concerned, it will be necessary to examine how people are involved in access-related issues. So this is the key message that I see as a participant.

What can ICIMOD offer? I would say that ICIMOD, UNEP, and SANDEE are committed to seeing how to work this, as Dr Pushpam Kumar might say. As a beginning, all three institutions are coming together to do piloting work in Nepal. At ICIMOD, we are actually applying two approaches: the transboundary landscape approach and the river basin approach. Landscapes are multifunctional, they can include forests, wetlands, rangelands, as well as agro ecosystem and possibly also a whole range of ethnicities. There is a need to look into ecosystem-based adaptation and how ecosystem services can be maintained. So in that context, REDD+, value chain and marketing, ecotourism and payment for ecosystem services, are all going to play a part and I think ICIMOD will be able to contribute. ICIMOD is also working on the river basin approach, and there are examples of this work on a number of rivers including the Koshi, the Ganga, and the Brahmaputra where ICIMOD is bringing together a number of countries for their common interest. Hydropower, and especially hydropower which encourages sustainability of the hydrological cycle, is also quite important for countries in the region.

From ICIMOD's point of view, poverty alleviation is there in most of our programmes and that is the new focus as Dr. Tolia was saying. He was part of our last review (a quinquennial review) where ICIMOD was asked to do work on this and we have two major programmes, adaptation to change and transboundary landscapes that focus on poverty and again I would like to just reemphasize that we are looking into that.

The last point from ICIMOD's point of view, is that this region is a data deficit area; as I said earlier it will be important to address this knowledge gap in order to take up natural capital accounting. ICIMOD will work to contribute as much as possible from its side. The water, food, energy nexus is quite important and it is important to understand how these three are interlinked when we look to the future with respect to natural capital.

Finally, the assessment report which ICIMOD is preparing for monitoring and assessment of the Hindu Kush Himalayas will bring together about 300 to 400 scientists who will work together over the next two and half years. They will also work very closely with policy makers because ultimately we will believe that the key messages which will be drawn from this exercise will be the essential ones that policy makers will take forward. So, like the IPCC report, this report will also be directed at policy makers but we would like to take the matter a step further

by actually involving policy makers in the processing rather than only incorporating their views. That will be the difference between the IPCC report and this mini IPCC report that ICIMOD is preparing.

Finally, in closing I would like to thank the Constituent Assembly Members from Nepal and the Member of Parliament from India, who have given their very valuable time to make this dialogue a success. Their cooperation and collaboration very clearly shows that there is a big interest at the highest policy level. To everyone who participated, and especially to the experts and the very senior people coming from these four countries: thank you very much on behalf of the organizers. Let's give a big hand to all of you for your support.

ICIMOD is very keen on this topic and we would like to also thank Dr. Pushpam Kumar for his leadership and for his engagement in this area -- we are very happy that you were able to bring your keen enthusiasm on the topic to this meeting. From ICIMOD's side a lot of the work has gone in to make the meeting a success. I would not like to forget a few names, one is Dr. Bhaskar Karky, and Ms Sun Cho and Ms Rekha, who are sitting at the back, They have really worked very hard. I would like to give them all a big hand. All what we do needs to be communicated; if it is not communicated well, then it is not heard. The person who is behind all what we do that involves raising awareness is Ms Nira Gurung. During this dialogue we had very good media interaction, thank you for your excellent contribution. Finally the travel agent here and the hotel really worked hard for us, on behalf of the organizers we recognise that their contribution is highly appreciated. Finally, this meeting would not have been possible without all of you. I wish you all a very good time for the next half day together, enjoy, and then we wish you all a safe journey back home.



## Annex 2: Media coverage

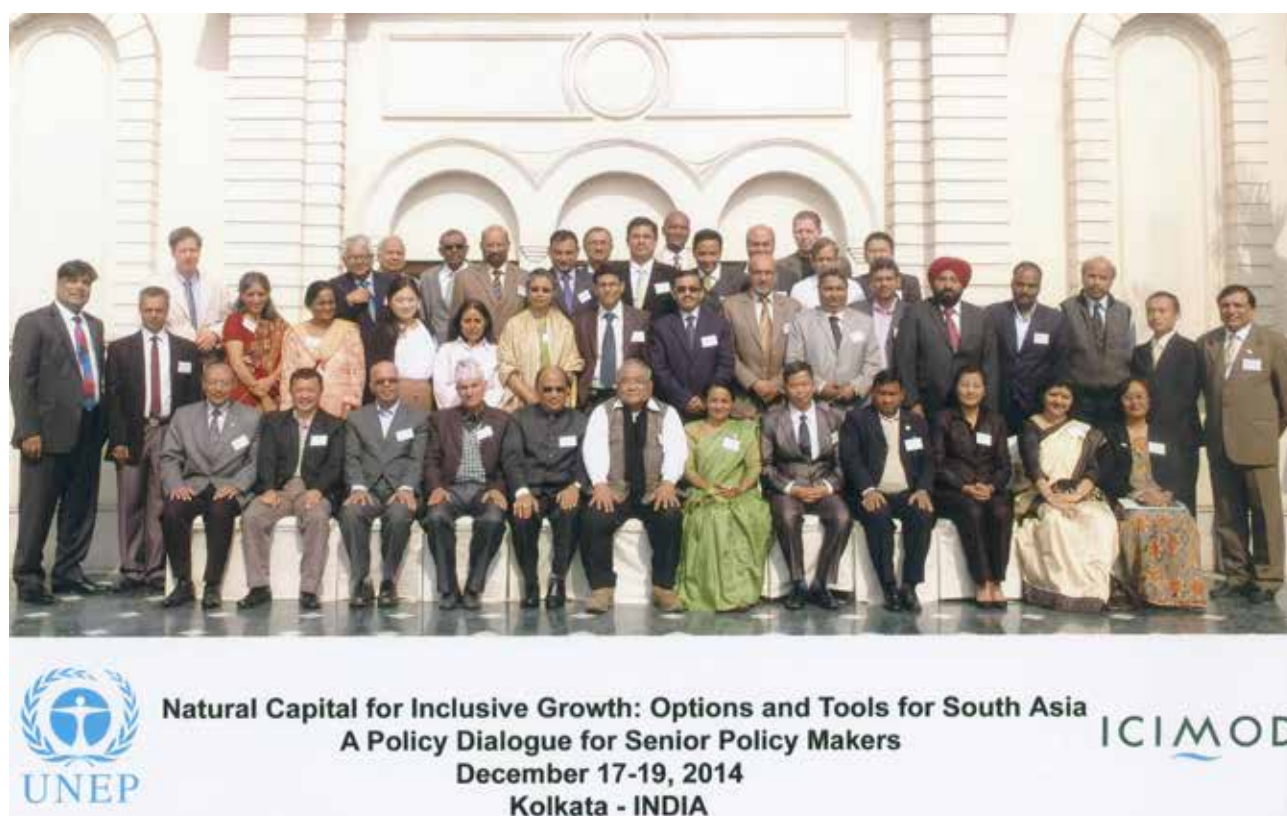
### ICIMOD Press release

During a high-level policy dialogue held in Kolkata, India from 17 to 19 December 2014, participants from four Eastern Himalayan countries stressed the need to include the value of natural capital in national accounts. The dialogue, titled 'Natural Capital for Inclusive Growth: Options and Tools for South Asia', brought together more than 40 senior policy practitioners, ecologists, economists, and statisticians from Bhutan, Myanmar, Nepal, and representatives of the state governments of North East India. Participants also included forestry officers, statistical officers, economic planning officials, and representatives of influential NGOs.

The event was jointly organized by the United Nations Environment Programme (UNEP) and the International Centre for Integrated Mountain Development (ICIMOD). The key lesson was that it is important to value and account for the contribution of ecosystems and ecosystem services, such as water, forests, and biodiversity, to a country's overall capital, as well as the support they provide to human wellbeing and sustainable development. Incorporating natural capital into the national accounts system will create scope for a broader and more inclusive approach, as it takes into account the resource base of the poor, a group often left behind under current economic growth models.

The experts called for greater efforts to make policies that take into account the full value of ecosystem services. This message of the policy dialogue was: "We now need to think beyond GDP, as traditional indicators are limited to measuring social progress, and fail to account for wellbeing and sustainability".

At the opening session, Dr Eklabya Sharma, Director of Programme Operations, ICIMOD, said that mountains are endowed with a rich natural capital base, but also have a large bulk of the region's poor population. "We need to take landscape level and river basin approaches while trying to improve the sustainable management of natural capital in the mountains, and to account for their impacts in the downstream areas," he said.



Participants at the Natural Capital for Inclusive Growth: Options and Tools for South Asia, a policy dialogue for senior policy makers

Photo credit: UNEP/ICIMOD

Dr Pushpam Kumar, Chief of the Ecosystem Services Economics Unit, UNEP, said, “Applying innovative approaches, like valuing natural capital and showing how natural resources contribute to societal wellbeing in sustainable and just ways, in the natural resource rich regions of Bhutan, North East India, Myanmar, and Nepal has the potential to bring transformational change.”

In his keynote address, Prof. Jim Salzman, Samuel Fox Mordecai Professor of Law and Nicholas Institute Professor of Environmental Policy at Duke University, USA, said that balancing conservation with development is a delicate subject. He said that context-specific instruments, such as payment for ecosystem services (PES), could help ensure this balance.

The mountain regions of Bhutan, North East India, Nepal, and Myanmar heavily depend on their natural capital, which exist in the form of water, agriculture, forest, hydropower, and tourism resources.

The event sensitized the participants on the need to mainstream the valuation of natural resources into their national accounts and development design. This will enable the countries to ensure the long-term sustainability of development and resources. In this regard, guidance and technical support from UNEP and ICIMOD will be extremely valuable for these countries.

“This is significant for ICIMOD as taking account of natural capital will show the importance of mountain ecosystems and also help us redefine sustainable mountain development in relation to sustainable development goals,” said Bhaskar Karky, Resource Economist, ICIMOD

The dialogue also touched on the ‘Inclusive Wealth Report 2014’ recently released by UNEP, UNESCO, and UNU. The report provides an assessment of the changes in human, natural, and produced capital in 140 countries.

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## প্রাকৃতিক সম্পদ বাঁচাতে উদ্যোগ

আজকালের প্রতিবেদন: পাহাড়, বনাঞ্চল, জলাভূমির প্রাচুর্য আছে দক্ষিণ এশিয়ায়। কিন্তু এই প্রাকৃতিক সম্পদকে বাঁচাতে সাধারণ মানুষের মধ্যে সচেতনতা বাড়তে হবে। উন্নত করতে হবে যোগাযোগ ব্যবস্থাকেও। বুধবার ‘ন্যাচারাল ক্যাপিটাল ফর ইনক্লুসিভ গ্রোথ অপশন অ্যান্ড টুলস ফর সাউথ এশিয়া’ নামে একটি কর্মশালার আয়োজন করা হয় কলকাতার একটি হোটেলে। আয়োজক আই সি আই এম ও ডি এবং ইউ এন ই পি। উপস্থিত ছিলেন ড. পুষ্পেন কুমার। নেপাল, ভূটান ও মায়ানমারের প্রতিনিধিরা ছিলেন। ভূটানের তরফে ছিলেন ড. লংতেন নরগু। মায়ানমারের তরফে ছিলেন বি এ কুঙ্গ। নেপালের সারদ শ্রী পুডেল, আই সি আই এম ও ডি-র প্রতিনিধি ড. একলব্য শর্মা, প্রফেসর জেমস ই সালাজমান উপস্থিত ছিলেন। তাছাড়া ইউ এন ই পি-র প্রতিনিধিরাও ছিলেন। কেন্দ্রীয় সরকারের প্রতিনিধি হিসেবে ছিলেন কৃষ্ণ কুমার। হুগলি নদী, পাহাড়, ব্রহ্মপুত্রের পাশে থাকা প্রাকৃতিক সম্পদ নিয়ে আলোচনা হয়। সাংবাদিকদের তাঁরা বলেন, গোটা দুনিয়ার আবহাওয়ার পরিবর্তন হচ্ছে। তাই বৃদ্ধি করা দরকার সচেতনতা। হিমালয় পার্বত্য অঞ্চলে গঙ্গা ও ব্রহ্মপুত্রের ধারে প্রচুর মানুষ বসবাস করেন। তাঁদের জীবনযাত্রার মান আরও বাড়তে হবে। বিশেষ করে দরিদ্রদের। প্রাকৃতিক সম্পদ রক্ষা করতে কী ধরনের পদক্ষেপ করা হচ্ছে, তা তাঁরা ব্যাখ্যা করেন। তাঁরা বলেন, পরিবেশের ভারসাম্য বজায় রেখে নতুন দিক খুলে দিতে হবে।





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# The Statesman

## Bengal

'Valuation of natural resources must for poverty eradication'

### The Statesman

20 Dec 2014

SHIBA NANDA BASU

[shiba@thestatesman.net](mailto:shiba@thestatesman.net)

Kolkata, 19 December

Valuation and accounting of natural resources is a must for a better managed ecosystem and to address poverty, said experts from government of India and United Nations Environment Programme (UNEP).

Mr Krishna Kumar, Deputy Director General, Ministry of Statistics Programme and Implementation, said time had come to assess the natural resources in the country for an inclusive growth with an eye to eradicate poverty. "It is very difficult to assess natural capital, on the other hand it is the need of the hour. The UN has set up a guideline to evaluate natural capital. But the guideline cannot address certain issues related to assessment of the huge natural resources in India," said Mr Kumar. But he acknowledged the importance of such accounting manage natural capital in the future. Experts from UNEP echoed what Mr Kumar said. An inclusive growth was not possible without accounting natural capital as some counties achieved economic growth utilising natural capital. Mr Puspam Kumar, chief, ecosystem services economics unit of UNEP, said that a large number of contributions is missing due to absence of accounting and therefore did not reflect in the GDP. "There is no database and statistics and the mandate is to set up a robust database to assess the impact of natural capital on the GDP for an inclusive growth. Even it can help in policy making and addressing issues related to environment degradation," said Mr Puspam Kumar. In a policy dialogue organised by UNEP along with International Centre for Integrated Mountain Development (ICIMOD) in the city, experts said often bad managed strategies could erode the capacity for sustained advances in wealth and human wellbeing. Mr Bhaskar Karky, resource economist of ICIMOD, said that accounting is important as a separate indicator of the economy. "Any policy must address its natural capital issues on the basis of assessment of its natural capital. Accounting of natural capital is not a substitute index, rather it is an additional indicator on how a particular economy is performing," Mr Karky said.

Citing the Millennium Ecosystem Assessment report (2005) experts aid that 60 percent of the ecosystem services that support life on earth such as fresh water and air are being degraded or used unsustainably. Scientists have even that the harmful consequences of this degradation could grow significantly worse in the next 50 years. The study said: "Progress achieved for poverty and hunger eradication, improved health, and environmental protection is unlikely to be sustained if most of the ecosystem services continue to be degraded."

## Annex 3: List of participant

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## Annex 4: Photos





## Annex 5: Programme

### Programme

#### Day 1: Wednesday, 17 December 2014

08:30–09:00 Registration

##### Opening session

09:00–10:20	Welcome remarks (10 mins.)	Eklabya Sharma, Director of programme Operation, ICIMOD
	Introduction to the Policy dialogue (10 mins.)	Pushpam Kumar, Chief, Ecosystem Services Economics Unit, Division of Environmental Policy Implementation (DEPI), UNEP
	Keynote speech (30 mins.)	Jim Salzman, Samuel Fox Mordecai Professor of Law, Nicholas Institute Professor of Environmental Policy, Duke University, USA
	Introduction of participants (30 mins.)	All participants and resource persons
10:20–10:50	<i>Coffee break</i>	

##### Capturing contribution of natural capital to national socio-economies in the region

Chair: Eklabya Sharma, Director of Programme Operations, ICIMOD

10:50–12:20	Introduction to environmental valuation of natural capital (20 mins.)	Rodney Smith, Associate Professor, Director of Graduate Studies, University of Minnesota, USA
	Natural Capital in the Mountains	Hon P D Rai, Member of Parliament, Sikkim
	Types of natural capital and their relationships with the elements of economic growth (20 mins.)	Nilanjan Ghosh, Observer Research Foundation
	Natural capital and its role in creating socio-economic outputs and jobs (20 mins.)	Joyashree Roy, Professor of Economics, Jadavpur University, India
	Responses from the floor (30 min.)	
12:20–13:30	<i>Lunch</i>	

##### Macroeconomic indicators and natural capital

Chair: Priya Shyamsundar, Executive Director, the South Asian Network for Development and Environmental Economics (SANDEE)

13:30–15:00	Briefing session: Inclusive Wealth Report (IWR) 2014 (60 mins.)	Pushpam Kumar, Chief, Ecosystem Services Economics Unit, Division of Environmental Policy Implementation (DEPI), UNEP
	Forest accounts (10 min)	Haripriya Gundimeda Professor, Department of Humanities and Social Sciences, Indian Institute of Technology Bombay, Mumbai
		<b>Panelists:</b> Sonam Lhendup Senior Planning Officer Ministry of Economic Affairs, Bhutan Krishna Kumar, Deputy Director General, Ministry of Statistics and Programme Implementation Krishna Acharya Joint Secretary, Ministry of Forest & Soil Conservation or Bikash Bista DG/CBS Nepal Golam Rasul Senior Economist, ICIMOD
	Responses from the floor (20 min.)	
15:00–15:30	<i>Coffee break</i>	

##### Natural capital accounting in practice: examples from countries

Chair: Bhaskar S. Karky, Resource Economist and Programme Coordinator for Regional REDD+ Initiative and Transboundary Landscape Regional Programme, ICIMOD

15:30–17:20	Lead talk on natural capital accounting for inclusive growth (15 mins.)	Krishna Kumar, Deputy Director General, Social Statistics Division, Central Statistics Office, Ministry of Statistics and Programme Implementation
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	Natural capital accounting in practice (60 mins.) what economic aggregates are estimated, where are changes made in the System of National Accounts and satellite monitoring, how frequently and with what data	Representatives from each country and state <b>Bangladesh:</b> Khandakar Rakibur Rahman/Additional Secretary Ministry of Environment & Forest <b>Bhutan:</b> Tshering Wangmo, Programme Coordinator, Gross National Happiness Commission, Bhutan <b>India:</b> (tbc) <b>Myanmar:</b> Win Zaw/DDG MoECF <b>Nepal:</b> Suman Raj Aryal/DDG CBS Nepal <b>North East India States:</b> S Ashutosh/Additional PCCF Meghalaya
	Responses from the floor (35 mins.)	
	Closing Day 1	
17:30–1800	Press brief by ICIMOD and UNEP	Pushpam Kumar, Eklabya Sharma, Jim Salzman, and 4 senior officials
18:00–19:30	High tea followed by dinner	

## Day 2: Thursday, 18 December 2014

### High-level opening session

Master of ceremonies: Pushpam Kumar, Chief, Ecosystem Services Economics Unit, Division of Environmental Policy Implementation (DEPI), UNEP

09:00–10:00	Remarks by Parliamentarians/Senior officials	Heads of delegations from each country and state <b>Bangladesh:</b> Khandakar Rakibur Rahman/Additional Sec MoEF <b>Bhutan:</b> Lungten Norbu Specialist/MoEF <b>India:</b> (tbc) <b>Myanmar:</b> Win Zaw/DDG MoECF <b>Nepal:</b> Janak R. Chaudhary/CA member/Environment Chair <b>North East India States:</b> R. P. Agarwalla/PC CF Assam
10:00–10:30	Coffee break	

### Evidences of science-policy interface

Chair: Rodney Smith, Associate Professor, Director of Graduate Studies, University of Minnesota, USA

10:30–12:30	Debriefing of Day 1 (5 mins.)	Bhaskar Karky, Resource Economist and Programme Coordinator for Regional REDD+ Initiative and Transboundary Landscape Regional Programme, ICIMOD
	Panel discussion: Linkages between macroeconomic policy and natural capital (40 mins.)	<b>Panelists:</b> Anantha Duraiappah, Director of the Mahatma Gandhi Institute of Education for Peace and Sustainable Development (MGIEP), UNESCO Arabinda Mishra, Dean and Professor, Department of Policy Studies, TERI University, India Sharad Chandra Poudel Secretary, Ministry of Forests and Soil Conservation, Nepal Krishna Acharya, Joint Secretary MoFSC
	Case presentation (I) (15 mins.)	Joyashree Roy, Professor of Economics, Jadavpur University, India
	Case presentation (II) (15 mins.)	Ritesh Kumar, Conservation Programme Manager, Wetlands International South Asia
	Case presentation (III) (15 mins.)	Nilanjan Ghosh, Observer Research Foundation
	Responses from the floor (30 mins.)	
12:20–13:30	Lunch	

**Forests: Natural capital for inclusive growth in the region**

Chair: Jochen Statz, International Cooperation Division, UNIQUE forestry and land use GmbH, Germany

13:30–15:00	Forest monitoring and natural capital accounting (20 mins.)	Ashbindu Singh, Former Chief and Regional Coordinator of North America, UNEP
	Forests and REDD+ for green economy and inclusive growth in Bhutan (15 mins.)	Sangay Wangchuk, Lecturer/ Ugyen Wangchuck Institute for Conservation and Environment
	Forests and REDD+ for green economy and inclusive growth in Myanmar (15 mins.)	Win Zaw/DDG MoECF/Gov. of Myanmar
	Forests and REDD+ for green economy and inclusive growth in Nepal (15 mins.)	Resham Dangi Joint Secretary, MoFSC/Gov. of Nepal
	Responses from the floor (25 mins.)	
15:00–15:30	<i>Coffee break</i>	
<b>Group Discussion: mainstreaming natural capital in inclusive growth</b>		
Chair and lead discussant: Jim Salzman, Samuel Fox Mordecai Professor of Law, Nicholas Institute Professor of Environmental Policy, Duke University, USA		
15:30–17:30	Group Discussion (I): country & state specific policy needs	Participants will be in country groups to discuss the theme with 1-2 resource persons in each group.
	Group Discussion (II): challenges and ways forward	Participants will be in country groups to discuss the theme with 1-2 resource persons in each group.
17:30–	Closing Day 2	

**Day 3: Friday, 19 December 2014****Debriefing session**

Chair: T P Singh/ DDG ICFRE

09:00–10:30	Debriefing of Day 2 (5 mins.)	Bhaskar Karky, Resource Economist and Programme Coordinator for Regional REDD+ Initiative and Transboundary Landscape Regional Programme, ICIMOD
	Country Presentations (55 mins.) • Country capacity and needs on valuation and Accounting for policy • Opportunities and challenges to natural capital accounting	Representatives from each country and state <b>Bhutan:</b> Lungten Norbu, Specialist /MoEF Bhutan <b>India:</b> R S Rawat/Scientist ICFRE <b>Myanmar:</b> Ba Kaung/Dy.D MoECF <b>Nepal:</b> Bikash Bista/DG CBS Nepal <b>North East India States:</b> Ajay Kumar/ Scientist RRI Assam
	Responses from the floor (30 mins.)	
10:30–10:50	<i>Coffee break</i>	

**Closing session**

Chair: Sharad Chandra Paudel, Secretary, Ministry of Forests and Soil Conservation, GoN

10:50–12:00	Overview of sessions, next steps and conclusions (20 mins.)	Pushpam Kumar, Chief, Ecosystem Services Economics Unit, Division of Environmental Policy Implementation (DEPI), UNEP
	Remarks by participants (40 mins.)	
	Closing remarks (10 mins.)	Eklabya Sharma, Director of Programme Operation, ICIMOD
12:00–	Closure of the Policy Dialogue & Lunch	



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