



Recognising the value of forest ecosystems

Keynote address:

Assessment of carbon and non-carbon benefits of tropical home gardens in relation to natural forests for REDD-related activities in Sri Lanka



Dr Eskil Mattsson
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Eskil Mattsson is a researcher at the Centre for Environment and Sustainability, Chalmers University of Technology, Sweden. Dr. Mattsson holds a PhD in Physical Geography from the University of Gothenburg and his research interests include land-use change, agroforestry, climate policies, ecosystem services and sustainable development. He currently investigates the role of forests and multifunctional landscapes in relation to climate change, food security and ecosystem services with special emphasis on the Sri Lankan context. Besides his academic research focus on forests and multifunctional land use systems, Dr. Mattsson has been active in research-policy dialogues and published a number of policy briefs related to agroforestry.

Synopsis of research presentations:

RED FLAG ON MINI-HYDRO POWER PLANTS

Prof E.I.L. Silva

The streams that flow down Sri Lanka's mountains create a delicate ecosystem. While mini-hydro plants don't create the same large disruption of a full-scale dam, they can still have damaging effects on the forest that depends on the natural water cycles. Scientists must carefully study the fallout that these mini-hydro plants can create.

THE ELUSIVE SRI LANKAN LEOPARD

Dr Andrew Kittle

The apex predator of a forest can be the most crucial source of information about the overall health of the forest ecosystem. The Sri Lankan Leopard is a beautiful creature at the top of its food chain. While numbers have been threatened by many changes, this tawny cat is still creating quite a stir in Sri Lanka's tourism sector. This valuable asset must be studied, understood and carefully managed to maintain the integrity of our island's wildlife.

HORTON PLAINS CANOPY DIEBACK

Mr P.H. Tithira Lakkana

Satellite data is used to study the canopy coverage in Horton Plains National Park. There are many aspects that influence the strength of a forest's canopy. By studying these different influences, we are able to better understand what threatens our forest ecosystems.

CREATING A HEDGE OF PROTECTION

Mr R.M.C.L. Bandara

Recent Tsunamis in the Indian Ocean have been a crude wake-up call to anyone who might be within range of the ocean. As we cannot deny the possibility of future hazards, a natural remedy has shown surprising promise. Coastal vegetation, depending on its size, type, and extent has shown its worth in softening the blow of these uncanny disasters.



Demonstrating the value of forest ecosystems

Keynote address:

Natural capital, ecosystem services and role of environment valuation in policy making



Dr Herath Gunatilake
ADB Headquarters
Philippines

Herath Gunatilake is the Director, Environment and Safeguards Division, Sustainable Development and Climate Change Department of the Asian Development Bank, Manila, Philippines. He has published more than 50 journal articles; about 25 ADB/World Bank publications; and five books on energy, natural resources, and environmental economics. As the Director of Environment and Safeguards Division he provides oversight on environment and social safeguards for over \$20 billion worth ADB investments in the region. He has a Masters in Natural Resources Management and a Ph.D. in Resource Economics, and has received Harvard, Cambridge, and Gothenburg University post-doctoral training in environmental economics.

Synopsis of research presentations:

SOCIAL MARKETING AND ECOSYSTEMS

Prof Evans Rosauro I Yonson

A catastrophe caused by forest destruction in the Philippines triggers an initiative that is creating ripples of positive change towards payment for ecosystem services. Now with economic benefits at hand, communities are being reached effectively through an aggressive advertising campaign – which includes social media – to establish sustainable forest-centered partnerships.

BENEFITS OF REDD+ READINESS IN NEPAL

Mr Basanta Gautam

The Nepalese REDD Implementation Centre has quickly taken proactive steps to obtain REDD+ readiness funds to safeguard the nation's forests. This preparation ensures that Nepal is eligible to receive substantial financial support through the conservation and rehabilitation of its forests. This proactive approach to emissions reduction in the forestry sector is setting the stage for well-preserved forest ecosystems.

THE VALUATION OF A FOREST

Dr Priyanie Amarasinghe

A forest ecosystem is an intricate natural arrangement. How we find value in it can be just as complex. Forestry departments worldwide have developed several methods to quantify this evaluation. Studying these simplified models can give us a better grasp of the great services these forest ecosystems provide. This also allows us to compare the effectiveness of conservation efforts. The understanding that there is a return on investments can boost the task of sustaining healthy ecosystems.

BANGLADESH WILDLIFE SANCTUARY

Prof Mohammed Jashimuddin

The Chunati Wildlife Sanctuary (CWS) in Bangladesh is a protected ecosystem that offers direct goods to be harvested by people living in or around the area. However, collecting these resources often has a negative impact on the sanctuary. A study on the amounts and type of goods collected combined with the health of the forest can provide valuable data for calculating trade-off values between the two. Public policy must take into consideration all aspects of the benefits that forests provide. Understanding all of these benefits is the first step to making better decisions.

Capturing the value of forest ecosystems

Keynote address:

Incorporating ecosystem services and biodiversity benefits into decision making through economic incentives and reducing environmentally harmful subsidies due to governmental or institutional inaction



Prof Madhu Verma
Indian Institute of Forest Management
Bhopal, India

Madhu Verma is Area Chairperson at the Faculty of Environment & Developmental Economics, and Coordinator of the Centre for Ecological Services Management & Environmental Management Module Coordinator at the Indian Institute of Forest Management, Bhopal, India. She is a Fulbright Fellow, a LEAD Fellow and has won many other prestigious fellowships for higher research. She has a large number of publications to her credit and has been part of many international action and policy research studies like Millennium Ecosystem Assessment, The Economics of Ecosystems & Biodiversity (TEEB) and ongoing process of Inter-governmental Platform on Biodiversity and Ecosystem Services (IPBES). Many of her research findings, such as 'Economic Valuation of Himachal Forests', 'Net Present Value of Forest Diversion in India', and 'High Conservation Value Forest for the 14th Finance Commission of India' – to mention a few – have capacitated policy and decision makers to introduce economic instruments.

Synopsis of research presentations:

UNITING FOREST AND AGRICULTURAL ECOSYSTEMS

Prof Gamini Seneviratne

Nature's complex ecosystems connect everything from the smallest microbes to the biggest trees, and it all works in a balancing act to create a wonderful biodiversity. When we develop land for agriculture, we disrupt this balance and often fail to see its value. Such disruption can have far-reaching consequences. Scientists creating biofilm bio fertilizers (BFBF's) are working to restore this balance so that agriculture and natural ecosystems can thrive side by side.

BIO-LINK CONNECTS SINGHARAJA TO KENNELIYA

Ms Lakmini Senadheera

A bio-link zone expands connections of biodiversity between ecosystems. With stability of our forests being threatened, bio-link corridors strengthen the ability of ecosystems to withstand these threats. Rehabilitating these areas can optimise the return on investments.

KENYA'S SUCCESS WITH MANGROVES

Dr James G. Kairo

The unique structure of mangrove forests means that they provide benefits unlike typical forest coverage. In Kenya, a small-scale study of mangrove forests has revealed a growing healthy forest playing its part in worldwide rehabilitation efforts. International recognition of these benefits through REDD+ has generated income to provide community benefits to many local villages.

LAND COVER CHANGES AND CARBON STOCK

Mr Oluwole John Pelemo

The study of woody biomass in a national park in Nigeria reveals the environmental, economic and political values of woody biomass when estimating the country's forest biomass resources. Understanding the amount of carbon in forests is important when strategically managing the use of forest resources. This knowledge paves the way to apply adaptation measures, substantial planting of trees, and urgent development of forest and wildlife reserves that will ultimately contribute towards the fight against climate change.

This research symposium attempts to bring the latest developments in valuing ecosystems and their services – according to The Economics of Ecosystems and Biodiversity (TEEB, 2010) methodology – to the forefront in Sri Lanka. The three main focus areas of TEEB that deal with recognising, demonstrating and capturing the value of ecosystems and their services would be explored by twelve selected national and international researchers who would present their findings on how forest ecosystems and their services can be valued using economic indicators. This would reveal the contribution of such ecosystems and their services to the mainstream economy of a nation. Three international specialists would make keynote addresses on the main focus areas of the symposium and join a panel discussion at the end of the event. As an outcome of the symposium, a set of recommendations are expected to be presented to the Government of Sri Lanka indicating specific actions to be taken in line with the findings of the research symposium.

Forest ecosystems incorporate the complex relationships between forest plants and other organisms with which they interact in different ways, and between forest plants and water as well as soils, etc. Humans depend on forests in many ways that we are only beginning to understand and appreciate their true value now.

Benefits to humans provided by forest ecosystems include support services such as nutrient cycling, primary production and biodiversity habitat, etc. Forests also provide regulating services such as windbreak and erosion control, which happens through the retention of soil by roots. Some other services that forests provide include water storage and filtration, waste treatment, and climate regulation.

There is now a cooperative effort to globally value forest ecosystems and the services they provide in order to understand the economies that they produce. The forest is more than just trees to be harvested. They perform invaluable services as they stand and grow and thrive with us. To safeguard our forests, we must understand them first. Studying such a vast and intricate ecosystem is no easy task. It is necessary to outline innovative methods used to study the health of forests and the impact these forests have on a nation. By evaluating the environmental, social and economic benefits that forest ecosystems provide, we will be able to ensure that they are protected and fostered through forward-thinking national policies.

The UN-REDD Programme is setting the stage in Sri Lanka for great advances in forest ecosystem management by supporting the Ministry of Mahaweli Development and Environment to set a mechanism in place that considers the impact of government policy decisions which can have an impact on forest ecosystems.

