

Toward an Integrated, Transdisciplinary Science of Humans-in-Nature: Social-economical-ecological Systems (SEs) and Ecosystem services, assessment and perspectives for sustainable planning and management of SEs

Overview

In today's practical problem solving in sustainable planning and management toward an Integrated Transdisciplinary Science of Humans-in-Nature requires the integration of the vision of how the world responds? How we the human beings would see the world in future? Tools and analysis appropriate to the vision, as a multiscale approach for transferring knowledge across scales, are needed to understand, model, and manage Complex, Adaptive, Hierarchical Systems (CAHSs). The social-economical-ecological system (SES) theory emerged from the close interaction between society and both natural and human-managed systems; human societies, with their cultural heritage, represent the driving forces of biosphere and SEs. For this reason a transdisciplinary approach is needed to assess the limits of predictability of complex, adaptive, living systems, through a "pragmatic modeling" philosophy of science. This will allow new, adaptive approaches to environmental management and better links with social decision-making. Envisioning and goal setting should be recognized as critical parts of both science and social decision-making. We need to create a shared vision of a desirable and sustainable future, and implement adaptive management systems at multiple scales in order to get us there.

This course is organized in two modules that should be taken together: Module A - Integrated Hard Problem Science (HPS) would include the challenges of sustainable management; Complex, Adaptive, Hierarchical Systems (CAHSs) with Capitals of SEs. Module B - How HPS can inform planning and management for sustainable SEs which will include the Resilience and adaptive capacity of SES; Ecosystem Services (ESs), and their global assessment according to Millennium Ecosystem Assessment (MEA), multiscale approach to understanding, modeling, and managing complex, adaptive, living systems, and methods for transferring knowledge across scales.

Course participants will learn these topics through lectures and hands-on training. Case studies and assignments will also be part of the course to broaden the understanding for decision making and stimulate research motivation among scholars and students.

Modules	A: Toward an Integrated Hard Problem Science (HPS) of humans-in-nature : Nov 19 - Nov 23 B: How HPS can inform planning and management for sustainability of SEs : Nov 26 - Nov 30 Number of participants for the course will be limited to fifty.
You Should Attend If...	<ul style="list-style-type: none"> ▪ Executives, Indian Forest Service Officers, State Forest Service Officers, , engineers, ▪ Researchers from manufacturing, service and government organizations ▪ Faculties and scientists from reputed academic, technical and research institutions ▪ Representatives of Non-governmental organizations and civil society ▪ Other stakeholders ▪ Scholars and Students at all levels (BTech/MSc/MTech)
Fees	<p>The participation fees for the course is as follows:</p> <p>Participants from abroad : US \$500 Industry/NGO's : Rs 5000/- Academic/Research Institutions: Faculty/Scientists : Rs 4000/- Scholars and Students: Rs 2000/-</p> <p>The above fees include all instructional materials, computer use for tutorials and assignments, laboratory usage charges. The individual course participants will have to borne themselves the expenses for their food, transport and accommodation. The external participants will be provided accommodation on request and payment basis.</p>



The Faculty

Prof. Giovanni Zurlini is full professor of ecology at the University of Salento, Italy. He has published more than 200 research papers in scientific peer-reviewed journals. He has also many issued or pending patents worldwide. He served as Director of Center for Marine Studies at ENEA (Italian National Agency for New Technologies, Energy and Economic Sustainable Development). He served as senior researcher at the CNR (Italian National Research Council). He got his Ph. D. in the Netherlands, at the University of Utrecht in 1980. He has received many awards, such as, from the Chile government, from Russian universities. He was elected vice-president of the IALE (International Association of Landscape Ecology). He has been invited for lecturing by many Institutions and Universities from all over the world such as, University of Kiel, Bohn (Germany), Utrecht, Wageningen (NL), EPA at Las Vegas and Durham (USA), China (Beijing), the Academy of Science, London School of Economics (UK), California University River Side, US Geological Survey, US Forest Service, CSIRO Canberra (Australia). He is member and founder of the worldwide Ecosystem Service Partnership (ESP - <http://es-partnership.org>). He is associate editor-in-chief of Ecological Indicators (Elsevier) and coordinating editor of Landscape Ecology (Springer). He is responsible of many projects on sustainability and ecosystem services at the national and European level.

Patron: Vice Chancellor
Chairman: Dean
Course Co-ordinator: Dr T Selvan



Dr. Thiru Selvan is an Assistant Professor in the Department of Forestry and Biodiversity at Tripura University (A Central University), Agartala, Tripura. Dr Selvan, trained in forestry, has been working and researching in diverse areas of natural resource management with focus to ecology and environment for more than 15 years and published more than 30 peer reviewed papers. He has been a field officer and trainer. A merit awardee during his Ph. D., Dr Selvan has also been awarded the IASc-INSANA-NASI Summer Research Fellowship. He is a member of many renowned organizations. Currently, he is implementing projects with support from NMHS on social and ecological systems.

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