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## Collaborative Programmes and Projects

Multi-institutional, national and international collaborative research programmes have been at the core of C-MMACS overall research. C-MMACS today has active collaboration with a number of national and international institutions. At the national level, C-MMACS is a participant of projects like Indian Ocean Modelling Programme (INDOMOD) and New Millennium Indian Technology Leadership Initiative (NMITLI) project on Monsoon Related Meso-scale Forecasting. At the international level, C-MMACS is the Indian Node of the Indo-French Centre for Environment and Climate (IFCEC)

The year 2003-04 has seen considerable strengthening of the existing programmes and initiation of new ones. A notable development has been the launching of a CSIR Network project with two Sub Tasks : one in the area of Environmental Modelling and the other in the area of computational mechanics, with C-MMACS as the nodal organization for the former. There had been also other exciting developments: A broad framework of collaboration between CSIR laboratories and Universities (Tezpur University and CUSAT) has been formalised through signing of two MoUs. This paves the way for enhanced and effective synergy between academic Institutions and of CISR Laboratories

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- Sponsored Projects
- Collaborative Projects
- In-house Projects

## 7.1 Sponsored and Collaborative Projects

*Scale interactions in air, land, sea coupled environment & North-east monsoon, USIF  
ONR – P Goswami*

*Evaluation and Validation of Systems of  
Assimilation, IFCPAR - P Goswami*

*Modelling of Atmosphere-Hydrosphere-  
Biosphere Interaction, ISRO - P Goswami, S  
Himesh*

*Mesoscale Modelling for Monsoon Related  
Predictions, CSIR (NMITLI) - P Goswami*

*Active Tectonics in the Shillong Plateau using  
Global Positioning System (GPS) based  
Geodesy, Department of Science and  
Technology (India) –Malay Mukul, Sridevi Jade*

*Active Tectonics in the Kutch, Cambay and  
Narmada Rift Systems using Global  
Positioning System (GPS) Geodesy,  
Department of Science and Technology (India)  
- K. C. Tiwari, A. Joshi, Malay Mukul*

*Dynamics of Continental Collision and  
Rheology of Lower Crust based on GPS  
studies in Indian Sub-Continent, Department of  
Science and Technology (India) - Sridevi Jade,  
V. K. Gaur, Malay Mukul*

*Geometry, Kinematics and Deformation  
Mechanisms in the Gish Transverse Zone in  
the Darjiling-Sikkim Himalaya, India,  
Department of Science and Technology (India)  
- Malay Mukul, Sridevi Jade, V. K. Gaur, A. P.  
Krishna, A. Matin*

*Establishment of Continuous recording GPS  
systems at four sites in North Eastern India,  
Department of Science and Technology (India)  
–Sridevi Jade, Malay Mukul and V. K. Gaur*

*Measurement of accurate coordinates for  
ACMI, Gwalior, AIR HQ, MOD – Sridevi Jade &  
M B Ananda*

*Modelling biogeochemical cycles in Bay of  
Bengal, Department of Ocean Development –  
P S Swathi, M K Sharada*

*Assimilation of in-situ and satellite altimeter  
data into OGCM, Department of Ocean  
Development - P S Swathi*

*Development of Indian Ocean community  
model, Department of Ocean Development –P  
S Swathi*

*Microzonation investigations and study of  
building parameters in the Anjar (Kutch) area  
using microtremor recordings, Department of  
Science and Technology (India) – Imtiaz A  
Parvez*

*A Kinematic study of suspected major active  
shear/fault zones, Department of Science and  
Technology (India) - Sridevi Jade*

## 7.2 Joint Projects with Laboratories

*Finite element modelling: A priori Error  
Analysis, NAL, Gangan Prathap*

*Numerical investigations of stability dynamics  
and morphology of thin liquid films, IIT,  
Kanpur, Anand Kumar*

## 7.3 In house Project

*Complex fluid flow modelling and simulation  
- Anand Kumar*

*Mesoscale Modelling for Monsoon Related  
Predictions - P Goswami*

*Determination of shear Indian crust beneath a  
velocity structure of the few Geodynamically  
broad band seismic records - Malay Mukul/NK  
Indira/Sridevi Jade/VK Gaur*

*Coupled atmospheric - Hydrological model to  
Forecast spatio-temporal variability of water  
resource - P Goswami & S Himesh*

*Role of Lithospheric Heterogeneities in Earth-  
quake dynamics - TR Krishna Mohan*