



INSTITUTE FOR CLIMATE CHANGE STUDIES

Three Days National Workshop on Bridging the Knowledge Gap: Workshop on the Theory of Climate Change

1 - 3 November, 2023



Jointly with
**KSCSTE – SRINIVASA RAMANUJAN
INSTITUTE FOR BASIC SCIENCES**



विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY



Kerala State Pollution
Control Board
കേരള സംസ്ഥാന പ്രദൂഷണ
നിയന്ത്രണ ബോർഡ്





Background

Climate change, an intricate phenomenon driven by natural processes and human activities, has emerged as a critical global challenge. This phenomenon transcends geographical boundaries and affects ecosystems, economies, and societies worldwide. The growing frequency and intensity of extreme weather events have garnered considerable attention. In India, a nation marked by its rich diversity of landscapes, cultures, and traditions, climate change and its implications for extreme events hold profound significance. The climate change hypothesis revolves around the accumulation of greenhouse gases in the Earth's atmosphere. This accumulation, primarily resulting from the combustion of fossil fuels and deforestation, leads to a greenhouse effect that traps heat and elevates global temperatures. The consequences of this warming extend beyond average temperature increases, encompassing a spectrum of complex interactions within the climate system. Extreme events, characterized by their rarity, intensity, and deviation from the norm, have become an unmistakable manifestation of climate change. These events include but are not limited to heatwaves, heavy rainfall, droughts, cyclones, and floods. While the link between climate change and individual extreme events can be complex, scientific research indicates that the changing climate significantly influences their frequency and severity. Understanding this nexus is crucial, especially for a nation like India, where millions of lives and livelihoods are intricately intertwined with the environment. Stepping into the domain of climate change research, research scholars often stand poised to the fresh perspectives of climate change studies. A better understanding of the theory and the methods behind climate change studies will enable scholars to approach their studies with depth and insight. Hence for emerging scholars, this workshop recognizes their potential and is tailored to meet their specific needs as they embark on this scholarly endeavour.

Aims

- To introduce various data and methodologies employed in climate change studies.
- To expose analytical methods for Climate Change signal assessment through extensive hands-on sessions.
- To foster interdisciplinary collaboration among research scholars by providing a platform for cross-disciplinary discussions.
- To provide participants with a comprehensive understanding of the underlying concepts and principles driving global climate change.

Who should attend?

Researchers, educators, and early career scientists interested in advancing their knowledge of climate change assessment are encouraged to attend.

Workshop Mode

The workshop is planned to be in offline mode at Kottayam, Kerala.

Resource Persons

Experts from Institutions of National Importance and R & D Organizations:

- Prof. P. P. Mujumdar, IISc Bangalore
- Prof. C. Balaji, IIT Madras
- Dr. D. S. Pai, IMD Delhi
- Dr. Vamshi Krishna, NIT Warangal
- Dr. Prasanth Valayamkunnath, IISER Trivandrum

Topics Covered

- Global Circulation Models (GCM)
- Downscaling and Bias Correction
- Climate Change signal assessment
- Data analysis and interpretation

Includes extensive hands-on sessions. The participants are requested to bring their own laptops.



Important Dates and Schedule

- 12-10-2023 ▶ Last date of Application
- 15-10-2023 ▶ Notification of acceptance
- 01-11-2023 ▶ Workshop Day 1
Opening Ceremony
Plenary Talk
Hands on session 1
- 02-11-2023 ▶ Workshop Day 2
Plenary Talk
Expert Lecture
Hands on session 2
- 03-11-2023 ▶ Workshop Day 3
Expert Lecture
Valedictory Ceremony



Registration

Candidates must complete the online application form (Google Forms Link: <https://forms.gle/JTjY6SwY3NywXB1LA>) not later than 12th October, 2023. The registration fee is Rs. 2,000/- which includes workshop materials, participation in all the events, food, and accommodation. Candidates have to meet their own travel expenses.





About ICCS

ICCS is a R & D Institution of the Kerala State Council for Science Technology and Environment (KSCSTE), under the Department of Science and Technology, Government of Kerala. The general objectives of ICCS are focused research on State specific impacts of climate change on various sectors and zones of the State and propose appropriate action for climate change management and adaptation strategy in collaboration with other Institutes, Universities and Line departments. At the inception, the institute's initiative was to understand the effects of global climate change on the biosphere, with an ecosystem approach towards biodiversity conservation, sustainable agricultural practices, and disaster risk reduction. With the recent experience of frequent extreme weather phenomenon over the state, the institute has broadened its research over various synoptic and regional weather patterns causing extreme events in projected climate change.



About SRIBS

SRIBS is a R & D Institution of the Kerala State Council for Science Technology and Environment (KSCSTE), under the Department of Science and Technology, Government of Kerala. The general objectives of SRIBS are: Promote original, often speculative thinking that produces advances in knowledge that change the way we understand the nature; Undertake research studies which will make significant contributions in any of the broad areas in basic sciences; Cater intellectual interactions among scientists across the globe; and build a strong network of scientists who could conduct original research in challenging theoretical areas.

Organizing Team

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| <p>▶ Patron
Prof. K. P. Sudheer
Ex Officio Principal Secretary
S&T Department &
Executive Vice President
KSCSTE</p> | <p>▶ Organizing Secretaries
Dr. C. C. Bajish
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Team

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| <ul style="list-style-type: none"> ▪ Dr. Gowri R.
Research Associate, ICCS ▪ Mr. Jose George
Research Associate, ICCS ▪ Dr. Aiswarya Kunnath Poovakka
Research Associate, ICCS ▪ Ms. Aiswarya B. Babu
Junior Research Fellow, ICCS ▪ Mr. Sruthin Vijay
Junior Research Fellow, ICCS ▪ Mr. Jikku Joy
Junior Research Fellow, ICCS | <ul style="list-style-type: none"> ▪ Smt. Mary Jo
Administrative & Finance Officer, ICCS ▪ Mr. P. J. Jainet
Scientist, CWRDM ▪ Ms. Dawn Emil Sebastian
Scientist, CWRDM ▪ Dr. A. N. Rohith
Post Doctoral Fellow
Pennsylvania State University ▪ Dr. Jobin Thomas
Post Doctoral Fellow
Michigan Technological University |
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