



WELCOME...

The South Asian Network for Development and Environmental

Economics brings together researchers and decision-makers from Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka to address development-environment problems, strengthen research and writing skills and promote dialogue and discussion on evidence-based solutions. This newsletter provides information on SANDEE activities during the last six months. Please read on and, and as always, we would love to hear from you.

Dear Friends and Colleagues:

Safe to say, this year has been very rewarding for SANDEE. A highlight of the many regional, national and international awards received recently by our SANDEEites is the lifetime achievement award given to Sir Partha Dasgupta by the World Congress of Environmental and Resource Economists for his many contributions to the field. Please read more about our researchers' achievements in the Kudos and Awards sections.

In 'Focus' you will find an overview and discussion of Bhutan's fascinating Gross National Happiness Index. SANDEE researcher Ngawang Dendup explored the index and its implications for growth and development in Bhutan by interviewing two knowledgeable officials: Lham Dorji of the National Statistics Bureau and Tsoki Zangmo of The Centre for Bhutan Studies and GNH. While Bhutan gets a lot of global attention for its GNH index, an issue of much local interest is human-wildlife conflict. In June, the Bhutan Broadcasting Service featured SANDEE research on human-wildlife conflict on national television. SANDEE is hopeful this emerging research will offer insights into reducing ecosystem 'disservices' across South Asia.

Along with Bhutan, SANDEE activities in the last several months focused on two other 'smaller' counties in the region. The University of the Maldives invited SANDEE to train researchers, teachers and practitioners on 'Environmental Valuation'. Our activities in Sri Lanka, in addition, took us to six universities across the entire country. Our goal, as ever, is to continue to grow a skilled set of professionals across the region who can together address South Asia's sustainability challenges.

With best wishes,
SANDEE Secretariat
Kathmandu, Nepal

IN THIS ISSUE

Research	2
Focus	4
Publications and Dissemination	7
Training	8

Research

Research Grants

SANDEE's research is thematically focused on three areas: economics of climate change, ecosystems management, and policies and programmes for greener development. Grants for research are thus awarded mostly under these themes, and so it was with grants given in the spring 2014 cycle. SANDEE received a total of 74 research concept notes and approved eight research grants based on the Research and Training workshop held in Thimpu, Bhutan June 16-20, 2014.

Research Grants Supported in the Spring 2014 Cycle

Economics of Climate Change

Ahmad, Ajaz	Pakistan	Farmers' Flood Adaptation Measures in Nowshera, Pakistan
Bahinipati, Chandrashekhar	India	Will Climate Change Adaptation Enhance Farm Productivity? A Study of Micro-Irrigation Systems in Gujarat, India
Jesudasan, Allwin	India	How Farmers Adapt to Water Shortages in the Tamirabarani River Basin
Thinley, Tshering	Bhutan	Household Cooking Fuel Choices in Rural Bhutan

Ecosystems Management

Sardana, Kavita	India	Valuation of Biodiversity Conservation in Forest Ecosystems in Kodagu District, India
Sherchan, Roshan	Nepal	Strategies to Prevent Human-Elephant Conflict in Eastern Nepal

Policies and Programs for Greener Development

Haque, Mohammad Ashraful	Bangladesh	Reducing Household Risk via Community Disaster Management in Coastal Bangladesh
Rahman, Mahfusur	Bangladesh	Environmental Regulation and Sustainable Growth in Bangladesh's Ship Breaking and Recycling Industry

Plenary Session, SANDEE Research and Training Workshop Thimpu, Bhutan, June 16-20, 2014

SANDEE invited several special guests from Bhutan to offer an overview of the country's economy, development, and environmental challenges. **Mr. Chenchu Norbu**, Director General, Department of Forest and Park Services for the Ministry of Agriculture and Forests spoke about deforestation, sedimentation and human-wildlife conflict. **Dr. Ha Vinh Tho**, Programme Director of The GNH Centre introduced the audience to the philosophy behind Bhutan's Gross National Happiness index. **Dr. Lam Dorji**, Executive Director of Royal Society for Protection of Nature spoke about the increasing need for accurate economic valuation of the environment. National Statistics Bureau Deputy Chief Research Officer (Socio-Economic Research and Analysis Division) **Mr. Lham Dorji** discussed a meta valuation study undertaken to assess Bhutan's ecosystem services.



Working Papers

Adoption and Use of Improved Stoves and Biogas Plants in Rural India

Somnath Hazra, Jessica Lewis, Ipsita Das, Ashok Kumar Singha (WP 86-14)

Housing and Labor Productivity of Female Tea Pluckers in Sri Lanka

Ajantha Kalyanaratne (WP 87-14)

Demand for Watershed Services: Understanding Local Preferences through a Choice Experiment in the Koshi Basin of Nepal

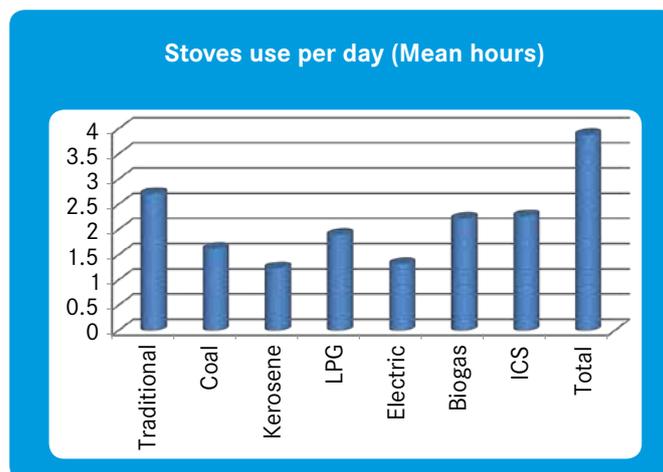
Rajesh Rai (WP 88-14)

Co-Producing Sustainability Knowledge: Assessing SANDEE's Role as a Research Network in South Asia

Pranab Mukhopadhyay, Mani Nepal and Priya Shyamsundar (WP 89-14)

Potential Benefits and Earnings from Improving the Hussain Sagar Lake in Hyderabad: A Combined Revealed and Stated Preference Approach

Prajna Paramita Mishra (WP 90-14)



Research by Hazra et al (2014) in Odisha suggests that biogas plants have the potential to reduce firewood use, the time households spend gathering fuel, and the incidence of respiratory disease caused by household air pollution.



All Working Papers, associated Policy Briefs, and a wealth of other data and analysis can be found on the SANDEE website. Please visit www.sandeeonline.org. SANDEE Working Papers are also now available at the following global websites: Research Papers in Economics (<http://repec.org/>) and the Institute of Development Studies' Open Docs BLDS Digital Library (<http://opendocs.ids.ac.uk/opendocs/handle/123456789/4265>).

Bhutan's Gross National Happiness Index

*In Bhutan, the health of society and the health of the environment are entwined. This integration is well represented in Bhutan's unique index of Gross National Happiness (GNH). SANDEE is grateful to Lham Dorji, Head of the Research Division of the National Statistics Bureau, and Tsoki Zangmo of The Centre for Bhutan Studies and GNH, for answering questions about GNH.**

How is GNH integrated into the State's activities? Does the government use the GNH data?

LD: There is no question GNH is integrated into the State's activities; it has long been a part of us. The 1972 legal code of Bhutan specifies that the purpose of governance is to bring happiness to its citizens, and beyond that to all sentient beings. The Bhutanese people have always had happiness, or 'gakyid' as their central goal, though the expression of happiness in GNH form was more recent. GNH became our guiding principle of development when the Fourth King (K4) [of Bhutan Jigme Singye Wangchuck] propounded the idea that 'GNH counts more than GDP'. Now, the Constitution provides the legal framework to pursue GNH as the State's policy.

The government has recognized that improving human well-being and happiness requires multi-dimensional approaches. Based on the two nationally representative surveys (2007 and 2010), the Centre for Bhutan Studies and GNH (CBS) has identified nine domains as the constituent elements of the GNH framework. This model helps the government create conditions for its people to pursue happiness.

To operationalize GNH, the Gross National Happiness Commission (GNHC), formerly the Planning Commission, has been institutionalized. Not every sector may have effectively integrated GNH, but efforts are being made. It is a matter of time.

How does the [Index] data illustrate the importance of different GNH issues? How exactly is the data used?

LD: The government's protocol for public policy formulation requires every public policy to undergo GNH policy screening. In the recent past, the national policies were endorsed only if they were [tested of being] free from adverse implications on GNH. Some of the national policies approved after the rigorous GNH screening process are the National Employment Policy (2013), National Health Policy, National Youth Policy, and FDI Policy.

We know that each of the nine domains makes varying contributions to the GNH Index. For instance, the GNH survey and analysis have concluded that 'Community Vitality' contributes more to the GNH Index than any other domain. This will gradually influence the way we formulate and implement the policies and programmes of family, community, urban development, education, etc.

* The questions were posed by SANDEE researcher Ngawang Dendup. The responses of Mr. Dorji and Ms. Zangmo have been edited for brevity. The views expressed are their own, and not the views of the NSB, CBS, or the Royal Government of Bhutan.

THE FOUR PILLARS of Bhutan's Gross National Happiness Index

- Good Governance
- Sustainable Socio-economic Development
- Cultural Preservation
- Environmental Conservation

DOMAINS (9) and INDICATORS (33):

Community Vitality

- Donation (time and money)
- Safety
- Community relationship
- Family

Cultural Diversity and Resilience

- Zorig chusum (Artisan skills)
- Cultural participation
- Speak native language
- Driglam Namzha (code of etiquette and conduct)

Ecological Diversity and Resilience

- Wildlife damage
- Urban issues
- Responsibility towards environment
- Ecological issues

Education

- Literacy
- Schooling
- Knowledge
- Value

Good Governance

- Political participation
- Services
- Governance performance
- Fundamental rights

Health

- Self reported health status
- Number of healthy days
- Disability
- Mental health

Living Standards

- Household per capita income
- Assets
- Housing

Psychological Wellbeing

- Life satisfaction
- Positive emotion
- Negative emotion
- Spirituality

Time Use

- Work
- Sleep

TZ: The GNH Index adopts a domain-based approach for a better understanding of the concept, as well as for clarity of interventions in terms of policies and programs. The GNH Index sets an alternative framework of indicators for development. It provides indicators to sectors to guide development, and will attempt to measure people’s wellbeing and happiness over time.

Does the GNH index relate to budget allocation?

TZ: The CBS has not yet come up with a formula for using the GNH index in budget allocation. However, the motivation is there to develop a comprehensive GNH-adjusted budget allocation formula in the near future.

LD: As far as I know, I do not think the GNH data has been used to practically determine budget or resource allocation. Rather, in the past Five Year Plan (2008-2012), the resource allocation to districts and sub-districts was based on a Resource Allocation Formula (RAF) using geographic area, income poverty incidence, and population size. Now, the GNHC has added a transportation cost index to the RAF. I strongly feel the environmental index should be included in the RAF, as some districts and sub-districts have more protected areas and ecological parks due to which they have to forego certain environmentally sensitive development activities. The districts or sub-districts with more protected areas and parks should get more development budget to offset the cost of environmental conservation. This will encourage our people to recognize the importance of environment conservation. Since the GNH indicators provide key information for public policy formulation, it is logical to conclude that they indirectly influence resource allocation.

The former Prime Minister Jigmi Y. Thinley was keen to develop a GNH-based national accounting system to assess the true cost and benefit of development. I am confident we can, because our country is gifted with the GNH development philosophy and political economy.

Creating GNH accounts will add vital economic valuation dimensions to GNH indicators and provide an accurate picture of our prosperity and wellbeing.

– *Lham Dorji*
Head of the Research Division of
the National Statistics Bureau

How does the GNH index influence investments? Would Bhutan’s hydropower projects need to pass through the GNH screening tool?

LD: The GNH policy and programme screening exercises may influence public investment decisions. The very fact that the Foreign Direct Investment (FDI) policy in 2010 was subjected to the GNH screening process is an indication that the GNH data can influence investment decisions at the national, as well as at programme and project levels.

Hydropower seems to be exempted from the GNH screening process. While we extol hydropower’s benefits in terms of huge economic returns and so-called ‘minimal impacts’ on the environment, comprehensive cost-benefit analysis may be needed in the future, one that incorporates the negative impacts on the social and cultural wealth of the country. GNH does not mean accumulating economic and built-in capital at the cost of natural, social and cultural capital.

TZ: We haven’t yet tried [to analyze a hydropower project with GNH screening tools]. The GNH screening tool is still at its infant stage and requires improvement and refinement, and pilot testing. Much work needs to be done on the GNH screening tool. Currently, the CBS is focusing on refinement of the GNH Index (indicators).

How useful is the GNH data for government activities and investments compared to GDP, HDI or natural capital accounting?

LD: GNH data looks at our welfare and wellbeing in a more holistic manner than GDP and HDI. I do not discount other measures of progress and wellbeing. [However], the psychological dimensions of GNH, recognition of traditional and social values, indigenous knowledge, cultural resources, healthy hours, spiritual wellbeing, community vitality and family life are some unique features that are not in GDP and HDI.



How does the GNH data help in developing statistical comparisons and in national accounts?

TZ: The CBS will be facilitating GNH surveys every three to four years for comparison purposes, and will keep track of indicators that are either improving or deteriorating. The GNHC will be using it as target indicators and consequently, develop programs and activities to improve the indicators.

LD: The GNH surveys can be used in the long run to analyze trends and compare the statuses of nine domains across the groups, communities and districts. The government ministries or sectors will be obliged to or get incentives to improve the domain indicators (for which they are responsible), based on how they change over time and space.

Are there some indicators that could be useful for global comparisons?

TZ: Most of the GNH indicators may be universally applied, to enable global comparisons, but others, such as those under the Culture domain, are relevant only in a Bhutanese context.

LD: Yes, environmental indicators, I believe, will be useful for global comparison if the GNH survey collects environmental data in a consistent manner. Whether a comparable survey is possible will depend on the respective countries' development approaches and political economies.

GNH data is extremely useful since it serves as indicators for aspects that are not incorporated in conventional indices such as GDP, HDI, etc. Our spiritual, environmental sustainability, community and social capital, cultural values, and others are vital, yet not accounted for in such indices. We have made an attempt to develop an overall holistic index.

– Tsoki Zangmo
The Centre for Bhutan Studies
and GNH



Publications and Dissemination

Publications

- ▶ Rai, R.K. and Scarborough, H. (2014) Understanding the effects of invasive plants on rural forest-dependent communities. *Small Scale Forestry*. doi: 10.1007/s11842-014-9273-7
- ▶ Rai, R.K. and Scarborough, H. (2014) Nonmarket valuation in developing countries: Incorporating labour contributions in environmental benefits estimates. *The Australian Journal of Agricultural and Resource Economics*. doi: 10.1111/1467-8489.12071
- ▶ Murty, M.N. (2014) Measuring well-being and accounting prices of environmental resources. *Economic and Political Weekly*, Vol. XLIX, No. 35.
- ▶ Pant, K.P. (2014) Uniform-price reverse auction for estimating the costs of reducing open-field burning of rice residue in Nepal. *Environmental and Resource Economics*, (forthcoming).
- ▶ Patra, S. (2014) Cross-border trading of Kendu Leaf in Odisha. *Asian Journal of Research in Social Sciences and Humanities*, Vol. 4, No. 2.
- ▶ Patra, S. (2014) Procurement and cost analyses of Kendu Leaf trade in Odisha. *Asian Journal of Research in Business Economics & Management*, Vol. 4, No. 1.

Dissemination

18th International Consortium on Applied Bioeconomy Research, Nairobi, Kenya, June 18-20, 2014. Khuda Bakhsh presented his work on Bt cotton in Pakistan.

A number of SANDEEites presented research at the **Fifth World Congress of Environmental and Resource Economists** in Istanbul, Turkey June 28-July 2, 2014. Please see the information under 'Other Developments' below.

2nd Annual South Asia Biosafety Conference, Colombo, Sri Lanka, September 14-16, 2014. Khuda Bakhsh presented his research on 'Assessing Agricultural Management Practices and Externalities of Bt Cotton Plantations in Pakistani Punjab'.

National Workshop on Payment for Ecosystem Services: Opportunities and Challenges in Nepal, Kathmandu, Nepal, September 18-19, 2014. Rajesh Rai presented a paper on 'Linking Upstream and Downstream in Sardhu Khola for possible PES Mechanisms'.

Workshop on Environmental Management Practices in Sri Lanka, Colombo, Sri Lanka, October 14, 2014. Kanchana Wickramasinge of the Institute of Policy Studies of Sri Lanka presented her SANDEE research on sustainability and environmental considerations in the hotel sector in Sri Lanka.



Crop residue burning in Southern Nepal and various parts of South Asia contributes to black carbon, climate change and local pollution.



30th Annual General Meeting and Conference of Pakistan, December 2-4, 2014. Heman Lohano and Bishnu Sharma presented research on livelihood and carbon ecosystem services.

17th Sustainable Development Conference, Islamabad, Pakistan, December 9-11, 2014. SANDEE and SDPI co-organised a panel on environmental compliance in the textile and garment industries. Presenters included, Kinkini Hemachandra, Waseem Gulzar, Muhammad Khan and a number of policy makers.

Training



Research Write-shop, Kathmandu, Nepal, October 7-9, 2014. The objective of this workshop was to help a small number of researchers think through the policy implications of their work and re-write their analyses to ensure that policy issues were carefully considered.



A training course on Environmental Valuation Methods took place in Male, Maldives on September 15-18, 2014. SANDEE and the Maldives National University organized this course on the valuation of environmental and natural resources for Maldivian and Sri Lankan researchers.



In early September SANDEE representatives visited six universities across Sri Lanka to showcase research opportunities in Environmental and Resource Economics.



Fifth World Congress of Environmental and Resource Economists, Istanbul, Turkey, June 28-July 2, 2014.

Professor Sir Partha Dasgupta received the European Lifetime Achievement Award in Environmental Economics in recognition of his contribution to the development of environmental and resource economics.

SANDEE Advisor **Eswaran Somanathan** of the Indian Statistical Institute in Delhi gave a keynote speech at the conference and presented research on the evolution of learning titled 'Social Learning and Choice Theory'.

Sakib Mahmud won the Best Poster Award for 2014 for 'Coasean bargaining under insecure property rights and capital investment'. He, along with colleagues Prasenjit Banerjee and Jason Shogren, presented a poster on insecure property rights. The work was part of Sakib's Ph.D. dissertation research related to the Sundarbans and funded by SANDEE.

SANDEEites Suresh Kumar, Heman Lohano, Krishna Pant, Rajesh Rai, Chandan Singha and Saravana Kumar also presented at the Congress.

Natural Capital for Inclusive Growth: Options and Tools for South Asia: A Policy Dialogue for Senior Policy Makers, Kolkata, India, December 17-19, 2014

Co-organized by the United Nations Environment Programme and the International Centre for Integrated Mountain Development, this workshop is a natural continuation of the conversation begun in October 2013 at the 'Valuing and Accounting for the Environment in Asia' conference co-sponsored by SANDEE. Attendees will include representatives from SANDEE, The World Bank, the ASEAN Centre for Biodiversity, the South Asia Co-operative Environment Programme and the South Asian Association for Regional Cooperation. The objective of the workshop is examine strategies for valuing and accounting for natural capital, particularly in North-Eastern India.

Kudos

Aradhna Agarwal joined the Department of International Economics and Management at the Copenhagen Business School as 'Professor in Indian Studies' December 1, 2014.

Waqar Akram received a Fulbright Scholarship to the College of Agricultural Sciences and Natural Resources, Oklahoma State University for the 2014-15 academic year to continue his SANDEE research on clean energy technology in Pakistan.

Khuda Bakhsh joined COMSATS Institute of Information Technology at Vehari, Punjab Pakistan as Associate Professor.

Dipendra Bhattarai joined Practical Action Consulting South Asia as a Project Development Officer - Energy in July 2014.

Haripriya Gundimeda was elected President of the International Urban Biodiversity and Design network (URBIO) for a four-year term.

Udith Jayasinghe is a Visiting Fulbright Professor in the Department of Resource Economics at the University of Massachusetts in the USA and will be researching food safety management. Udith is Professor and Chair of the Department of Agribusiness Management and Director of the Staff Development Center at Wayamba University of Sri Lanka.



Awards



Bibhu Prasad Nayak received second place in the category of Research on Development at the Global Development Network Awards June 18-20, 2014 in Accra, Ghana, with the research paper 'Trust and Cooperation among Urban Poor for Transition to Cleaner and Modern Cooking Fuel'.

S. Madheswaran, currently working as Adviser to the Planning, Programme Monitoring and Statistics Department of the Government of Karnataka, received the Kempe Gowda Award from the Honorable Chief Minister of the Government of Karnataka, in the field of Economics/ Statistics on June 27, 2014.

Kanchana Wickramasinghe took top honors with the Japanese Award for Outstanding Research on Development at the Global Development Network Awards in June for her research on 'Demand for Climate Insurance in Sri Lanka: Comparative Study of Dry Zone Rain-fed Farmers and Coastal Fishers'. Kanchana also received the 'Top Outstanding Young Persons in Sri Lanka Award 2014 for Personal Accomplishment' on November 11, 2014. The award is organized by the Junior Chamber International of Sri Lanka and given to individuals whose personal and professional achievements in a chosen field are exemplary, outstanding and nationally beneficial.

Upcoming Workshops

- ▶ Winter School in Quantitative Methods, Kathmandu, Nepal, February 2-9, 2014
- ▶ Communicating Research, Kathmandu, Nepal, February 10-12, 2014

A warm welcome to **Jamuna Shrestha**, who recently joined the SANDEE team as a Research Assistant. Jamuna is supporting the SANDEE program in our research and dissemination activities. She has a Master's degree in Economics and is currently pursuing her M. Phil in Economics from Tribhuvan University. She has also been teaching for more than five years.



SANDEE's 29th Biannual Research and Training workshop, December 7- 11,2014, Kathmandu, Nepal



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