

Dr. ANUSHIYA.J
Research Associate
Centre for Climate Change and Disaster Management
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RESEARCH AREA

Climate variability and extremity analysis, Sectoral impact and vulnerability assessment, Urban microclimate
Climate resilience, Climate Knowledge Management

SKILLS

Proficiency in tools - ArcGIS, Erdas IMAGINE, SWAT, MAGICC/SCENGEN, R, RCLimDEX, CHyM,

EDUCATION

Ph.D., Centre for Climate Change and Adaptation Research, Anna University, Chennai, India, 2015
Thesis Title: Impact and Vulnerability of Emerging Climate Change Scenario on Natural Resources in
Chennai Metropolis, India, supported by DST-PURSE, Govt. of India

EXPERIENCE

- Research Associate (Nov 2017 - till date) “*Establishing/Strengthening the State Climate Change Centre/Cell under NMSKCC (SCCC-NMSKCC) in the State of Tamil Nadu*” funded by DST-SPLICE, Govt. of India
- Research Associate (May 2016 - Nov 2017) “*Impacts of Climate Change on Pluvial and Fluvial Flooding in Chennai*” funded by State Planning Commission, Govt. of Tamil Nadu
- Research Fellow (Jan 2010 – Feb 2015) “*Impact and Vulnerability of Emerging Climate Change Scenario on Natural Resources in Chennai Metropolis, India*”, supported by DST-PURSE, Govt. of India
- Consultant- Team member (June 2019- Sep 2019) “*Scoping study for Project WASCA in the state of Tamil Nadu*”, funded by GIZ Delhi

PUBLICATIONS

PEER REVIEWED INTERNATIONAL JOURNALS

- **Anushiya Jeganathan**, Ramachandran Andimuthu & Palanivelu Kandasamy 2021, “**Climate risks and socio-economic vulnerability in Tamil Nadu, India**”, Theoretical and Applied Climatology, Vol 145, pages121–135, <http://link.springer.com/article/10.1007/s00704-021-03595-z>
- **Anushiya Jeganathan**, Ramachandran Andimuthu & Palanivelu Kandasamy 2021, “**Challenges in Chennai City to Cope with Changing Climate**”, European Journal of Climate Change, Vol 3, Issue 1, pp. 33-43 <https://doi.org/10.34154/2021-EJCC-0017/auraass>
- Ramachandran Andimuthu, Kandasamy Palanivelu, B. V. Mudgal, **Anushiya J**, Abinaya B & Guganesh S 2019, “**Performance of urban storm drainage network under changing climate scenarios:Flood mitigation in Indian coastal city**”, Nature Scientific Reports 9:7783 | DOI:10.1038/s41598-019-43859-3, published online on 23 May 2019, <https://www.nature.com/articles/s41598-019-43859-3>
- Ramachandran Andimuthu, Kandasamy Palanivelu, B. V. Mudgal, **Anushiya J**, Abinaya B, Guganesh S & Arun Babu.E 2019, “**Climate Change impact on fluvial flooding in the indian Sub Basin: A case study on the Adyar Sub basin**”, PLoS One 14(5): e0216461. DOI:10.1371/journal.pone.0216461, published online on 14 May 2019, <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0216461>
- **Anushiya Jeganathan**, Ramachandran Andimuthu & Palanivelu Kandasamy 2019, “**Thermal Comfort level in Chennai Metropolis under present and future climate scenarios**” European Journal of Climate Change, Vol 1, Issue 1, pp. 17-23 ISSN-e: 2677-6472 https://www.auraass.com/article/category/list-of-journals/ejcc#list_volume
- **Anushiya Jeganathan**, Ramachandran Andimuthu & Palanivelu Kandasamy 2019, “**Trends of the observed temperature and its variations in the Tamil Nadu State of India**” Theoretical and Applied

Climatology, Vol 137 (1), pp.103-116, Published online on 3 August 2018, DOI: 10.1007/s00704-018-2582-6 <https://link.springer.com/article/10.1007%2Fs00704-018-2582-6>

- **Anushiya Jeganathan**, Ramachandran Andimuthu, Ramachandran Prasannavenkatesh & Divya Subash Kumar 2016, “**Spatial variation of temperature and indicative of the urban heat island in Chennai Metropolitan Area, India**”, Theoretical and Applied Climatology, Volume 123, Issue 1, pp 83-95, Published online on 23 December 2014, DOI: 10.1007/s00704-014-1331-8 <http://link.springer.com/article/10.1007%2Fs00704-014-1331-8>
- Ramachandran & J.Anushiya 2015, “**Long-term rainfall trends of Indian urban station and its variation in different phases and seasons**”, International Journal of Global Warming, Vol. 7, No. 3, pp.307–321 <http://www.inderscienceonline.com/doi/abs/10.1504/IJGW.2015.069364>
- **Anushiya Jeganathan & Ramachandran Andimuthu** 2013, “**Developing climate scenarios for Tamil Nadu, India using MAGICC/SCENGEN**”, Theoretical and Applied Climatology, Volume 114, pp.705-714, Published online on March 15 2013. DOI 10.1007/s00704-013-0871-7, <http://link.springer.com/article/10.1007%2Fs00704-013-0871-7>
- **Anushiya Jeganathan & Ramachandran Andimuthu** 2013, “**Temperature trends of Chennai City, India**”, Theoretical and Applied Climatology, Volume 111, Issue 3-4, pp 417-425, DOI 10.1007/s00704-012-0646-6 <http://link.springer.com/article/10.1007%2Fs00704-012-0646-6>

BOOK CHAPTER

- **J.Anushiya & A.Ramachandran** 2015, “**Assessment of Water Availability in Chennai Basin under Present and Future Climate Scenarios**”, Chapter 18 In. Environmental management of River Basin ecosystems, Ramkumar, M., Kumaraswamy, K. and Mohanraj, R. (Eds.). Springer Earth System Sciences Publications, pp. 397- 415, ISBN: 978-3-319-13424-6, <http://www.springer.com/in/book/9783319134246>

REPORTS

- **Water security and Climate Adaptation in Rural India: Preliminary Scoping Assessment Report-Tamil Nadu (2020)** Authors: K. Palanivelu, A. Ramachandran, B. V. Mudgal, **Anushiya. J.** Published by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, New Delhi, India. February 2020 pp 1-94.
- **Climate Change Projections for Tamil Nadu: A vista for adaptation Strategies (2013)** Centre for Climate Change and Adaptation Research, Anna University, Chennai, India
- **Addressing Climate change and Adaptation strategies of Tamil Nadu Coast (2012)** Centre for Climate Change and Adaptation Research, Anna University, Chennai, India

PUBLICATIONS/PRESENTATIONS IN INTERNATIONAL CONFERENCES/WORKSHOPS

- **Anushiya.J**, 2021, “Global climate indices’ teleconnection with monsoons of Tamil Nadu” 15th -17th March 2021, **Workshop on Indian Ocean Variability and Teleconnections** (Virtual), ICTP, Italy
- B. Abinaya, **J. Anushiya**, K. Palanivelu 2017 “Analysis of District wise climate exposure vulnerability in Tamil Nadu”. **4th Indian Biodiversity Congress**, 10-12th March, Pondicherry University, Pondicherry, India
- **Anushiya.J** 2016 “Teleconnections of Global Climate Indices on Monsoon Seasons of Tamil Nadu”, **National Conference on Climate Change Impacts and Natural Resources Management**, 18 - 19th February, Anna University, Chennai, India
- **Anushiya.J** and Ramachandran. A 2015 “Chennai’s Climate Extremes Trends under Climate Change Scenario”, **Third workshop on Water Resources in Developing Countries; Planning and Management in Face of Hydro climatological Extremes and Variability**, 27th Apr- 8th May, ICTP, Trieste, Italy
- **Anushiya.J**, Jayanthi. N and Ramachandran A 2014 “Influences of El Nino Modoki on NEM Rainfall in Tamil Nadu, India”, **WMO International Conference on Seasonal to Sub Seasonal Prediction**, Feb 10-13th Jointly Organized by WWRP/ THORPEX-WCRP at NOAA Centre for Weather and Climate Prediction, MD, USA
- **Anushiya.J** and Ramachandran. A 2014 “Observed and Projected Climate Extremities in Chennai Metropolitan Area”, **WMO International Conference on Seasonal to Sub Seasonal Prediction**, Feb 10-13th Jointly Organized by WWRP/ THORPEX-WCRP at NOAA Centre for Weather and Climate Prediction, MD, USA
- Divya, SK, Ramachandran, A, **Anushiya, J** & Prasannavenkatesh, R 2014 “How hot was Chennai? A retrospective analysis of UTCI in Meenambakkam Chennai”, **National Conference on Challenges of Water**

Resources and Environmental Management -NCCWE 2014, 27-28th January, Department of Civil Engineering, Easwari Engineering College, Chennai, India

- **Anushiya.J** and Ramachandran. A 2013 “Observed and Projected Temperature Scenarios for Chennai Basin”, *International Conference on Impact of Climate Change on Food, Energy & Environment*, July 4 -6th 2013 Organised by Satyabama University, Chennai, India
- **Anushiya.J** and Ramachandran. A 2013 “Dealing Urban Challenges to cope with Changing Climate”, *8th International Congress on Climate Change, Territorial Classification & Socio Economic Crisis*, 23 -27th April, Jointly organized by Bharathidasan University, Trichy, India and IPN National Polytechnic Institute, Mexico
- **Anushiya.J** and Ramachandran. A 2012 “Emission and GCM based Climate Scenarios for TN, India”, *International Conference of Climate Change and CO₂ Management: Mitigation, Separation and Utilization*, 2 -3rd February, Anna University, Chennai, India
- **Anushiya.J** and Ramachandran. A 2011 “Modelling the Climate – An Introduction”, *International Seminar on Climate Change and Sustainable Resource Management*, 25- 26th February 2011, Department of Geography, University of Madras, Chennai, India

INVITED TALKS

- ‘Awareness talk on Climate change mitigation and adaptation; the role of women’ 6th April 2019, RPM Women Welfare Association, Adambakkam, Chennai
- ‘Water resources Present Scenario and Climate Adaptation’, Capacity Building Workshop for ‘Implementation of Tamil Nadu State Action Plan on Climate Change: Water Resource Sector’, 14th July 2016, WRD Conference hall, Chepauk, Chennai-5, Organized by Dept. of Environment, Govt. of Tamil Nadu
- “Cities and Climate Change: A path towards city resilience” Seminar on ‘Understanding local adaptation from the lens of climate change-Tamil Nadu perspective’ 20th Feb 2015, Centre for Climate Change and Adaptation Research, Anna University, Chennai

SEMINARS/WORKSHOPS PARTICIPATED

- “Workshop on Indian Ocean Variability and Teleconnections” Organized by ICTP, Italy 15th – 17th March 2021,
- “Revisiting TNSAPCC Strategies: Sustainable Habitat Sector” Organized by Chennai Metropolitan Development Authority, 24th January 2018, Chennai
- “Flood Inundation Modelling and Water Quality Projection Modelling for Chennai, India” organized by United Nations University, Japan and IIT Madras, 7- 8th December, 2017, Chennai
- “State Level Consultation Workshop on Climate Change Adaptation Demonstration Project Planning” Organized by GIZ, Dan Foundation and Department of Environment, Govt. of Tamil Nadu, 21st March 2017 Anna University, Chennai
- “Revisiting TNSAPCC Strategies- Coastal Area Management” Govt. of Tamil Nadu, 17th August 2016 Anna University, Chennai
- “Third workshop on Water Resources in Developing Countries; Planning and Management in Face of Hydroclimatological Extremes and Variability”, 27th Apr- 8th May 2015, ICTP, Trieste, Italy
- “TERI-BCCR Climate Research School III on Statistical Downscaling” Organized by TERI, Bjerknæs Centre for Climate Research and Norwegian Embassy during 25 -29th November 2-13, TERI University, Delhi.
- “International Workshop on Renewable Energy, Climate Change & Energy Management 2013” Organized by Institute of Energy Studies, Department of Mechanical Engineering, Centre for Climate Change and Adaptation Research, Centre for International Affairs and Department of Management Studies, 24 -25th January 2013, Anna University, Chennai
- “Advanced SWAT workshop SWAT – 2012” Organized by Texas Agri Research Foundation and Indian Institute of Technology, Delhi 16 -17th July 2012
- “High Noon Spring School 2012” – Collaborative project of European Union titled ‘Adaptation to Changing water Resources Availability in Northern India with respect to Himalayan Glacier Retreat and Changing Monsoon Pattern’ Indian Institute of Technology, Delhi, 2 - 6th April 2012
- National meet on “Development of Methodology for Vulnerability Assessment” Organized by GIZ and Centre for Climate Change and Adaptation Research, 29th September 2010, Anna University, Chennai

- **“Geospatial Technology for Natural Resources and Environment Management”** Department of Geography, 13 -14th of September 2010 University of Madras, Chennai
- **“WMO Interregional CLIPS Training workshop on Urban Climatology”** Organized by World Meteorological Organization (WMO) and the India Meteorological Department (IMD), 6 -10th September 2010 IITM Pune, India
- Inception workshop on **“State Action Plan on Climate Change for Tamil Nadu”** Organized by GIZ and Centre for climate Change and Adaptation Research, 25 - 26th August 2010 Anna University, Chennai
- Workshop on **“Awareness Programme for Women and Children on Impacts of Climate Change”** Organized by Centre for Climate Change and Adaptation Research, and REEDA, 14th August 2010 Anna University, Chennai

AWARDS/ TRAVEL GRANDS

- **Department of Science and Technology DST – PURSE** sponsored **Junior Research Fellowship (2010-2013)** to carry out PhD at Centre for Climate Change and Adaptation Research, Anna University, Chennai (proceeding no. 11001/PD2/2008) 2010
- **International Centre for Theoretical Physics, Trieste, Italy (ICTP)** sponsored **Travel, Registration and Accommodation grant** to participate and presentation in ‘Third workshop on Water Resources in Developing Countries; Planning and Management in Face of Hydro climatological Extremes and Variability’, 27th Apr- 8th May 2015, Trieste, Italy
- **DST- SERB, Government of India** sponsored **Travel and Accommodation grant** through International Travel Support Scheme to participate and present in ‘WMO International Conference on Seasonal to Sub seasonal Prediction’, NOAA, USA, February 2014
- **CICS-Centre for International Cooperation in Science, Chennai** sponsored **Registration grant** to participate and present in ‘WMO International Conference on Seasonal to Sub seasonal Prediction’, NOAA,

INTERDISCIPLINARY ACTIVITIES AND OUTREACH

- Online course on FAO's **SDG goal 6**, 2020
- Advance Course on **“Applications of RS & GIS for Natural Resources”** during Jan - Mar 2015 offered by IIRS (Indian Institute of Remote Sensing) Dehradun, India
- Completed a Course on **“Introduction to the science of climate and climate change”** offered by University of Oxford, NERC and Met Office
- Active Participant and Contributed in **Evidence and Lessons from Latin America (ELLA) Learning Alliance on Climate Resilient Cities** from Jan 2013 – May 2013
- Contributed in organizing the Seminar on **“Looking forward: Challenges of Climate on Water and Land”** in commemoration of World Water Day and Forest Day 2010 on 22nd March 2010
- **Reviewer-** scientific research papers in International Peer review journals - **Springer and Taylors and Francis Group**
- The work on ‘Trends of the observed temperature and its variations in Tamil Nadu’ was highlighted in National Newspaper The Hindu on 11th April 2021 <https://www.thehindu.com/news/cities/chennai/chennais-scorching-summer-get-hotter/article34292878.ece>
- The work on Thermal comfort in Chennai was highlighted in Times of India on 17th June 2019 <https://timesofindia.indiatimes.com/city/chennai/by-2050-winters-in-chennai-will-be-warmer-by-2c/articleshow/69817194.cms>
- The work on ‘Thermal comfort in Chennai’ was highlighted as Winters in Chennai to become warmer by 2 degrees by the year 2050 on 17th June 2019 in <https://www.livechennai.com/detailnews.asp?catid=zqcdtfrgsbokd&newsid=48757>
- The work “Rapid urbanization turns Chennai into heat island” had highlighted in the National Newspaper DTNext on 26th July 2016 <http://www.dtnext.in/News/City/2016/07/28024814/Rapid-urbanisation-turns-Chennai-into-heat-island.vpf>
- The work on ‘heat island in Chennai’ was highlighted on 12th July 2016 in <https://www.newslaundry.com/2016/07/12/how-concrete-cities-are-building-up-the-heat-in-india>
- Work on ‘heat island “Hot spots and cold zones: how weather differs within Chennai” had highlighted in the National Newspaper ‘The Hindu’ on Sep 12, 2012 <http://www.thehindu.com/news/cities/chennai/hot-spots-and-cold-zones-how-weather-differs-within-chennai/article3886212.ece>