

## ABOUT TRIPURA UNIVERSITY



Taking into consideration the long cherished demands of the students community, growing aspirations of the people at large and also acknowledging the present and future needs of education in the state, the State Government took the initiative to pass the Tripura University Act in the Assembly in 1987 and the first University in the state came into being on 2nd October 1987, the birth day of Gandhiji, the 'Father of the Nation'. The dreams of thousands of people were at last fulfilled. Later Tripura University has been converted to a Central University w.e.f 2nd July, 2007 under the Tripura University Act, 2006 as enacted by the Parliament. A total number of 42 courses are run under the University, which includes Certificate Courses, Under Graduate, Post Graduate Diploma and Post Graduate Studies. In addition to these, Ph.D programmes are also offered in 33 subjects. The number of affiliated Colleges at present is 46 among which there are 23 General Degree Colleges, 17 Professional Colleges, 4 Paramedical and Nursing Colleges and 2 Medical Colleges.

## ABOUT DEPARTMENT OF FORESTRY AND BIODIVERSITY



The Department came into being in Sept., 2011 under the Faculty of Science to emerge as a Centre of Excellence in Forestry and Biodiversity Conservation and Management. It strives to deal with solution based forestry research in tune with the emerging issues in the sector. The Department also assists in the transfer of technology to the users viz, farmers/orchardists, state forest departments and different voluntary organizations. The Department is striving to create recognition in the field of Tropical Forestry and Biodiversity research at international arena with special emphasis on South East Asia.

## ABOUT THE CITY

Agartala, the capital city of Tripura is located in the north eastern region of the country. It covers 10,491



km<sup>2</sup> and is bordered by Bangladesh to the north, south and west, and the Indian states of Assam and Mizoram to the east. Tripura has

a picturesque surrounding covered with hills and dales, sprawling green valleys and hilly brooks. Tripura is adorned with a large number of attractive tourist sites. The popular Tripura attractions are Kamalasagar Lake, Dumboor Lake, Ujjayanta Palace, Neermahal, Kunjaban Palace, Tripura Government Museum, Jampui Hill, Dumboor Lake etc. The famous Tripureswari Kali Temple is situated in Udairpur city and is about 60 km away from the capital city. The weather condition of Agartala city is moderate with temperature between 21°C to 36°C during summer season and between 8°C to 25°C in winter. The northeastern state of Tripura is famous all over the world for its rich cultural heritage, beautiful palaces, wildlife sanctuaries, temples, museums. The city has a number of interesting tourist attractions to visit and enjoy.

## HOW TO REACH TRIPURA UNIVERSITY?

University is situated in West Tripura District about 9 km away from the Agartala town and 20 km away from Agartala Airport (Singerbill Airport).

Agartala is well connected with Gauhati, Silchar and Shillong by road (both Non-AC and AC buses). A daily bus service from Kolkata to Agartala is also available for which a transit visa is needed through Bangladesh. Agartala is also directly connected with Gauhati, Kolkata and other North-eastern cities and with other metros via Gauhati or Kolkata by air route. For Air travel, an advance booking (about 3 months ago from the date of journey) is highly suggested to avail the cheapest air-fare. Agartala also is connected with Lumding and Gauhati by railway.



## GIAN COURSE

ON

**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

19<sup>th</sup> – 30<sup>th</sup> November, 2018



TRIPURA UNIVERSITY  
(A CENTRAL UNIVERSITY)



Venue:

Department of Forestry and Biodiversity,  
Tripura University, Suryamaninagar,  
Agartala-799 022, Tripura, INDIA

Contact Details:

Dr Thiru Selvan  
Department of Forestry and Biodiversity,  
Tripura University (A Central University)  
Suryamaninagar, Agartala- 799 022

Tripura, INDIA

Tel: +91 3812379462 (O)

+91 8974236218 (M)

Email: [tselvan@tripurauniv.in](mailto:tselvan@tripurauniv.in)

## 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 SESs. 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 SESs. Module B - How HPS can inform planning and management for sustainable SESs 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 detail

**Day 1-** The challenge: Sustainable management Examples-Case Studies

**Day 2-** Complex, adaptive, hierarchical systems (CAHS); Case Studies- Hands on Training in the real world: social-economical-ecological systems (SESs)

**Day 3-** Resilience and adaptive capacity of SES Examples-Case Studies

**Day 4-** Ecosystem services (ESs), global assessment according to Millennium Ecosystem Assessment (MEA); Examples-Case Studies

**Day 5-** Capitals of SESs (social, natural, human, constructed); The DPSIR scheme; Examples

**Day 6-** The DPSIR scheme, disturbance, fragility, Examples-Case Studies

**Day 7-** The spatial dimension of systems: patterns and processes Sustainable planning and ecological networks; Examples-Case Studies

**Day 8-** Welfare indices (GDP, GPI); Examples-Case Studies-Comparing welfare indices

**Day 9-** Problem solving in SES planning and management; ESA (environmental strategic assessment); Examples-Case Studies

**Day 10-** Conclusions: Problem solving in SES planning and management; Toward an Integrated Hard Problem Science (HPS ); Examination on Module A and B

## Teaching 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.

## Course Coordinator:



**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 forester and trainer. A merit awardee during his Ph. D., Dr Selvan has also been awarded the IASc-INSA-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.

## Who can attend?

- \*Executives, Indian Forest Service Officers, State Forest Service Officers, Engineers,
- \*Faculties, Researchers/scientists from academic, technical and research institutions
- \*Representatives of Non-governmental organizations and civil society
- \*Scholars and Students of relevant discipline.

## Registration Fees

The participation fees for the course is as follows:

**Participants from abroad :**

Non-SAARC - US \$500 SAARC - US \$300

**Industry/NGO's :** Rs 5000/-

**Academic/Research Institutions:**

Faculty/Scientists : Rs 4000/-

Scholars and Students: Rs 2000/-

The above fees include all instructional materials, computer use for tutorials and assignments, laboratory usage charges including working lunch.

**The individual course participants will have to borne themselves the expenses for their food, transport and accommodation.**

## How to register?

**Step 1: One time Registration:** Registration for GIAN courses is not free because of constraint in the maximum number of participants allowed to register for a course. In order to register for any course, candidate will have to first get them registered to GIAN Portal of IIT Kharagpur using the following steps:

Create login and password at <http://www.gian.iitkgp.ac.in/GREGN/index> Login and complete the registration form- Select courses-Confirm your application and payment information-Pay **Rs. 500/-** (non-refundable) through online payment gateway- Download and print “**pdf file**” of your enrolment application form for your personal records and for further communications.

Shortlisted candidates will be notified by E-mail.

**Step 2: Institute Registration:** Deposit the requisite course fee online or through bank in favour of SBI, Tripura University Campus Br. A/C No: 30371209938, IFSC Code: SBIN0010495, MICR Code:799002524. Keep the copy of payment info (transaction # & date) handy. Scan copy of the filled in “**Registration Form**”, course fee payment details and application form generated in **Step 1**. Send via email to the Course Coordinator on or before 26<sup>th</sup> October 2018.

**P.S. Registering on the GIAN portal does not guarantee participation in the course. Enrolment in the course is subject to institute registration.**

A limited number of rooms may be available in Tripura University Guest House on a first-come-first serve basis and at a very reasonable charge on sharing basis (two persons).

**Number of participants for the course is limited to 50.**

**Last date for registration is 26<sup>th</sup> October, 2018.**

**In case of any queries, you send an email to the course coordinator.**

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## REGISTRATION CUM ACCOMODATION REQUEST FORM

(To reach electronically by 26<sup>th</sup> October, 2018)

### GIAN COURSE ON

**TOWARD AN INTEGRATED, TRANSDISCIPLINARY SCIENCE OF HUMANS-IN-NATURE: SOCIAL-ECONOMICAL-ECOLOGICAL SYSTEMS (SESS) AND ECOSYSTEM SERVICES, ASSESSMENT AND PERSPECTIVES FOR SUSTAINABLE PLANNING AND MANAGEMENT OF SESS**

19th November 2018 to 30th November 2018

**Department of Forestry and Biodiversity, Tripura University,  
Suryamaninagar 799022, Agartala, Tripura, INDIA**

Name (Block Letters):.....

M/F:.....

Designation/Professional Title: .....

Organization:.....

Address:.....

.....

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Tel.: ..... Mobile: .....

Email: .....

Application ID (Generated during one time registration at GIAN portal of IIT Kgp) : .....

Accommodation Required (Yes/No) : .....

Duration (in dd/mm/yy): .....

The registration fee of Rs. ....has been paid online vide transaction ID No. .... bank..... Dated..... in favour of “Tripura University”.

Date:

Signature of the participant