

Committee on Interdisciplinary and Trans-disciplinary Studies (IDTDS)

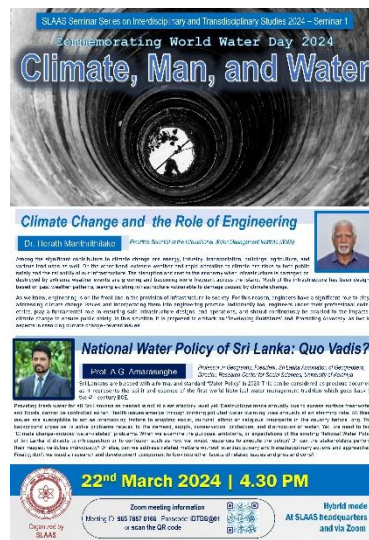
Eight meetings were held from January to October 2024. Names of the members, their positions, and the attendance are given in the table below.

No.	Name	Position	Attendance
01	Prof. Sumedha Jayanetti	Chairperson	08/08
02	Dr. Pasan Bandara	Secretary	08/08
03	Prof. R.D. Wijesekera	General president (Invited)	07/07
04	Prof. Ranjith Senaratne	Immediate past General President	04/08
05	Prof. Saroj Jayasinghe	Committee Member	03/08
06	Prof. Ruchira Cumararatunga	Committee Member	03/08
07	Prof. Preethi Udagama	Committee Member	04/08
08	Prof. Hema Pathirana	Committee Member	00/08
09	Prof. Charmalie Nahallege	Committee Member	03/08
10	Prof. Prasad Jayaweera	Committee Member	04/08
11	Prof. Indrika Rajapakse	Committee Member	00/08
12	Prof. Manjula Ranagalge	Committee Member	00/08
13	Prof. Mahesh Jayaweera	Committee Member	07/08
14	Prof. Saumya Liyanage	Committee Member	00/08
15	Dr. Prasad Senadheera	Committee Member	00/08
16	Dr. Gaya Jayakody	Committee Member	06/08
17	Prof. Nishara Fernando	Committee Member	02/07
18	Prof. Manjula Vithanapathirana	Committee Member	03/07
19	Prof. Bandunee Athapattu	Committee Member	00/06
20	Dr. Rohan Pethiyagoda	Committee Member	00/06
21	Prof. Bimali Jayawardena	Committee Member	02/06

This report summarizes the activities and commitments made by the Committee on Interdisciplinary and Trans-disciplinary Studies (IDTDS) towards the advancement of science by promoting the interdisciplinary and trans-disciplinary research in Sri Lanka. With the promise of utilizing TDR to achieve sustainable development goals (SDGs), committee on IDTDS conducted a series of awareness raising seminars on key topics related to SDGs. Selected seminar topics coincided with the international days declared by the United Nations that are relevant to the SDGs. A total of seven seminars were conducted in 2024.

Seminar 01 - Climate, Man, and Water

The first seminar of the SLAAS-IDTDS seminar series was held on 22nd March 2024 at the SLAAS Auditorium. Dr. Herath Manthirithilake, Emeritus Scientist at the International Water Management Institute (IWMI), and Prof. A.G. Amarasinghe, Professor in Geography, President, Sri Lanka Association of Geographers, Director, Research Center for Social Sciences, University of Kelaniya joined as the resource persons. Dr. Manthirithilake discussed about the significant changes in climate due to the contributors such as energy, industry, transportation, buildings, agriculture, and various land uses resulting in an increasing number of extreme weather events destroying existing infrastructure. As these infrastructures have been designed based on past weather patterns, they are vulnerable to the damages caused by climate change, professionals in the Engineering field have a significant role to play in addressing climate change issues and incorporating them into engineering designs and practice. Furthermore, Prof. Amarasinghe talked about the National Water Policy of Sri Lanka introduced in 2023. He explained the contents of the policy framework and discussed how it can be helpful in actions to solve problems related to the demand, supply, conservation, protection, and distribution of water. Recording of the seminar is available online at <https://youtu.be/tr93hK8iIMXY>.



The graphic is a promotional poster for Seminar 01. At the top, it reads 'SLAAS Seminar Series on Interdisciplinary and Transdisciplinary Studies 2024 - Seminar 1' and 'Celebrating World Water Day 2024'. The main title is 'Climate, Man, and Water' in large blue letters. Below the title is a circular image of a globe. The first section is titled 'Climate Change and the Role of Engineering' and features a small portrait of Dr. Herath Manthirithilake. The second section is titled 'National Water Policy of Sri Lanka: Quo Vadis?' and features a small portrait of Prof. A.G. Amarasinghe. At the bottom, it provides the date '22nd March 2024 | 4.30 PM', Zoom meeting information (ID: 865 7887 8166, Passcode: QTS686), and a QR code. It also mentions 'Hybrid mode At SLAAS headquarters and via Zoom'.

Seminar 02 - Earth: What Lies Ahead?

The second seminar of the SLAAS-IDTDS seminar series was held on 22nd April 2024 at the SLAAS Auditorium. Prof. Rohana Chandrajith, Senior Professor in Geology, Department of Geology, University of Peradeniya, and Dr. Sajith Edirisinghe, Senior Lecturer, Department of Anatomy, Faculty of Medical Sciences, University of Sri Jayewardenepura, and Secretary, Sri Lanka Medical Association joined as the invited speakers. Prof. Rohana Chandrajith joined the seminar online to discuss his views on Geoscientific visions for one health approach. He explained how, multidisciplinary approaches are required to solve more complex problems related to human, animal, and environmental health at local, regional, and global levels. Dr. Sajith Edirisinghe delivered an eye-opening talk on microplastics. He gave a descriptive introduction to the generation and characterization of microplastics while citing various research studies

from around the globe. He raised the question if we have done our duty to reduce the contamination of microplastics and prevent them from entering to environment, since the two decades that have passed since the discovery of microplastics. Recording of the seminar is available online at <https://youtu.be/yHZQA31jYqM>.



Seminar 03 - Migratory Birds: The Societal Impact

The third seminar of the SLAAS-IDTDS seminar series was held on 13th May 2024 as a hybrid event. Prof. Sandun Perera, Professor in Biogeography and Environmental Conservation, Department of Natural Resources, Faculty of Applied Sciences, Sabaragamuwa University of Sri Lanka and Mrs. Indrachapa Weerasingha, Lecturer in Tourism & Cultural Resource Management, Department of Archaeology, Faculty of Social Sciences, University of Kelaniya joined as the invited speakers for the Seminar. Prof. Sandun Perera highlighted the geographical and ecological drivers of bird migration. He highlighted the rich avian migration we could experience in Sri Lanka drawing examples and interesting research findings of the Sri Lankan scientists in the field. On the other hand, Mrs. Indrachapa Weerasingha sparked an interesting discussion about the arrival of migratory birds in Sri Lanka as a phenomenon that has not yet been under-

SLAAS Seminar Series on Interdisciplinary and Transdisciplinary Studies 2024 - Seminar 3

Commemorating World Migratory Bird Day 2024

Migratory Birds: The Societal Impact

Biogeography of Bird Migration
 Prof. Sandun Perera
 BSc (Hons) Zoology (1st Class), PhD in Environmental Science (2020), South Africa
 Professor in Biogeography and Environmental Conservation, Department of Natural Resources, Faculty of Applied Sciences, SLAAS

Socio-economic Benefits of Migratory Birds and Ecotourism
 Mrs. Indrachapa Weerasingha
 B.A. Honors (Economics) H. II (Research), MEd (2018) (SLAAS)
 Lecturer in Tourism & Cultural Resource Management, Department of Archaeology, Faculty of Social Sciences, University of Kelaniya

Bird migration is a natural phenomenon which occurs due to the unfriendly geological atmosphere of the winter regions in the world. Being an island in Indian subcontinent, the geological positioning of Sri Lanka invites the migratory birds to spend their challenging period in the environmentally rich eco systems stretching from the coastal line to the central highlands of the island. The extreme value of this phenomenon has not yet been explored by the Sri Lankan tourism industry, especially in the niche tourism product of ecotourism. This is an effort to explore the current situation of migratory bird watching in tourism in Sri Lanka and to identify the potentials, socio-economic benefits and challenges in promoting migratory bird watching as a recreational activity in ecotourism in the country.

13th May 2024 | 4.30 PM
 Hybrid mode at SLAAS headquarters and via Zoom

Zoom meeting information
 Meeting ID: 911 9456 5405 | Passcode: IDTDS@03
 or scan the QR code

SLAAS

explored by the Sri Lankan tourism industry. She focused on the potentials, socio-economic benefits, and various challenges in promoting migratory bird watching as a recreational activity in ecotourism in Sri Lanka. Recording of the seminar is available online at https://youtu.be/L6_NjUVaN10.

Seminar 04 - Land Restoration, Desertification, and Drought Resilience

The fourth seminar of the SLAAS-IDTDS seminar series was held on 7th June 2024 Commemorating World Environment Day 2024 which fell on 5th June 2024. The seminar was held as a hybrid event. Vidya Jothi Emeritus Professor Sarath W. Kotagama, Professor Emeritus and Former head of the Department of Zoology, Faculty of Science, University of Colombo and Dr. Niranga Alahacoon, Researcher in Remote Sensing and Disaster Risks, International Water Management Institute (IWMI) and Council Member, National Research Council (NRC) joined as the invited speakers. Professor Kotagama indicated the necessity of integrating various disciplines such as science, sociology, economy, and ecology. And he analyzed strong is the effect of human activities on destruction of natural ecosystems and how hard is to restore the original ecosystems through unscientific corrective activities. He also indicated the power of citizen science and how to utilize in restoration and conservation efforts. Dr. Niranga Alahacoon shared his experience in the field of managing drought risks and he highlighted the use of advanced techniques and tools used for identifying, quantifying, and managing such risks and enhancing drought resilience. With examples, he showed how GIS-based drought hazard mapping can be used effectively to identify at-risk areas. Recording of the seminar is available online at <https://youtu.be/yLFkPMcZEto>.



Seminar 05 - Building Today's Youth for the Future

Commemorating World Youth Skills Day 2024 a seminar titled “Building Today’s Youth for the Future” was held on the 15th July 2024 at the SLAAS Auditorium and via Zoom. It was conducted as the fifth seminar of the SLAAS-IDTDS seminar series. Prof. Rohan Munasinghe, Professor, Department of Electronic and Telecommunication Engineering, Faculty of Engineering, University of Moratuwa and Dr. Ruchira Wijesena, Senior Lecturer, Institute of Technology, University of Moratuwa joined as the invited speakers. Dr. Ruchira Wijesena indicated the qualities to be embodied by young individuals to secure employment and also to drive innovation while contributing significantly to their organizations. Prof. Rohan

Munasinghe delivered an eye-opening speech on how to manage work and face challenges in tough times. He talked extensively about matters related to mental health and overcoming such problems. Recording of the seminar is available online at <https://youtu.be/3efaWiYTsJA>.



Seminar 06 - Challenges in Coexistence with Nature

The sixth seminar of the SLAAS-IDTDS seminar series was held on 09th August 2024 at the SLAAS Auditorium. Prof. Premakumara de Silva, Senior Professor, Faculty of Arts, University of Colombo, and Dr. Priyanka Weerasekara, Senior Lecturer, Department of Communication and Creative Art, University of Colombo joined as the invited speakers. Prof. Premakumara de Silva explained the history and background of Sri Lankan Veddas, an indigenous group. In summary, they inhabited the island long before the arrival of the Aryans and had spread across the entire island and they have survived several millennia by adapting and coping with external and internal pressures placed on them. Today the Vedda are under stress that threatens to modernize them, which could easily lead to their demise as a cultural group. He further explained the research conducted on sociological and anthropological analysis of Vedda people which were focused on the current status of the Vedda Population to identify the real ground situation they struggle within the highly globalized world. Dr. Priyanka Weerasekara described in her speech the current situation of the Vedda language from a linguistic perspective, based on their overall socio-cultural background. Her interesting talk explained the construction of the Vedda language, and how the present-day Vedda language, found in Sinhala-speaking areas, closely resembles colloquial Sinhala due to years of linguistic assimilation. She highlighted how the linguistic outcomes of language contact indicate that the Vedda language has become an extreme language mixture and is severely endangered as of now. Recording of the seminar is available online at <https://youtu.be/2iCJFPJ-zJM>.



Seminar 07 - Innovation & Sustainability

SLAAS Seminar Series on Interdisciplinary and Transdisciplinary Studies 2024 – Seminar 7
Commemorating International Day of Science, Technology and Innovation for the South 2024

Innovation & Sustainability



**Decoding Ancient Wisdom:
Merging Tradition with Innovation for True Sustainability**
Prof. Rangika Halwatura
Professor, Department of Civil Engineering, Faculty of Engineering, University of Kelaniya

In the past, people learned from nature, integrating practices like minimalism, eco-friendly materials, and mindful transportation into their lives. Ancestors in Sri Lanka lived in harmony with nature, respecting both health and the environment. Today, however, technological advancements have led to the destruction of nature, overshadowing these traditional practices. Now, there's a resurgence in embracing ancient wisdom, driven by a desire to reconnect with sustainability. This includes digitizing traditional methods with modern innovations through collaborative research into old technologies. Such efforts not only honour past practices but also enhance current sustainability initiatives.

However, sustainability has increasingly become commercialised, raising concerns about its authenticity and effectiveness. Despite this, the urgency for genuine sustainability is critical due to climate change, resource depletion, and social inequalities. By combining traditional knowledge with modern solutions and fostering collaborative research, we can address global challenges more effectively and make sustainability a lasting priority.



Innovative and Sustainable Agricultural Practices to Enhance Total Factor Productivity in Sri Lanka
Dr. Thilanka Ariyawansa
Senior Lecturer, Department of Agricultural Technology, Faculty of Technology, University of Colombo

Agriculture is a critical sector in Sri Lanka, contributing approximately 8.9% to the national GDP while employing 25% of the workforce and utilizing 40% of the land. However, this significant resource allocation has not been interpreted into proportionate productivity, leading to a lower Total Factor Productivity (TFP). This leads to an increase in production cost and food security risks.

This session focuses on the integration of appropriate technologies, such as precision agriculture, advanced irrigation systems, and climate-smart practices, which are essential for improving TFP. Data-driven agriculture, powered by innovations in technology, will also be emphasized as a key driver in optimizing resource use, reducing waste, and increasing productivity. Additionally, we will highlight the need for new policies that support innovation-driven agricultural development, ensuring that the agricultural sector in Sri Lanka can adapt to emerging challenges and contribute more effectively to the nation's economic growth and food security. We bring together experts, policymakers, and stakeholders.

13th September 2024 | 4.30 PM
Hybrid mode At SLAAS headquarters and via Zoom

Zoom meeting information
Meeting ID: 922 1034 1224 | Passcode: IDTDS@07
or scan the QR code




The seventh and last seminar of the SLAAS-IDTDS seminar series was held on 13th September 2024 at the SLAAS Auditorium. Prof. Rangika Halwatura, Professor, Department of Civil Engineering, Faculty of Engineering, University of Moratuwa, and Dr. Thilanka Ariyawansa, Senior Lecturer, Department of Agricultural Technology, Faculty of Technology, University of Colombo joined as the invited speakers. Prof. Rangika Halwatura presented an interesting point by showing how ancient people learned from nature, integrating practices like minimalism, eco-friendly materials, and mindful transportation into their lives. He explained through many reasons how they harvested raw materials from the nature and processed them for their needs in a way surprising to modern scientists as well. Prof. Halwathura showed how he and his research group integrating traditional methods with modern innovations through collaborative research into old technologies. Dr. Thilanka Ariyawansa explained how agriculture sector is critical to

the nation. Even after employing 25% of the workforce and utilizing 40% of the land, this resource allocation has not been interpreted into proportionate productivity, leading to a lower Total Factor Productivity (TFP) leading to an increase in production cost and food security risks. He further explained about how novel technological advancements such as precision agriculture, advanced irrigation systems and climate-smart practices, and data-driven agricultural practices are instrumental in improving TFP.