International Conference 2025:
Towards Resilient and Sustainable Cities and Communities
4-5 September 2025

The Atrium, 0.08 and 0.10 Hugh Aston Building

Programme

4th September 2025

Welcome address – HU0.08

9am – 9.30	Participant pack collection from the Atrium
9.30-9.35	Conference inauguration – HU0.08 – Prof. Subhes Bhattacharyya
9.35-9.45	Welcome by Prof. Shushma Patel, PVC Dean, Faculty of Technology, Arts and Culture
9.45-9.55	Welcome by Prof. Siobhan Keenan, ADRI, Faculty of Technology, Arts and Culture

Keynote Address – HU0.08

Chair: Prof. Subhes Bhattacharyya

10.00-10.30	Keynote address by Prof. Darren Woolf, Chair of Resilient Cities Group, CIBSE – A Wicked Collaboration
10.35-11.05	Keynote address by Mr. Michael Seager, Economics and Commercial Manager, Storegga – Economic and Commercial aspects of driving hydrogen demand in the UK
11.05-11.15	Questions and answers

Break 11.15-11.30 – The Atrium

11.30-12.30 Morning Parallel session 1 – Urban Resilience - HU0.08

Chair: Prof. Alistair Duffy (DMU)

11.30-11.45	Application of Digital Twins for Low Carbon Development and Resilience: A comparative Analysis of Smart City Evolution in New Delhi, New York and Jakarta – Arnav Mathur, Kings College, London
11.50-12.05	Rethinking end-of-life renewable energy assets as components of sustainable urban infrastructures – Abhishek Tiwary, De Montfort University
12.05-12.30	Questions, answers and discussions

11.30-12.30 Morning Parallel Session 2 – Net-zero transitions- HU0.10

Chair: Prof. Subhes Bhattacharyya

11.30-11.45	Economics of and Technologies for Net-Zero Emissions – Govinda Timilsina, The World Bank
11.50-12.05	Accelerating Progress to Net Zero in UK Local Government – Daniel Kerr, De Montfort University
12.05-12.30	Questions, answers and discussions

Lunch break 12.30-13.30

13.30-15.00 – Afternoon Parallel Session 1 – Resilient Built Environment – HU0.10

Chair: Prof. Ahmad Taki (DMU)

13.30-13.45	Mapping Synergies and Trade-offs Among Climate Resilience Indicators: A Systematic Review Based Cross-Impact Framework for Buildings – Ashmin Aryal (Linnaeus University)
13.50-14.05	A framework for holistic cross scale resilience – Christopher Medland, University of Surrey
14.10-14.25	Design of Smart Systems for Sustainable Cities – Drarmesh Shah, Indrashil University, Gujarat, India
12.05-12.30	Questions, answers and discussions

13.30-15.00 – Afternoon Parallel Session 2 – Workshop – Civic Research and Collaboration on Sustainability – HU0.08

How can our research partner with and address the needs of our local area and the local government, businesses and organisations in our place? This workshop will hear from the experience of the South Yorkshire Sustainability Centre and provide space to discuss recent DMU collaborative sustainability projects and future opportunities.

This session will be led by Andrew Reeves (DMU) and Jess Thomas, Operations Director, South Yorkshire Sustainability Centre

15.00-15.30 - Coffee/ tea break and networking (The Atrium)

15.30-17.30 - Post-tea Parallel Session 1 – Sustainable Urban Planning and Living - HU0.08

Chair: Dr Amal Abuzeinab (DMU)

15.30-15.45	Reimagining Coastal Prosperity through landscape-led climate adaptation in Lagos, Gulf of Guinea – Esan Oluwasegun Babatunde, University of Lagos, Nigeria
15.50-16.05	Adaptive Façades in Practice: Investigating Predesign Challenges and Opportunities for Sustainable Architecture – Sahar Abdalrahman, De Montfort University
16.10-16.25	Community knowledge and participatory urbanism: Reshaping urban development and resilience trajectory in Lagos – Damilola Odekunle, University of Lagos, Nigeria
16.30-16.45	Ecologies Beyond the Human: Reimagining Nature-based Solutions through Relational and More-than-Human Perspectives – Shweta Salvi, DMU
16.45-17.30	Questions, answers and discussions

15.30-17.30 -Post-tea Parallel Session 2 – Resilient Energy Systems – HU 0.10

Chair: Prof. Muyiwa Oyinlola (DMU)

15.30-15.45	Alternative Railway Line/Points Heating using thermoelectric Heating – Martin Woodcock, Jacobs Engineering, Birmingham, UK
15.50-16.05	Study of Analyzing the Sustainability of DRE Mini grids in India the Context of Large-Scale Grid Electrification – Gopal K Sarangi, TERI SAS, New Delhi (India)
16.10-16.25	Regulatory Impact of Prepaid Metering on Sustainable Urban Living – Fauzia Tanko, Secretry, Public Utilities Regulatory Commission, Ghana
16.30-16.45	Energy Harvesting and Power Back-up System for Pharmaceutical Tablet Compression Machines – Chris Gould, DMU
16.45-17.30	Questions, answers and discussions

05 September 2025 – Second day

09.00-09.15 - Networking

09.15 – 11.00 – Parallel Morning Session 1 – Liveable and Sustainable Cities and Communities – HU0.08

Chair: Dr Andrew Reeves

09.15-09.30	Working from home environments to enhance wellbeing and productivity – Amal Abuzeinab, DMU
09.35-09.50	Improving Disposable Income for Micro entrepreneur in the Rural India for Sustainable Community – Vishvjit Thakar, Indrashil University, India
09.55-10.10	An expansion too far? The Contested Space of Environmental Policy Discourses – Andrew Mitchell
10.15-10.30	Enhancing Basic Education as a Foundation for Resilience and Sustainability in Low-Income Mega-Cities: the Case of Lagos, Nigeria – Silifat Okoya, DMU
10.30-11.00	Question and Answer session

09.15-11.00 – Parallel Morning Session – Online Session – HU0.10

Chair: Prof. Subhes Bhattacharyya

09.15-09.30	Climate Vulnerability and Urban Resilience in Seville: Bioregional Interdependencies and Strategies Towards 2030 – Carlos Tapia Martin, University of Seville, Spain
09.40-09.55	Sustainable Urban Design and People's Perceptions – Ashlesha Passi, TERI SAS, New Delhi (India)
09.55-10.10	Local Government Autonomy and the Urban Political Settlement: Implications for Resilient Cities in Lagos, Nigeria. – Damilola Agbalajobi, Obafemi Awololo University, Nigeria
10.15-10.30	Hybrid Solar-Biomass Steam Retrofits for Food-Processing Clusters in Kano, Nigeria: Techno-Economic and Resilience Assessment using PyPSA-Steam – Solomon Ojoawo, University of North Dakota, USA
10.30-11.00	Question and Answer Session

11.00-11.30 - Tea/ Coffee break – The Atrium, Hugh Aston Building

11.30-13.00 – Expert Consultation Workshop (see below)

13.00-13.15 – Closing remarks by Subhes Bhattacharyya

Expert Consultation: Toward a Composite Resilience Indicator: Exploring Interactions Among Climate Resilience Indicators for Buildings

Organized by: Linnaeus University (LNU)in association with De Montfort University (DMU)

Overview

As climate-induced stressors such as heatwaves, floods, storms, wildfires, and cold spells intensify, the need to embed resilience into building design and renovation has become increasingly urgent. However, current renovation practices remain largely mitigation-focused, lacking systematic approaches to assess and enhance resilience. There is also no standardized or integrated method to evaluate the climate resilience of buildings.

Currently, there is no widely accepted method for assessing a building's climate resilience, which can make it challenging for decision-makers to identify and prioritize resilient renovation measures. To help address this need, our team is developing a composite resilience indicator framework and a companion scorecard tool designed to support practitioners and policymakers in benchmarking buildings across various climate resilience dimensions.

To address this gap, a research initiative is underway to develop an indicator-based framework for evaluating building resilience, leading to a composite resilience indicator. This workshop serves as a critical step in this process by engaging experts to assess, refine, and explore relationships among resilience indicators across five key domains: thermal, energy, flood, fire, and wind.

We are seeking collaboration with De Montfort University (DMU) to co-host this workshop, provide venue and outreach support, and contribute to advancing this vital area of climate adaptation research.

Workshop Objectives

1. Present the conceptual framework of integrated resilience indicators developed through a systematic literature review.
2. Facilitate expert review and refinement of a preliminary set of **building-level climate resilience indicators** across four hazard domains.
    a) Flood
    b) Heat Wave and Cold Snap
    c) Fire Resilience
    d) Wind/Storm Resilience
3. Explore potential **interactions, overlaps, and trade-offs** between indicators to inform the development of a robust composite indicator.

Workshop Design

The workshop will use an interactive format designed to encourage engagement and cross-disciplinary exchange. It will bring together small-group thematic discussions and a shared plenary session, helping participants collectively review and refine the indicator set.

Workshop Activities

- Introductory briefing on the conceptual framework and rationale for a composite resilience indicator.
- Breakout group discussions by hazard domain (thermal, flood, fire, wind/storm, energy) to review, critique, and refine indicator sets.
- Cross-domain integration session where groups reconvene to identify synergies, conflicts, and potential weighting approaches for a composite metric.

Expected Outcomes

- A refined and expert-validated set of climate resilience indicators for buildings.
- Expert insights on indicator interactions and integration for composite scoring.
- Strengthened interdisciplinary collaboration on resilience assessment
- Follow-up engagement through an online feedback process to finalize the composite indicator framework.

Target Participants

- Urban planners, climate adaptation researchers, architects, engineers, policymakers, energy experts, and insurance/risk analysts with experience in resilience and the built environment.

Workshop Format:

Time	Activity
11:00-11:15	**Opening:** Climate Resilience and Buildings - providing the background and guide for workshop
11:15-11:45	**Group Discussion Round 1**: Cross-domain discussion to finalize refined indicator set
11:45-12:15	**Group Discussion Round 2:** Discussion finalization of Integrated Resilience Indicators
12:15-13:00	**Closing Remarks and Next Steps:** Summary of outcomes and outline of online follow-up process

Note: Outcomes will be further refined through post-workshop feedback, forming the basis of a composite indicator system.