

COLLABORATIVE PROGRAMMES AND PROJECTS

Multi-institutional, national and international collaborative research programmes have been the core of C-MMACS overall research. C-MMACS to-day has active collaboration with a number of national and international institutions.

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CSIR Network Projects

Engineering of Structure against Natural and Other Disasters: Cyclone Disaster Mitigation: PI: Goswami P

Nodal Lab: CSIR Structural Engineering Research Centre (SERC)

Network Partners:

CSIR C-MMACS

CSIR Centre Building Research Institute (CBRI)

Integrated Analysis for Impact, Mitigation and Sustainability (IAIMS): Regional Climate Modelling at Decadal Scale – PI: Goswami P

Nodal Lab: CSIR C-MMACS

Network Partners:

CSIR Central Institute of Medicinal and Aromatic Plants (CIMAP)

CSIR Indian Institute of Chemical Biology (IICB)

CSIR Indian Institute of Chemical Technology (IICT)

Precipitation Enhancement and Modification through Ground-Based Cloud Harvesting – PI: Goswami P

Nodal Lab: CSIR C-MMACS

Network Partners:

CSIR National Aerospace Laboratories (NAL)

Associated Partners:

GBP Institute of Himalayan Environment and Development (GBPIHED)

Karnataka State Natural Disaster Monitoring Centre (KSNDMC)

Atmospheric Carbon Dioxide Sequestration through Fertilization of High Nutrients Low Chlorophyll (HNLC) Oceanic Region with Iron – PI: Sharada M K

Nodal Lab: CSIR National Institute of Oceanography (NIO)

Network Partners:

CSIR C-MMACS

CSIR National Environmental Engineering Research Institute (NEERI)

CSIR Centre for Cellular and Molecular Biology (CCMB)

11th Five Year Plan Projects

The Supra Institutional Project: Multi Scale Simulation and Quantification of Sustainability and Vulnerability under Climate Stress and Other Natural Hazards – Nodal Officer: Goswami P

Atmospheric Modelling, PI: Goswami P, C-MMACS

Carbon Flux Studies PI: Swathi P S, C-MMACS

Solid Earth Modelling, PI: Jade S, C-MMACS

Geo-hazard Modelling: Earthquake Hazards, PI: Parvez I A, C-MMACS

The Main Lab Project: Analysis and Measurement of Concentrations of Carbon Dioxide, Methane and other Trace Gases over India at Andaman & Nicobar Islands for Inferring Sources and Sinks of Carbon over Indian Sub-Continent – PI: Indira N K

Collaborating Institutions:

Indian Institutes of Astrophysics (IIA)

Laboratoire des Sciences du Climat et de l' Environnement (LSCE), France

National Institute of Ocean Technology (NIOT).

CSIR Empower Projects

Quantitative Estimation of the Prevalence and Nature of IP Spoof based Denial-of-Service Attacks in the Indian part of the Internet through Backscatter Analysis of Network Telescope Data, PI: Anil Kumar V

Impact of Regional Aerosol Radiative Forcing on Indian Monsoon – PI: Sajani Surendran

Sponsored Projects

Modelling of Atmosphere-Hydrosphere-Biosphere Interaction, ISRO – PI: Goswami P

Impact of GCM Generated Dynamical Boundary Fields on Meso-Scale Simulation, DOS – PI: Goswami P

Development of a High-Resolution Regional Atmospheric Analysis through Observation and Simulation for Validation of the CSIR Fog Forecasting Platform, CSIR, New Delhi – PI: Goswami P

Associated Partners:

CSIR National physical Laboratory (NPL)

CSIR Central Institute of Medicinal and Aromatic Plants (CIMAP)

Shear Wave Velocity Structure in Delhi City Using Microtremor Arrays, MoES – PI: Parvez IA

Neodeterministic Seismic Hazard Assessment in Indian Megacities, DST - PI: Parvez I

Collaborating Institutions:

Department of Geosciences, University of Trieste, Italy

Crustal and Mantle Structure Along the East-West Corridor across Dharwar Craton for Constraining Models of The Crustal Evolution, DST - PI: Parvez IA

ILTP project on Earthquake Hazard Quantification on GIS Platform, DST - PI: Parvez IA

Collaborating Institutions:

Institute of Physics of the Earth, Russian Academy of Sciences, Russia.

Megha-Tropiques Mission Project: Impact of Physical Assimilation of Vertical Profiles of Latent Heating and Moisture on Short-Range Weather Forecasting, ISRO - PI: Rajendran K

Collaborating Institutions:

Indian Institute of Science (IISc)

Advanced Mathematical Modelling and Artificial Intelligence System in the Analysis of Geophysical Time Series (Earth, Ocean and Atmosphere) – PI: Rameshan Kallummal

Collaborating Institutions:

Institute of the Physics of the Earth, Russian Academy of Sciences, Moscow

Establishment of a Continuously Running GPS Station at WBREDA Campus, Durgapur, West Bengal, MoES - PI: Sridevi Jade

Monitoring of Post Seismic Deformation using GPS in Andaman Nicobar Region, MoES - PI: Sridevi Jade

Collaborating Institutions:

CSIR National Geophysical Research Institute, Hyderabad

Plate Kinematics Geodynamics and Earthquake Occurrence Processes in the Andaman Nicobar Region Using Real Time Geodetic and Seismological Observations and Earthquake Awareness Centre at Port Blair, MoES - PI: Sridevi Jade

Collaborating Institutions:

CSIR National Geophysical Research Institute, Hyderabad

Estimation of Crustal Deformation and Tropospheric Precipitable Water Vapour Content in North Eastern India using GPS Measurements, MoES - PI: Sridevi Jade

Modelling of Marine Biogeochemical Cycles in the Northern Indian Ocean, DST – PI: Sharada M K

Estimation of Carbon Fluxes in the Indian Ocean, INCOIS - PI: Swathi P S

Collaborative Projects

Active Tectonics of the Darjeeling-Sikkim Himalayas using Global Positioning System (GPS) based Geodesy, GBPHIED, Gangtok, Sikkim - PI: Sridevi Jade

Super High Resolution Modeling of Tropical Climate Under Future Scenarios - PI: Rajendran K

Collaborating Institutions:

Meteorological Research Institute (MRI)

Aqua-Planet Experiment Project: WCRP/WGNE Project, Co-PI: Rajendran K

Collaborating Institutions:

Meteorological Research Institute (MRI)

In-house Projects

Empirical modelling and Relationship of the Primary Productivity with Other Ocean Parameters in the Indian Ocean - PI: Indira N K

Site-specific Ground Motion Modelling and Microzonation Studies in Delhi City - PI: Parvez IA

Monitoring of Continuously Operating C-MMACS GPS Station Located in the IISc Campus - PI: Sridevi Jade