



South Asian Network for Development
and Environmental Economics

Newsletter

No. 3

June, 2001

Dear Friends and Colleagues:

As you will read in this third edition of our newsletter, SANDEE is settling into a routine and experiencing all the challenges of running a regional research network. We moved our last research meeting from Bangladesh to India to avoid election-related hartals in Dhaka, but this resulted in our Pakistani friends being unable to join us. The Delhi workshop was very good and we went home thinking we could get the next round of research started quickly; but a huge tragedy has since occurred in Nepal and SANDEE offices were closed for over a week. However, such are the joys and pains of regional networking - we continue to be inspired and challenged by South Asia's environmental concerns, potential for good analyses, and the hard work that goes on. Here's what we have been doing as a result....

SANDEE...

The South Asian Network for Development and Environmental Economics (SANDEE) is a new network that seeks to bring together analysts from the different countries in South Asia to address environment-development problems. SANDEE's mission is to strengthen the capacity of individuals and institutions in South Asia to undertake research on the inter-linkages among economic development, poverty, and environmental change and to disseminate practical information that can be applied to development policies.

Research and Training Workshop at the RETREAT in Delhi, May 2001

SANDEE held its 3rd biannual research and training workshop from May 6-11, 2001 at the Tata Energy Research Institute's environmentally friendly facility called the RETREAT in Gurgaon, just outside New Delhi, India. Approximately 30 researchers and faculty from Bangladesh, Nepal, India, Sweden, Sri Lanka, the UK and the United States attended the workshop. Five on-going projects and 12 new research proposals were discussed. On the basis of the discussions at this meeting, 5 research grants and 2 study grants were made. Highlights of the meeting included three stimulating presentations by resource persons on some very interesting topics.

Poverty and the Environment, Non-linearities and What is So Funny about Benefits Transfer?

These were the themes of three very engaging presentations that were made at the May Workshop. Dr. Anil Markandya presented a paper on Poverty Alleviation and Sustainable Development – Implications for the Management of Natural Capital. This paper is a broad survey piece that discusses the linkages between poverty and environment and

how they are relevant to the broader goals of economic development. The full paper is available on SANDEE's website (www.sandeeonline.org). Prof. Partha Dasgupta's presentation focused on theoretical developments that raise questions about traditional ways of looking at poverty and the environment. He argued that non-linearities in the way ecosystems behave, in human adaptation to malnutrition, and, in development processes have serious implications for how we think about poverty-environment

interactions. Dr. John Dixon reviewed the literature on benefits transfer and identified studies that were good, bad, or ugly. In a humorous and interesting talk, he discussed various conditions under which benefits transfer makes sense and when it does not.

SANDEE's Second Set of Research Grants, June 2001

SANDEE is glad to announce its second set of research grants. The grants that were recently approved include:

- *Institutional Structure and Sustainable Collective Action, Rucha Ghate, SHODH: The Institute for Research and Development, Nagpur.* In India, forest management regimes based on collective action are sometimes promoted by NGOs, others are state sponsored, and still others are self-initiated. Are they all equitable and efficient? What is the difference in forest management strategies adopted by user groups initiated through NGOs, the state, and self organized groups? These are some of the main questions that this research attempts to answer.
- *A study of environmental pollution from prawn farming in coastal areas of West Bengal. Debarata Lahiri, Indian Institute of Technology, Karagpur.* This study examines the environmental costs imposed on mangroves as a result of prawn farms. It examines social costs in relation to three types of prawn-farming technologies.
- *Economics of Land-Use Options in a Degraded Dry Deciduous Forest, Seema Purushottam, Institute of Forest Genetics and Tree-breeding, Coimbatore.* This study seeks to conduct a detailed economic analysis of alternative options for reforestation of a degraded tropical dry deciduous forest area. Locally feasible land use strategies include eco-tourism, extractive conservation, forest plantation establishment, and agroforestry. Benefits and costs associated with these land uses to different stake holder groups will be estimated.
- *An Economic Analysis of Arsenic Contamination in Ground Water in the Bengal Basin, Joyashree Roy, Jadavpur University.* In this study, the author seeks to explore demand for arsenic free water in areas of West Bengal. Using pre-existing dose-response functions, the author will also estimate the costs to households that result from drinking arsenic contaminated water.

Research Guidelines For SANDEE's 2002 Grants Competition Deadline – December 1, 2001

SANDEE would like to announce its April 2002 research grants competition. Researchers are requested to send proposals on the following three broad themes:

- 1) Poverty and Natural Resource Management;
- 2) Economics of Pollution Management and Environmental Health; and
- 3) Sharing of Regional and Global Resources.

The deadline for receiving research proposals is December 1, 2001

We would like to encourage collaborative projects between researchers from different countries of the region and between economists and non-economists. As before, priority will be given to junior faculty and researchers. Please send your research proposals electronically to Manik Duggar at manikd@sandeeonline.org or mduggar@sandee.wlink.com.np or by mail to: Manik Duggar, Program Manager, SANDEE, C/o IUCN Nepal, PO Box 8975 EPC-1056, Kathmandu, Nepal.

For detailed information on SANDEE Research Guidelines please visit our website at www.sandeeonline.org. A set of Frequently Asked Questions (FAQs) will help to clarify most of your questions.

- *Valuation of Life and Injury Risk*, S. Madheswaran, Gokale Institute of Politics and Economics. Conducting benefit-cost analyses of health and safety regulations requires placing a monetary value on reductions in health risks, including risk of death. Empirical studies on this problem are practically non-existent in South Asia. Hence, this study seeks to use primary as well as secondary data to examine whether the Indian labor market compensates workers for accepting job risks.

Announcements

Advanced Workshop on CGE Modeling for the Environment, September 30th to October 11th, Kathmandu Nepal Deadline - July 30th, 2001

SANDEE and the Beijer Institute of Ecological Economics would like to invite applications for an advanced training course in CGE modeling and the Environment. The course will focus on how to develop and use CGE models to address environmental questions. Participants will learn how to use GAMS software and be exposed to both static and dynamic models. The course will be primarily taught by Professor Lars Bergman, Stockholm School of Economics. Additional lectures will be provided by several other resource persons, including the Course Director, Professor Karl-Goran Maler of the Beijer Institute.

Applicants who have a Ph.D in economics, are well versed in quantitative methods, and are comfortable with computer use are invited to apply. Qualified applicants are requested to submit a CV and a brief letter of interest identifying how they will use the information provided in the course in their own work. Please send this by July 30th 2001 by email to manikd@sandeeonline.org or by mail to Manik Duggar, Program Manager; SANDEE; PO Box 8975 EPC-1056, Kathmandu, Nepal Tel +977-1-528761, 528781; Fax +977-1-536 786. Course participants will be hosted by SANDEE and the Beijer institute - we will cover travel, boarding and lodging expenses related to the course.

Study Grants...

SANDEE's Technical Advisory Committee also recommended small study grants to two researchers to refine, strengthen and revise two potentially good research proposals. Each researcher was linked to a more senior researcher to get extended and direct support on conceptual and applied aspects of his research. The researchers are:

- Zulfikar Ali from Bangladesh for his proposal on "Shrimp Culture, Environment and Poverty: An Analysis of Rural Livelihoods in Coastal Bangladesh."
- Arbinda Mishra from India for his proposal on "Development Induced Resource Depletion and Adaptive Strategies: A Micro Level Study of Displaced Tribals' Dependency on Shrinking Forest Resources."

Other Activities

'Lots of good work and time to play' – a report on Property Rights and Discussions at Luxor, Egypt, March 2001

Earlier this year, the Beijer International Institute of Ecological Economics, Stockholm, organised an Advanced Research Workshop on Property Rights and Environmental Resource Management at the Luxor, Egypt. Of the twenty participants from Africa and Asia, five were identified by SANDEE and were from S. Asia. This report is from Pranab Mukhopadhyay, Goa Univerisity who participated in this workshop.

It was past mid-night when I arrived at the Movenpick Resort in Luxor. It had been a long journey. Hopping from Goa to Mumbai, to Dubai, to Cairo to Luxor is more than a day's work. The last thing I wanted to do at the little airport in Luxor, (which looks more like the railway station in Jhumri Tillaia) was haggle with the taxi driver. But boy would you be mistaken if you thought there was

anything called a straight deal in Egypt! For a civilization which over centuries has mastered the art of squeezing consumer's surplus and differentiating markets in order to maximize the producer's surplus, Egypt is a revelation.

There are no pre-paid taxis where the fares are stated. Every curio shop is a museum. But mind you, if you are not buying or selling, Egyptians have a heart of gold. It was past mid-night, and Luxor was

still alive and you could easily stop for a cup of tea and a chug at the *hukkah* at one of cafes that dotted the market area. behind the Temple of Karnak. A touch of Meena Bazaar in Lucknow, if you know what I mean.

Announcements

SANDEE Scholarships for Studying Environment and Resource Economics in South Asia

SANDEE will make available modest scholarships for South Asia students enrolled in post-graduate programs in environment and resource economics within South Asia. This program seeks to encourage students who don't have access to courses in environmental and resource economics in their own countries to take advantage of and benefit from centers of excellence within the region. Please contact Manik Duggar (manikd@sandeeonline.org) for details.

Post Doctoral Fellowships, Yale University

An interdisciplinary program in Agrarian Studies is offering 4-6 Postdoctoral Fellowships tenurable from September 2002 - May 2003. The Program is designed to maximize intellectual links between Western and non-Western studies, contemporary and historical work, the social sciences and the humanities in the context of research on rural life and society.

Fellowships include a stipend of about US\$40,000 per year. The Program also seeks applications from knowledgeable "activists" and "public intellectuals" whose work on rural life transcends the academy. Successful applicants are expected to reside in New Haven. The deadline for receipt of applications for 2003-2003 is January 3, 2002. For more complete information, contact James C. Scott, Program in Agrarian Studies, Yale University, Box 208300, New Haven, Connecticut 06520-8300. Fax (203) 432-5036. Information is also available at <http://www.yale.edu/agrarianstudies>

The focus of the Egypt workshop was the allocation and use of resources under different property rights regimes. The lectures covered a broad set of topics including Coase theorem, non-convexities, evolution of norms, role of reputation and social capital etc. Theoretical constructs were illustrated with a wide range of case studies. In addition, each participant made a presentation on his/her research project.

Faculty at the workshop were: Professors P. Dasgupta, Cambridge University, K-G Maler, the Beijer Institute, J. P. Platteau, University of Namur, and D. Starrett, Stanford University. Prof. Maler introduced the issue of property rights and how different regimes produce diverse solutions to resource management. Dr. Starrett devoted his lectures to decentralized behaviour and private property rights in a game theoretic framework leading to cooperative outcomes under repeated interactions. Dr. Dasgupta's lectures began with the theory and empirics of measuring well-being. He then provided economic explanations for cooperation and how institutions tend to internalize externalities through cooperative behaviour. Jean Philippe Platteau discussed case studies from around the world ranging from grazing lands to fisheries and showed how technology can change time-established modes of resource management. Since much of this empirical literature is based on developing countries and the participants were from Asia and Africa there was animated discussion that followed after each lecture. The second half of the workshop was devoted to individual presentations by each of the participants.

What did we learn? As a participant from Asia, it was wonderful to learn about the African case studies from Platteau and participants from Africa, which included examples of extensive open access systems on land governed by social norms. The African participants too seemed to find the Asian cases

fascinating. There are also commonalities in that both these continents are in transition and the pressures on natural resources have increased significantly. So in a sense there was a group brain storming for a new paradigm to manage change. What did we come away with? When we packed our bags we left with focused researchable themes rather than just ALL the worries of the world.

The advantage of a mix of faculty who have different fascinations lent a completeness to the workshop. The lectures and discussions went from clinically pure theory (Starrett), to the tensions of theory and lived economics (Dasgupta and Maler) to practical case studies (Platteau). A major learning from the workshop was the manner in which one can use theory to fit the jig-saw puzzle of seemingly inexplicable observations.

Participants from Asia already had an ongoing study (doctoral dissertations and sponsored research projects) which they presented and received comments and suggestions from their peers. The participants from Africa were in the process of undertaking or beginning new studies so their presentations were more in the nature of proposals. They received comments on how to improve the focus of their study.

It wasn't "all work and no play." Participants had the opportunity to visit important historical sites in and around Luxor (which is the ancient city of Thebes known for its exquisite tombs). These included trips to the Valley of the Kings, Queens and Nobles and the Temples of Karnak and Luxor. The extent of the restoration work itself is a marvel. Highly recommended for a visit. And don't take just your Lonely Planet but remember to read your book on bargaining. *If you are interested in finding out more about some of the issues raised at Luxor or obtaining specific references, please contact Pranab Mukhopadhyay at pm@thegym.net*

Writing for Change, May, 2001

In an attempt to strengthen scientific writing skills in South Asia, SANDEE joined hands with the South Asian Regional Office of the International Development and Research Centre, IDRC, Canada and Nepal Water Conservation Foundation to sponsor a four-day training workshop in Nepal. Approximately 25 people participated in this workshop on basic and proposal writing skills.

The main purpose of the workshop was to provide a framework for logical thinking and to strengthen the capacity of policy makers, researchers and practitioners to write technical papers and proposals. The workshop was divided into two parts: the first part

Announcements

M.Phil in Economics at the Delhi School of Economics Deadline – July 12th, 2001

The department of Economics at the Delhi School of Economics, University of Delhi offers a M. Phil degree in Economics. This is a research degree comprising course work and a dissertation. Delhi School now offers applied courses in environmental and resource economics. Thus, this degree would be useful to students who want to extend their studies in the environmental economics area. The duration of the course is eighteen months. Foreign students are welcome to the programme as long as they fulfill the university's requirements (which includes an entrance exam on July 28th).

Expressions of interest may be sent to the M. Phil coordinator, Dr. B.L. Pandit at blpandit@cdedse.ernet.in. Application forms can be obtained on payment of Rs.100/- by money order in favour of the Head, Dept. of Economics, Delhi School of Economics, University of Delhi, Delhi-110007. The deadline for applying is July 12th 2001.

Visiting Faculty Position at the University of Peredeniya

The University of Peredeniya and SANDEE are soliciting applicants for a one-year Visiting Professorship/ Senior Visiting Fellow at the University of Peredeniya, one of Sri Lanka's premier academic institutions. This is a very good program that offers two Masters courses in Environmental Economics and related fields. It would be an excellent opportunity for mid-career professionals interested in teaching and starting collaborative research with colleagues in Sri Lanka. Interested scholars should write to Dr. Herath Gunatilake at gunehm@agecon.pdn.ac.lk

provided hands-on training in effective writing, creating messages for effective communication, and dissemination of research and development experience; and the second part of the training concentrated on writing and presenting proposals for seeking grant funding. The trainers relied on training tools developed by IDRC and its partners that have been widely used in a number of countries.

Thank you Donors, Members, Resource Persons....

SANDEE is grateful for the generous support of our donors and institutional supporters including the Department for International Development (DFID), UK, the Ford Foundation, the MacArthur Foundation, the Swedish International Development Cooperation Agency (SIDA), and Resources for the Future (RFF).

We are also thankful to all you who have become members. Please do renew your annual membership.

SANDEE's biannual research and training workshops continue to be successful because of the efforts of all the resource persons who review proposals and show up at workshops to help with research design. We appreciate your help, patience, and hard work.

Five Reasons why You should urge your Institution to become a SANDEE member

1. To receive this interesting newsletter by mail so it can be shared with colleagues.
2. To receive SANDEE research working papers and policy briefs as they become available.
3. To foster the development of regional networking and to signal to the world that this is important in S. Asia
4. To provide muscle to any demands you may want to make on SANDEE and its activities
5. To meet the challenge of overcoming institutional inertia and making your institution a member

Membership forms are attached. Do consider becoming a member.

Faculty at the workshop included Dr. R. Shaw, Director, Center for Development Communication (CDC), Hyderabad, India and Mr. A. Dixit, Director of NWCF, Kathmandu. Mr. D. Gyawali of NWCF and Mr. K. Dixit of Himal Publication Group & PANOS, Nepal, presented guest lectures.

Selected EcoNews...

We like to use this newsletter to share interesting news on economic development and its links to environmental change and on how economic analyses can result in policy and management changes in the environmental arena. We welcome stories from your corner of the world... do let us know if you wish to contribute.

Forest Policy Changes in Nepal

This article is by Ramachandra Bhattarai, Lecturer in Economics, Tribhuvan University, Nepal.

Nepal's Community Forestry Program is considered a leading example of community forest management in South Asia. Currently, some 10,000 Forest User Groups (FUGs) are engaged in the management of approximately 747,908 hectares of forest areas. The Government of Nepal is now considering changing its forest policy for *Terai* and *Inner-Terai* forests through an amendment to the 1993 Forest Act.

There are several features of the proposed amendment that make it an interesting and important policy issue.

First, under existing arrangements, returns to community forestry are retained by FUGs. With the new arrangement, forest income will be distributed among 3 parties: Government, Village Development Committees (VDCs), and FUGs. The Government argues that this income is required to develop and protect forests in other parts of Nepal. Similarly, VDCs argue that they need to distribute some forestry returns to communities that are not adjacent to

forests. The key question now is whether FUGs will continue to protect their forests in light of lowered returns? Will the costs of protection now be higher than the benefits?

Secondly, under existing laws, FUGs control the use of forest resources. With the proposed law, the authority and power of forest officers will increase. This, could result in inefficient management of the forest resources and a potential increase in corruption. The counter argument is that power structures within FUGs resulted in unequal distribution of forest benefits, with the poor and women being marginalized. There is also some evidence of timber smuggling (Sal and Khair) from community managed forests in the Terai and Inner-Terai. Thus, more questions follow: will the poorest among forest communities benefit or lose with the forest amendment? And, will illegal smuggling increase or decrease under the new regime?

Further, the draft amendment states that communities will no longer be allowed to take charge of forests in areas adjoining National Parks, and, that areas already under community control will revert to Government control. This provision is against the spirit of previously passed provisions under the Buffer Zone Management Rules of 1997, which allowed communities to fulfill their daily requirements from areas around National Parks. Therefore, will the draft forest amendment add another layer of protection to National Parks? Or, will it lead to increased pressure on National Parks because local residents are denied access to buffer areas?

FUGs and the Government are at logger-heads on the draft Forest Bill amendment. The development community seems equally divided on this issue. Answers to many of the above questions will be known only in the future; but these questions need to be raised and debated now. *Mr. Bhattarai can be contacted at Ramb@Col.Com.Np if you have questions regarding Nepal's forest policy amendments.*

The World's First Publicly-Traded Conservation Company

This note is based on ESL's website www.esl.com.au and other articles.

Earth Sanctuaries Ltd. (ESL), an Australian company is being widely hailed as the first publicly-listed conservation company in the world. ESL is trying to conserve and even increase Australia's biodiversity. ESL is traded in the Australian stock-exchange and has some 6800 shareholders from around the world.

ESL purchases land, rehabilitates it and puts back wildlife in it as it was 200 years ago. It offers what it calls the 'Triple Bottom Line' approach : 1) saving Australia's endangered wildlife; 2) neutralizing greenhouse gas

SANDEE Governance

SANDEE is run with the help of Management and Advisory committees. Their members are as below:

Management Committee:

1. Mahesh Banskota
Country Representative,
IUCN Nepal, Nepal
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SANDEE Secretariat:

1. Priya Shyamsundar
Program Director
2. Manik Duggar
Program Manager
3. Kavita Shreshtha
Program Assistant

SANDEE's secretariat is based at IUCN-
the World Conservation Union,
Kathmandu, Nepal.

emissions and; 3) conserving biodiversity in each habitat region of Australia. ESL has so far worked on rehabilitating ten sanctuaries. As we approach Rio+10, the value of biodiversity is more and more accepted -- ESL has simply created a market to capture this value.

Does ESL make any money? It appears to do so since it has paid its share-holders a small dividend each year for the last six years. In many ways ESL is like the Walt Disney Company with its theme parks, but instead of fun and Mickey Mouse ESL provides a nature-based experience. ESL makes its money through eco-tourism, lodges, food and beverage sales, gift and native plant sales, consulting services, weddings, education programs etc. Interested in purchasing ESL shares? Simply contact any stockbroker who deals in Australian shares and place your order. You can also find out more by checking out ESL's website at www.esl.com.au

Secretariat News

Poonam bids Good Bye to SANDEE

The SANDEE family would like to congratulate our colleague, Poonam, who got married on May 1st in Kathmandu. Poonam has since moved to the United States and is not with SANDEE any more. We will miss you Poonam, and wish you all the very best in your new life.

SANDEE's Website to Get a Face-Lift

Please do come and visit us online after the middle of July. We will look different and have some new information on our site – www.sandeeonline.org

Is any of this relevant for South Asia? As our natural areas dwindle, there is clearly considerable scope for increasing revenues from parks and protected areas – especially if this money can be used to better manage South Asia's natural assets. There must also be some private entrepreneurs who can follow the Australian model and make a profit out of conservation!

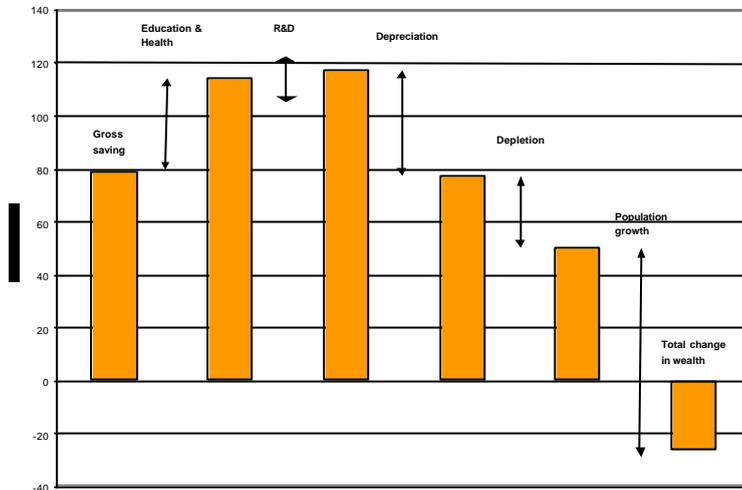
Genuine Saving Per Capita in India

This note by Kirk Hamilton continues the discussion in SANDEE's previous newsletter on genuine savings and sustainable development.

A fundamental result in the 'green national accounting' literature is that there is an intrinsic linkage between sustainable development and changes in the wealth of a country. If a country's total wealth, defined with appropriate shadow prices, is in decline then welfare over some interval in the future must be lower than it is currently – i.e., the country's development path is not sustainable. Estimates of the change in total wealth, 'genuine saving,' are published each year by the World Bank in the *World Development Indicators*. In assessing sustainability for countries with growing populations it is essential to measure the change in wealth *per capita* terms. A recent policy research working paper develops estimates of genuine saving per capita for over 100 countries. The figure below presents the results for India.

The saving measure, expressed in per capita terms, is decomposed as follows: *Gross saving* is just the usual national accounts definition of GDP minus public and private consumption. *Education and health* expenditures (investments in human capital and 'health capital') are added to this saving figure. Only certain health expenditures, those leading to permanent increases in healthfulness, are included. *R&D (research and development)* expenditures by the public and private sectors are similarly treated as investment and added to the saving measure. *Depreciation* – the usual national accounts measure of consumption of fixed capital – is then subtracted. *Depletion* of natural resources is also subtracted. In the case of the World Bank estimates for India this consists primarily of depletion of forests and energy, as well as damages from CO2 emissions.

Genuine saving per capita, India, 1997



As Figure 1 shows, once the various adjustments to traditional savings measures are made the overall saving per capita in India falls from \$80 to \$50. The final adjustment to the saving measure involves population growth. When accounting for the additional 1.6% of the Indian population that a year's growth brings, this implies a decline in wealth per capita on the order of \$80 – this is because the total assets available per person shrink as a result of the growth in population. The final figure for genuine saving per capita is therefore a decline of roughly \$30.

The net effect on per capita saving of depletion of the environment and growth in population is considerable. This analysis increases the urgency of implementing policies to increase gross savings, invest in human and health capital and research and development, and to increase the efficiency of exploitation of the environment. Many policies aimed at boosting income, educating women, and providing environmental infrastructure such as water and sanitation, will have a positive impact on sustainable development both by decreasing the population growth rate and by increasing savings.

The opinions expressed are those of the author and not necessarily those of the World Bank.

Dr. Hamilton can be contacted at khamilton@worldbank.org

Journals and Publications

In this section, we present information on publications that may be of interest to the SANDEE family.

Three New Books on Environmental Economics from India

The Environmental Management Capacity Building Project in India has resulted in three new text books in environment and resource economics. These have been produced through a network of some twenty Indian universities -- with some international collaboration. The books are:

- Ramprasad Sengupta, *Ecology and Economics: An Approach to Sustainable Development*, Oxford University Press, 2001, Rs. 495.
- Rabindra Nath Bhattacharya, *Environmental Economics: An Indian Perspective*, Oxford University Press, 2001, Rs. 475 (with papers by Gautam Gupta, M.N. Murty, Sarmila

Banerjee, Gopal Kadekodi, Kalyan Sanyal and Pinaki Chakraborty).

- U. Sankar (editor): Environmental Economics, Readers in Economics Series, Oxford University Press, 2001, Rs. 595 (a collection of important contributions -- published articles and excerpts from books -- along with an introduction, chapter on environmental policy and annotated bibliography).

Bibliography on Poverty and Environment

In this issue, we highlight a bibliography on Poverty and the Environment by Poonam Pillai, commissioned by the World Bank. This is a detailed bibliography that identifies approximately 200 papers on poverty-environment interactions. It is a good source of information on papers in a number of areas including poverty and environmental health, natural resource management, gender issues, property rights, role of the state etc. The document is available on the World Bank's website - <http://www-esd.worldbank.org/eei/> - please click on publications. A link will also be provided through SANDEE's website.

20 years of Experience documented in 'Economic Incentives and the Environment'

Over the last 20 years, and particularly during the past decade, economic incentives have been increasingly used to control pollution and improve environmental and health protection. A new EPA report, The United States Experience with Economic Incentives for Protecting the Environment, assesses the role of economic incentives for controlling environmental pollution. The report documents hundreds of uses of economic incentives for controlling pollution at all levels of government to both supplement and substitute for traditional regulatory approaches. The report

distinguishes seven basic types of incentives: 1) Pollution charges, fees, and taxes; 2) Deposit-refund systems; 3) Trading programs; 4) Subsidies for pollution control; 5) Liability approaches; 6) Information disclosure; 7) Voluntary programs. The full report is available on the web at <http://www.epa.gov/economics/>

Guidance on Multi-Criteria Analyses

At a recent SANDEE meeting, there was a discussion on the use of multi-criteria analyses. Here is a new guide from the Department of Environment, Transport and Regions of the UK that may be useful: "Multi-Criteria Analyses, A Manual." This guide will help government officials and others who need to compare options which involve trying to add 'apples and oranges' but without using money values. The internet version is available on <http://www.environment.detr.gov.uk/multicriteria>.



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Information about SANDEE and our activities can be obtained online at www.sandeeonline.org. Our mailing address is IUCN Nepal, PO Box 3923, Kathmandu, Nepal Telephone 977-1-528761 Fax 977-1-536 786. If you have any questions about our programs, please write to Priya Shyamsundar at priyas@sandeeonline.org or Manik Duggar at manikd@sandeeonline.org

SANDEE

MEMBERSHIP FORM

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Brief description of objectives & activities of your organization (Max. 10 sentences)

Payment Details (Enclose Cheque/Draft)

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Membership Fee for the Year

Notes:

1. This form is for institutional members only. The institutional membership fee is US\$25 per year for South Asian institutions and US\$250 per year for non-South Asian institutions.
2. Payments must be made in US dollars payable to **IUCN Nepal** and must accompany the Membership Form. **Please do not send any cash.**