



**U.S.-India Partnership for Climate Resilience**  
**Workshop on Development and Applications of Downscaling Climate Projections**  
March 7 – 9, 2017 | IITM, Pune, India

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**Day 1 : 7 March 2017 Tuesday**

**Venue : Meghdoot Auditorium**

9:00am – 9:30 am     **Registration**

9:30am – 10:15am     **Inaguration and Welcome by Prof Ravi Nanjundiah, Director, IITM**  
Guest of Honour : Dr. David Easterling, Chief, Scientific Services Division, NOAA  
Speech by Dr. David Easterling,  
Speech by Dr. Ken Kunkel, Professor, North Carolina Institute for Climate Studies  
Speech by Dr. Krishnan, Executive Director, Center for Climate Change Research, Pune  
Vote of Thanks : Dr. Ashwini Kulkarni

**10:15am – 10:45am HIGH TEA**

**Session I : An Introduction to downscaling : Theory and Methods;**  
**Venue : Varahamihira Hall**

(Chair : Prof David Easterling)

10:45am – 11:15am     Dr. Ken Kunkel - An Introduction to Downscaling Methods

11:15am – 12:15am  
Dr. Ashwini Kulkarni, Scientist, IITM –Review of Statistical Downscaling  
Dr. J. Sanjay, Scientist, IITM Initiatives for Dynamical Downscaling  
Dr. Aradhana Yaduwanshi, WOTR  
Ms. Jayshri Patel, IITM

**Session II : Applications of CORDEX Data**  
**Venue : Varahamihira Hall**

(Chair : Dr R Krishnan)

12:15am – 1pm  
Dr. Subimal Ghosh, IIT Mumbai  
Dr. P P Mujumdar, IISC, Bangalore  
Dr. Kamal Murari, TISS



**1pm – 2pm LUNCH**

**Session III : ARRM and NEX Data  
Venue : Aryabhata Hall**

(Chair : Prof Ken Kunkel)

- 2pm – 2.20pm **Data Quality**  
Dr. Ranjini Swaminathan, Climate Science Center, Texas Tech University
- 2:20pm – 2:45 pm **GFDL-NCPP "Perfect Model" Model Approach to Comparing  
Downscaling Methods and Introduction to Asynchronous Regional  
Regression Model (ARRM)**  
Dr. Anne Stoner, Climate Science Center, Texas Tech University
- 2:45pm – 3:05pm **Introduction to NASA Earth Exchange (NEX) Downscaled Data**  
Dr. Bridget Thrasher – by video
- 3:05pm – 3:30pm **Introduction with ARRM and NEX Downscaled Output**  
Dr. Katharine Hayhoe – by video  
Dr. Anne Stoner, Climate Science Center, Texas Tech University
- 3:30pm – 4:00pm TEA BREAK**
- 4:00pm – 5:30pm **Hands-on Exercise with ARRM and NEX downscaled output (continued)**



**Day 2 : 8 March 2017, Wednesday**

**Session IV : Uses and Applications of Downscaling for Decision-Making  
Venue : Varahamihira Hall**

(Chair : Dr. Nambi Appadurai)

- 9: am– 9:30am **Research and Implementation Experience with State Action Plan Development Activities**  
Ms. Jennifer Steeves, Risk Analyst, Acclimatise
- 9:30am – 11:15am **PANEL DISCUSSION - Perspectives on Station Action Plans and Vulnerability Risk Assessments**
- Dr. Sandhya Rao, Integrated Natural Resources Management Consultants ( Water Resources, Uttarakhand)
  - Dr. Arvind Boaz, Principal Chief Conservator of Forests and Head of Forest Force, Government of Chhattisgarh (Chhattisgarh)
  - Dr. Manish Kumar Shrivastava, TERI, (Karnataka, Maharashtra, Gujarat)
  - Dr. Lokendra Thakkar, Coordinator, Climate Change Division, EPCO (Environmental Planning & Coordination Organization (Madhya Pradesh)
  - Dr. Crispino Lobo, Co-founder, Watershed Organization Trust (Agriculture)
  - Dr. Amir Bazaz, Senior Consultant, Indian Institute of Human Settlement (Urban Planning)
  - Dr. Jagdish , ATREE (Watershed hydrology; landscape ecology)
- Moderator: Dr. Krishnan**
- 11:15am – 11:45am TEA BREAK**

**Session V : Case Studies  
Venue : Varahamihira Hall**

(Chair : Dr. B. Kalyan Chakravarthy)

- 11:45am – 12:30pm **Examples of Applications of Downscaling Outputs – 3 Case Studies (Agriculture, Infrastructure, Urban Planning)**  
Dr. Anne Stoner, Climate Science Center, Texas Tech University



**12:30pm – 1:30pm LUNCH**

**1:30-3:30pm Case Studies and Discussion on Connections of Downscaled Climate Information and Health Sector**

Dr. John Balbus, Senior Advisor for Public Health  
Director, NIEHS-WHO Collaborating Centre for Environmental Health Sciences

**3:30pm – 4:00pm TEA BREAK**

**Session VI : Downscaling for India State Action Plans – Hands on Exercises and Discussion**  
**Venue : Aryabhata Hall**

**4:00pm – 5:30pm** Group A – continue exercise from Day 1  
Group B–second exercise on application of outputs (introduction video by Dr. Katharine Hayhoe)

**5:30-6:00pm Group Discussion on Key Questions and Outcomes**  
Dr. Anne Stoner



**Day 3 : 9 March 2017, Thursday**

**Session VII : Communications and Collaborations for building Resilience  
Venue : Varahamihira Hall**

(Chair : Dr.Lokendra Thakkar)

- 9:00am – 10:00am **WRI and the Partnership for Resilience and Preparedness (PREP) – An Overview**  
Lauretta Burke, World Resources Institute, Washington, DC
- 10:00am – 10:30am **Resilience Efforts and Activities in India**  
Nambi Appadurai, World Resources Institute, Washington, DC
- 10:30am – 11:15am **Development of Dashboards and its Utilization in State Action Planning**  
Lauretta Burke, World Resources Institute, Washington, DC  
Nambi Appadurai, World Resources Institute, Chennai, India
- 11:15am – 11:45am TEA BREAK**
- 11:45am – 12:30pm **Development of Dashboards....cont'd**
- 12:30pm – 1:30pm LUNCH**

**Session VIII : Concluding Remarks  
Venue : Varahamihira Hall**

- 1:30pm – 2:00pm **Collaborative Research Activities and Discussion**  
Dr. Krishnan and Dr. Easterling
- 2:00pm – 2:45pm **Remarks/feedbacks/suggestions by participants**
- 2:45pm – 3:00pm **Closing Remarks and Next Steps**  
Director, IITM and Dr. Easterling
- 3:10pm – 4:00pm **TEA**

**End of the WORKSHOP**