

Newsletter

No. 25 / Spring 2013

ECONOMICS & THE ENVIRONMENT



WELCOME...

he South Asian Network for Development and Environmental Economics (SANDEE) is a regional network that brings together analysts from different countries in South Asia to address their development-environment problems. It is based on the premise that the quality of economic growth matters and that environmental sustainability is key to the future of the region. SANDEE's activities cover Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka.

This newsletter provides information on SANDEE activities during the last six months. Please read on and, as always, we would love to hear from you.

Dear Friends and Colleagues

ur 'Focus' in this newsletter is on the Millennium Development Goals (MDGs). The MDGs will expire in 2015 and there is currently considerable discussion on what will replace the current MDGs. During the Rio+20 Summit, there was a global commitment made to the next set of development goals. Two options are to renew the MDGs or to develop new Sustainable Development Goals that incorporate science-based conclusions on planetary thresholds. In 'Focus', several SANDEEites review how South Asia has fared with regard to meeting the Millennium Development Goals and discuss priorities for the future. We look forward to a vibrant dialogue

within South Asia on development priorities and measuring progress towards implementing these priorities.

With best wishes
Priya, Rucha and the SANDEE Team

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Research

Research Grants

ANDEE's research is thematically focused on three areas: economics of climate change, ecosystem management and policies and programs for greening development. Thus, our grants in the winter 2012 cycle focused on these issues. A total of 100 concept notes were received and eight grants were approved based on the Research and Training workshop in December 2012. The distribution of research concept notes and grants across countries is presented in Figure 1.

Figure 1: Distribution of Concept Notes and Grants, Dec. 2012 (%)

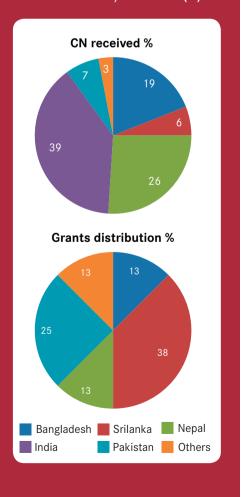


Table 1: Research Grants Supported

Economics of Climate Change

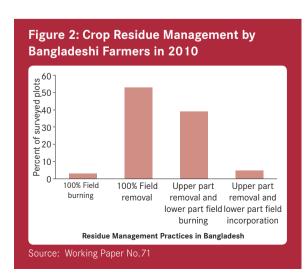
Edirisinghe, Jagath	Sri Lanka	Distributional Impacts of Climate Change on Smallholder Agriculture in Sri Lanka		
Ecosystems Management and Policy				
Katel,Om	Bhutan	Mapping and Designing Payments for Ecosystem Services in Punkha, Bhutan		
Udaykumara , Nimal	Sri Lanka	Assessment of Soil Conservation Benefits of the Upper Mahaweli Watershed in Sri Lanka		
Uddin Md, Belal	Bangladesh	Non-Timber Forest Products Extraction under Different Forest Institutions in Bangladesh		
Policies and Programs for Greening Development				
Bhardwaj, Bishal	Nepal	Why does the Plastic Bag Ban in Nepal Work in Some Municipalities and not in Others?		
Gunawardena, Asha	Sri Lanka	Optimal Use of Policy Instruments to Control water Pollution in Sri Lanka (study grant)		
Nadeem Abdul,Majeed	Pakistan	Targeting and Distribution of Post-Flood Aid in Punjab, Pakistan (study grant)		
Samad, Ghulam	Pakistan	Environmental Regulations and their Compliance in theTextile Processing Sector of Pakistan		

Working Papers

ptions and Determinants of Rice Residue Management Practices in the South-West Region of Bangladesh, Ziaul Haider, WP 71-12

Farmers in Bangladesh burnt an estimated 3.14 million metric tons of rice residue in 2010. Rice residue burning contributes to climate change and pollution through the release of gaseous and particulate matter. Thus, this study examines options for managing rice residue and the factors that determine its management. Study results indicate that farmers who burn residue enjoy a net annual benefit of USD 43-45/acre on average because productivity is higher by about 9 percent in fields where burning occurs. It estimates that farmers would need to be subsidized approximately USD

2.10 million per year in order to avoid rice residue burning. Research and development efforts into shortening straw length, shortening the time-period required between harvesting and planting and new rice varieties may help to mitigate residue burning.



Awareness as an Adaptation Strategy for Reducing Mortality from Heat Waves: Evidence from a Disaster Risk Management Program in India, Saudamini Das and Stephen C. Smith, WP 72-12

The paper presents quasi-experimental evidence of the impact of the Disaster Risk Management (DRM) program, with focus on heat wave awareness. It analyzes the impact on the death toll from heat stroke for the 1998 to 2010 period, using difference-in-difference (DID) regressions with district level panel data and a set of control variables, and then a statewide heat wave advertising program, to which the poor have limited exposure but which may also provide spillover benefits, using a triple differencing approach. These results suggest the heat wave awareness programs may have complementary impacts. The paper examines research strategies for much-needed improvement in the precision of impact evaluation results for innovative programs of this type.

Farm Productivity Loss due to Flood-Induced Sand Deposition: A Study in Dhemaji,

Kalyan Das, WP 73-12

It is widely believed that the decline in agricultural productivity in the Dhemaji district of Assam, India, is due to flood-induced sand depositions in paddy fields, which reduces pH value and organic carbon and nutrients. Analyses of paddy plots suggest that the annual damage costs from sand deposition in the study area range from INR 690 to 1845 (US\$ 13 to 35) per hectare. This study underscores the need for further research to identify other factors that may also be responsible for the decline in paddy productivity in the region, while proposing interventions to improve paddy productivity.

Valuing the Damage Caused by Invasive Plant Species in a Low-income Community in Nepal,

Rajesh Kumar Rai WP 74-12

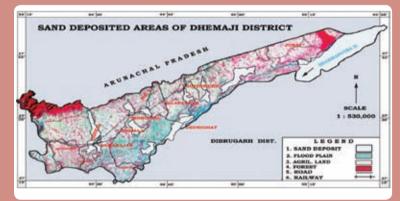
This paper presents a choice experiment designed to estimate the willingness-to-pay (WTP) of rural farmers to mitigate damages caused by invasive plant species, particularly Mikania micrantha, in the buffer zone of the Chitwan National Park in Nepal. The results suggest that the estimated shadow value of time is 47% of the daily wage rate. The results also reveal that rural farmers are willing to pay NRs. 2,382 (USD 31) per year for Mikania management activities. Households are willing to make cash and labor contributions because they expect that invasive species management will reduce forest product collection time and increase tourism.

Examining Private Participation in Embankment Maintenance in the Indian Sundarbans,

Prasenjit Sarkhel WP 75-12

This paper analyses the complementarities between land productivity and conservation investments in the context of river embankment maintenance in the Indian Sundarbans. The study finds that households whose principal occupation is

Figure 3: Sand deposits in Dhemaji district, Assam (courtesy, ASTEC, Guwahati)



IRS-1D,L-III 14 February 2002



Mikania Micrantha, an invasive species that is taking over parts of the Terai, Nepal

aquaculture commit more resources to embankment maintenance relative to those in non-aquaculture employment. However, there is evidence of free riding in canal-based aquaculture where head-enders with greater wealth as well as intense social networks tend to free-ride while tail-enders with less land holdings contribute more towards canal maintenance. Thus, in primarily agricultural areas, productivity-enhancing policies may be more efficient than policies that fully subsidize public good maintenance.

All SANDEE working papers are available on www.sandeeonline.org.

Focus

he Millennium Development Goals and the post 2015 Agenda

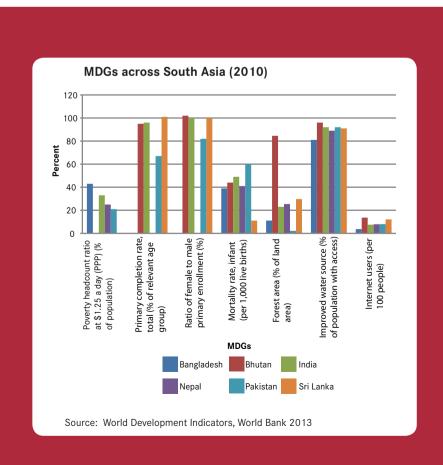
The global community agreed to implement eight Millennium Development Goals (MDGs) by 2015. Some of these goals have been met, while others have languished. The Environment goal, in particular, has many targets that will not be met by 2015. The question is where do we go in the post-2015 period and how do we build on the achievements thus far? As the possibility of new 'Sustainable Development Goals' are debated within the United Nations system and around the world, we bring to you a set of varied perspectives from South Asia.

Bangladesh's Experience with the MDGs

Bangladesh's delivery record on the MDGs reveals that the country is on-track in important areas, such as poverty reduction, gender parity in primary and secondary education, child and maternal mortality rates, and improved access to safe drinking water and sanitation. However, there are critical MDG targets that need further attention, including employment generation, creation of more decent jobs for women, increase in the primary school completion rate, births attended by skilled

personnel, and knowledge and information dissemination on HIV/AIDS. Attainment of targets relating to environmental sustainability and global partnership has largely remained beyond the reach of Bangladesh for a wide variety of reasons.

A number of important lessons emerge. For example, sustained Gross Domestic Product (GDP) growth has facilitated the government's efforts to achieve targets. Nonetheless, the country has experienced growing income and consumption inequalities and entrenched deprivations related to hunger and nutrition. It has also become clear that smoother implementation of MDGs does not provide for protection against external economic shocks such as global financial crisis or food price spikes. Moreover, delivery of MDGs does not necessarily attract more foreign aid to underwrite the MDG programmes.



The post-MDG international development goals will have to address the unfinished agenda of the MDGs and emerging challenges such as climate change. While discussions on a set of Sustainable Development Goals (SDGs) in the post-2015 period progress, it is not yet clear how these "universal" goals are going to merge with the "specific" concerns of countries like Bangladesh. Admittedly many of the evolving environmental concerns have direct consequences for poverty alleviation, yet incorporation of the environmental variables should not obscure socio-economic priorities. Thus, the new international development framework should consolidate and sharpen its focus on accelerated poverty reduction, based on sustainable and inclusive growth.

- Debapriya Bhattacharya, Distinguished Fellow Center for Policy Dialogue, Bangladesh

Bhutan's progress towards achieving MDGs

Bhutan is well on track to achieving all eight Millennium Development Goals. In terms of the first MDG, 'Eradicate Extreme Poverty and Hunger', Bhutan is on schedule to reduce the poverty incidence of households with less than \$1.2 per day from 23% in 2008 to less than 15%in 2013. Bhutan's net primary enrollment ratio has increased from 84% in 2008 to 97% in 2011. Girls enrollment is now at about 50% at every level of general education; and 2010 data shows that the Infant Mortality Rate and Under-Five Mortality rate are at 47and 69 per



1,000 live births. Bhutan is also on track to achieving its maternal health targets by 2015. Under the sixth MDG, the number of tuberculosis and malaria cases has dropped significantly from 4,232 and 22,126 cases in 1990 to 1,250 and 194 cases in 2011 respectively (the number of HIVcases, while low, has increased). Regarding the 'Environmental' MDG, Bhutan's forest cover has increased from 73% in 1995 to 81% in 2010 and protected area coverage from 39% in 2007 to 51% in 2009. The proportion of population with access to safe drinking water increased to 94% in 2011.

For the last MDG 'Develop a Global Partnership for Development', Bhutan's progress in persuading the world to adopt an alternative development paradigm toward promoting human happiness and wellbeing is perhaps its most significant

contribution. Bhutan is currently working with a group of international scholars to develop a broad conceptual framework on a new development paradigm, which will be presented to UN later this year and will prepare the ground for the post millennium development agenda.

- Tashi Dorji and Karma Rapten UNDP, Bhutan The time has never been more ripe and ready for genuine change from our current materialist obsession to a much broader and deeper view of human happiness and the wellbeing of all life on earth; from our current alienation from nature and from each other to a return to our essential one-ness with all life; from an economic structure founded on greed, competition and profit to one based on sufficiency, cooperation, and fairness.

- Prime Minister Jigmi Y Thinley, Bhutan, 30th January 2013.

MDGs: Issues for the Future in Pakistan

Pakistan's experience with MDGs, like most developing countries, remains mixed. The country is ahead or on track to achieve several targets related to women, health and the environment. These include targets such as proportion of women in parliament, availability of female health workers, children with access to ORT, HIV and TB indicators, use of CNG and land area for wildlife protection. However, there are many indicators on which Pakistan lags — unfortunately, Pakistan is off-track in one of the most important indicators, namely, infant mortality.



There seems to be a clear disconnect between the macro and micro economic performance in the country. For example, while education and health coverage has improved in absolute terms, there is still a decline in medium and long run economic growth rates. Similarly, while allocations towards education and health have increased, disbursement (relative to GDP) has declined. Further, rising per capita incomes are not matched by increasing access to basic services.

Pakistan's limited success with meeting the MDG can be attributed to uncoordinated implementation, lack of local capacity in terms of human and financial resources, affecting service delivery, and dearth of fiscal discipline, contributing towards diversion of pro-poor

expenditures into other uses. This is evidenced by recent cuts in public sector development programs in education and health and fund diversion towards short term cash-based social safety nets and to elected representatives for discretionary spending in their own constituencies. Further, the past list of MDGs was not comprehensive enough to address the challenges faced by Pakistan. Issues that were severely neglected include food security, climate change and a comprehensive strategy for youth engagement. As the government decides to embrace the post-2015 development agenda, new goals should focus on local level governance, accountability measures at all administrative tiers, and pro-poor investments. Measures that trace community abilities that demand and use of social services could also be tracked.

- Vagar Ahmed, Deputy Exec Director, Sustainable Development Policy Institute, Pakistan

Meeting Environmental Goals in India and Elsewhere – the Post 2015 Challenge

Many in the international community are pushing for "global goals with contextualized national targets" in the post-2015 period. But what does this really mean in the context of the environment? The phrase "common but differentiated responsibilities" has been a favorite of environmental negotiators for decades, but it is not clear how this will evolve, with many developed nations trying to distance themselves from the "differentiated" dimension, arguing for large developing countries to take on more obligations.

There are several important issues to consider in relation to post-2015 targets and indicators on the environment and how they will be applied in practice. Developing countries worry, for example, that if they agree to quantitative indicators such as carbon emissions, they open themselves to censure and unilateral tariff barriers on the pretext of environmental concerns. In other words, the post-2015 targets could become an excuse for protectionism. The recent controversy surrounding the aviation tax levied by the European Union is an example.

Also, what do targets on the environment dimension mean for other goals? We need to recognize that some goals may involve difficult trade-offs, e.g. poverty reduction (through increased consumption by the poor and access to modern energy services, etc) may have implications for environment goals related to climate change. Also of significance is who will pay, and how much, to achieve the post-2015 targets. In the context of an economic slowdown in developed countries, the appetite to finance actions of developing countries, many of whom are now looked upon as economic "competitors", is low. What happens to the targets in the absence of adequate finance?

Given these challenges, here are some concrete suggestions on the way forward: a) build an environment of trust upfront—this can be done, for example, if all nations agree on the principles of equity and also categorically commit that no unilateral trade barriers or other protectionist penalties will be imposed with respect to the achievement of the post-2015 targets; b) focus on the "low-hanging fruit" on which we can get rapid consensus. Targets on access to safe drinking water and basic sanitation, for example, are already agreed upon under the current environmental goals of MDGs. These kinds of targets may be amenable to early consensus; and c) err on the side of practical rather than bold. It is better to start with a small set of modest, non-controversial targets that get accepted, rather than endlessly debate a long list of ambitious ones on which there is no consensus. The precise targets could come from individual countries themselves with an accountability framework in place so

that progress can be verified transparently. There should be an interim review mechanism—say after five years—to reassess and enhance the targets, once we know how we are doing, and in light of newer data and science.

Agreeing on a post-2015 agenda, especially on the environment, will be challenging. But we must not let the best be the enemy of the good. Through a pragmatic and incremental approach, much can be achieved.

- Varad Pande, Officer on special duty to the Minister of Rural Development, Government of India¹

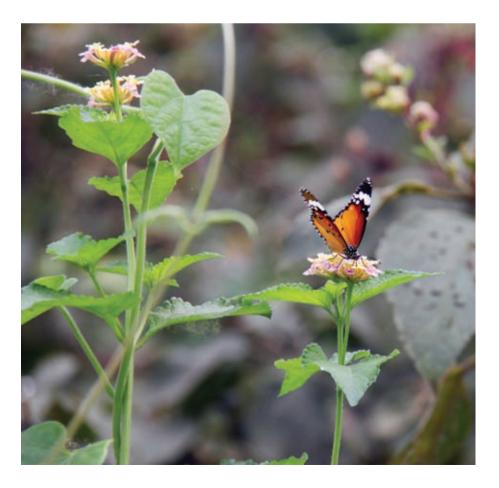
Consolidating MDG Achievements in Sri Lanka

The Pacific Regional MDG Report compiled and launched by the UNESCAP, ADB and the UNDP last year reported that Sri Lanka was well ahead of many countries in the region with regard to meeting the MDGs — Sri Lanka has achieved 13 of 22 targets and is on track to achieve two more by 2015. The targets achieved by 2012 are halving poverty, all targets on education, three targets on gender equality in education, several health related targets and the target related to provision of safe drinking water and basic sanitation .This does not come as a big surprise as Sri Lanka entered MDG tracking with a relatively high degree of achievements in most areas. This is a result of heavy investments in the public services such as health, education and social safety nets maintained over long periods of time. Three targets viz. under-five mortality and infant mortality and maternal mortality are expected to be met later than 2015. Sri Lanka has regressed on 3 targets, viz. under-weight children, and forest cover and CO_o emissions.

In spite of good progress in reducing poverty incidence at the national level, there are several reasons for concern. Income distribution has worsened with the share of the poorest quintile in consumption expenditure declining over the period of the MDGs. Poor performance in health related targets, mortality and nutrition among mothers and children, despite progress in increasing incomes and female education is puzzling. Maternal mortality has worsened despite high rates of skilled birth attendance. This suggests a need for greater gender empowerment. Regional differences in meeting targets are high, with the rural and estate sectors performing poorly relative to urban areas. As these targets relate to an area where publicly-provided services dominate, equity in the provision of public health services should be given attention. The expanding private sector involvement in the healthcare provision has also been inequitable, favoring urban clientele. Equally, despite improving statistics in school enrollment, educational outcomes in rural regions lag behind those of urban areas. The same is true for access to improved drinking water source and improved sanitation, with the rural sectors lagging.

Equally concerning is the poor progress and even decline in targets relating to environmental sustainability. Between 1990 and 2005 CO_a emissions per capita increased from 0.20 to 0.64 MT and forest cover has declined to less than 30% of land area. Air quality indicators for Colombo metropolitan area show a decline, a result of heavy growth in traffic. As the environmental outcomes have a greater bearing on sustaining key MDG goals related to income, particularly from agriculture, and access to water and sanitation, more attention must be paid to protecting the integrity of the environment.

> Nihal Atapattu , Senior Development Officer, CIDA Sri Lanka



Views expressed are personal

Publications and Dissemination

Publications

- ▶ Akram, N (2012) 'Is climate change hindering economic growth of Asian economies?' *Asia-Pacific Economic Development Journal* 19 (2): 1-18
- ► Ghate, R; Ghate, S; Ostrom, E (2013) 'Can Communities Plan, Grow and Sustainably Harvest from Forests?' *Economic and Political Weekly*, 48(8): 59-67
- ► Goswami, K (2012) 'Low returns forcing farmers to abandon Jatropha'. *The Assam Tribune*, (published online http://www.assamtribune.com/scripts/detailsnew.asp?id=nov2212/state05)
- ▶ Mangan, T; Brouwer, R; Lohano, HD; Nangraj, GM (2012) 'Estimating the recreational value of Pakistan's largest freshwater lake to support sustainable tourism management using a travel cost model.' *Journal of Sustainable Tourism*, (published online http://www.tandfonline.com/doi/abs/10.1080/09669582.2012.708040)
- Mukhopadhyay, P (2012) Marine Valuation Report for TEEB India Scoping Report, MoEF
- Nagendra, H; Ghate, R; Rao, J (2013) 'Governing the Commons'. Seminar, 641: 88-93
- ▶ Rai, R; Scarborough, H (2012) 'Estimating the public benefits of mitigating damages caused by invasive plant species in a subsistence economy', (published online) http://ageconsearch.umn.edu/handle/124421), Australian Agricultural and Resource Economics Society
- ▶ Rai, RK; Scarborough, H (2013) 'Economic value of mitigation of plant invaders in a subsistence economy: incorporating labour as a mode of payment'. *Environment and Development Economics* 18(2): 225-244

Dissemination

SDPI's Fourteenth Sustainable Development Conference, 13-15 December 2011, Islamabad, Pakistan.

Naeem Akram participated in the conference as a panelist on 'Climate Change Concerns and their Possible Impact on South Asian Countries'.

11th Islamic Countries Conference on Statistical Sciences, 19-22 December 2011, Lahore Pakistan

Waqar Akram presented his research on 'Endogeneity, Hausman test and Bt Cotton Productivity'. This work builds on previous SANDEE research on the adoption of Bt Cotton in Pakistan.

Conference of Agricultural Economists, 18-24 August 2012, Paraná, Brazil

Krishna Pant presented a paper 'A Payment Experiment for Modification of Farm Practices: The Case of Rice Residue Burning in Nepal', based on his SANDEE work. The conference was attended by nearly 700 agriculture economists from all over the world.

5th South Asian Economic Summit, 11-13 September 2012, Islamabad, Pakistan

The South Asian Summit is annual conference that brings together the research, policy and practice communities working on development issues in our region. Priya Shyamsundar gave a plenary presentation on 'Knowledge Without Borders'. SANDEE was also invited to organize a panel on climate change. Researchers Prakash Karn, Heman Lohano, Ifthikar Hussain, Joyashree Roy and Saudamini Das presented their climate change related SANDEE research at this panel.

Climate Change and Development Policy, 27-28 September 2012, Helsinki, Finland

Brinda Viswanathan presented her study on 'Weather Variability, Agriculture and Rural Migration: Evidence from India', showing the three way linkage between weather, agriculture and migration in India.

3rd URBIO 2012 Conference 'Urban Biodiversity and Climate Change: Mitigation and Adaptation' 8-12 October, 2012, Indian Institute of Technology, Mumbai, India.

Over 200 scientists and practitioners from 25 countries participated in the conference. SANDEE associates presented three papers in two separate symposia.

- Tackling Black Carbon Pollution from Agricultural Fires: the Case of Punjab, Ridhima Gupta
- Periurban Biodiversity and Ecosystem Services for Water Supply in Kathmandu City, Krishna Prasad Pant
- Recreation in Pollution: Hussainsagar Lake in Hyderabad, Prajna Paramita Mishra



Prajna Paramita presenting her paper at URBIO 2012

Pre-conference on 'Migration and Environment' organized by CERDI (of the University of Auvergne), the CES from the University of Paris, FERDI and IDDRI, 17 October 2012, France.

Brinda Vishawanathan and Heman Lohano presented their research on climate change and migration at this workshop.

Kishor Goswami gave a dissemination seminar based on his study 'Sustainability of Biodiesel Industry in North East India' at OKDISCD, Guwahati, on November 9, 2012.

Training

esearch and Writing Workshops: Islamabad, Pakistan (14-17 Sept, 2012) and Dhaka, Bangladesh (6-9 Oct, 2012)

SANDEE organizes research and writing workshops that are focused on specific countries and their research interests. The aim of these workshops is to build research capacity in the area of environment and resource economics by working through the details of research proposals. SANDEE partnered with the Sustainable Development Policy Institute to organize a Research and Writing workshop in environmental and natural resource economics in Islamabad, Pakistan in September 2012. The 16 Pakistani researchers who participated in this program are expected to develop full research proposals to submit to SANDEE for further review. SANDEE organized a second Research and

Writing workshop in Bangladesh, in partnership with the Economic Research Group, in October in Dhaka. Participants at this workshop were mainly from Bangladesh, but we also had researchers from India and Bhutan join.

"Along with analytical exercises involved in any research workshops, this workshop brings together natural resource & environmental researchers from South Asia, making for a uniquely enriching learning experience."

Md. Nabil Haque, Research Officer & CDM Project Associate, Clean Energy
 Alternatives, Dhaka



InVEST Training at Kathmandu, December 2012

Ecology and Economics Research Scholars Workshop, Ahmedabad, India (Nov 29-Dec 2, 2012)

Recognizing the critical importance of guiding young researchers seeking to undertake serious enquiry into various aspects of ecology, natural resources and development, INSEE, jointly with SANDEE, organized a workshop on

Ecology and Economics at the Gujarat Institute of Development Research in Ahmedabad, India. During this four day workshop, several ecologists and economists discussed research issues and identified emerging practical and theoretical developments, focusing mainly on SANDEE's research priorities.

"It was an interesting workshop focusing on climate change and institutions, incorporating academia and practitioners as trainers. Young scholars like us got a good platform to discuss our research interests and gain feedback from veterans."

- Rosewine Joy, Research Scholar, Cochin University-Kerala, India

Modeling Ecosystem Services with InVEST, Kathmandu, Nepal (9-11 Dec 2012)

SANDEE organized a three-day training workshop on Modeling Ecosystem Services, partnering with Natural Capital Project. The Natural Capital seeks to sensitize stake-holders about the importance of natural capital in supporting human well-being. It has developed a family of tools called InVEST to map and value the goods and services from nature which are essential for sustaining and fulfilling human life. The objective of this training was to enable a group of South Asian researchers to understand better how ecosystems can be modeled and how these results can be integrated with economic analyses. The faculty for this workshop included Barbara Pollini, Nirmal Bhagabati and Stephen Polasky from WWF and the University of Minnesota

"Investing my time in learning InVEST was not a waste; I am going to teach it to my environmental economics students."

- Junaid Alam Memon, Assistant Professor/ Head Development Studies, Pakistan Institute of Development Economics, Islamabad

Other Developments

Kudos

- Mohammed Ziaul Haider received a promotion and is now Professor at Khulna University, Bangladesh.
- Mohammad Rafiq, University of Peshawar, received two major grants from the Higher Education Program of Pakistan.
 The first study is on 'The Impact of Tourism on Local Livelihood in Klash valley' (PKR 1.8 million, 2012), and, the second on 'Valuing the Environmental Health Effects: A Case study of Peshawar' (PKR 2.8 million, 2012-2013).
- SANDEE Fellow Saudamini Das joined the Institute of Economic Growth, Delhi, India as Associate Professor.

The Agricultural Model Inter-comparison and Improvement Project (AgMIP) is a major international collaborative effort to assess the state of global agricultural modeling to understand climate impacts on the agricultural sector (www.agmip.org). The Department of Agricultural Economics, Tamil Nadu Agricultural University, Coimbatore, India, has been selected under the aegis of AgMIPto lead a new trans-disciplinary research project called "Integrated Assessment of Climate Change Impacts on Principal Crops and Farm Household Incomes in Southern India". P. Paramasivam, Agricultural Economist at TNAU, and a former SANDEE trainee, is the lead Principal Investigator, while SANDEE Research Associates .Balasubramanian and Suresh Kumar are co-Principal Investigators. The project carries a grant award of US\$ 400,000 for the South Indian component and is a part of the multi-country program on Climate Change Impact Studies conducted under AgMIP.



Influencing Curriculum Change

- Sudhakar Patra is using SANDEE workshop material for teaching Environmental Economics Course at Ravenshaw University, Odisha, India.
- Md. Belal Uddin is using SANDEE material for a research methodology course for M.Sc. Forestry students in Sylhet, Bangladesh.
- M. Rafiq has recently introduced and is teaching environmental economics courses at the graduate and undergraduate levels at IIM Sciences, Peshawar, Pakistan.
- Santadas Ghosh is teaching Research Methods at Shantiniketan University, West Bengal, India, with material drawn heavily from SANDEE training and research.
- Rehana Siddiqui at the Pakistan Institute of Development Economics, Islamabad, is using the SANDEE book, 'Environmental Valuation in South Asia' for their M.Phil. program in Pakistan.
- TERI University, India uses material from 'Environmental Valuation in South Asia' for its M.Sc. Economics Course.



Congratulations on your promotion Professor Ziaul Haider, Khulna University, Bangladesh

SANDEE influence on university teaching (2012)

Country	Institution and Course
Bangladesh	Khulna University, Masters of Science (Economics)
	Sylhet University, Masters of Science (Forestry)
	United International University, B.Sc. (Economics)
	Bangladesh Agriculture University, B.Sc. (Agricultural Economics)
	Visva-Bharati University, M.Phil. / Ph.D (Research Methods) and M.A. (Economics)
India	Ravenshaw University, M.A. (Economics)
	Goa University, M.A. (Economics):
	University of Calcutta ,M.Sc. (Economics)
	TERI University, M.A.
	University of Hyderabad, M.A. (Economics)
Nepal	Rampur College, M.A. (Agriculture)
	Goldengate College, Tribhuwan University, M.Sc. (Environmental Science)
	Patan Multiple Campus, Tribhuwan University, MSc (Environmental science), M.A. (Economics)
Pakistan	International Islamic University, Islamabad, M.Phil
	Pakistan Institute for Development Economics, Quaid-i-Azam University, M.Phil (Economics)
	IM Sciences, Peshawar, B.Sc. (Economics) M.Sc.(Economics)

Welcome Neesha and Goodbye Bhawana

We welcome Neesha Pradhan to the SANDEE Secretariat. Neesha comes to us with considerable experience in grant administration from the Micronutrient Initiative, Canadian Cooperation Office. Neesha is currently also working on her Masters in Development Communication.

We are sad to bid goodbye to Bhawana, who has ably supported our grants program. She is joining ICIMOD and will, therefore, not move far. We wish her well in her future endeavors.





SANDEE

P.O. Box 8975, E.P.C 1056, Lalitpur, Nepal Street address: c/o ICIMOD, Khumaltar, Lalitpur, Nepal Tel: 977 1 5003222, Fax: 977 1 5003299

Email: info@sandeeonline.org Website: www.sandeeonline.org