

# Increasing Resilience of School Buildings and Vulnerable Groups to Cope with Extreme Weather Events in Himalayas-India

EMAIL: pk@rupd.de

1. UTC Title: *(Title of your Urban Thinkers Campus)*

Increasing Resilience of School Buildings and Vulnerable Groups to Cope with Extreme Weather Events in Himalayas-India

2. UTC Date(s): *(Beginning date of your Campus)*

28 April 2023

3. UTC Date(s): *(End date of your Campus)*

28 April 2023

4. Location of your UTC:

Online

5. Lead organizer: *(Please provide name of organization hosting the UTC)*

Sphere India and UNICEF India

6. Co-lead organizer: *(Please provide the Names and URL of partner organizations to be associated to the Campus)*

1. Resilient Urban Planning and development (RUPD) GbR, <https://www.rupd.de>
2. Mannheim City, Germany, <https://www.mannheim.de/de>
3. ELFA International, India, [www.elfainternational.org](http://www.elfainternational.org)
4. Miyamoto International, India, <https://miyamotointernational.com>

7. Other organizations that participated in the campus: *(Please provide the Names, URL of partner organizations, and contact email to be associated to the Campus)*

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8. Number of Participants:

50-60 Participants

9. UTC Action Day: *(Please describe the theme of your UTC Action Day and its impacts)*

Since this UTC was a virtual event, we allocated one urban lab specifically to the call to action and push for the use of city-to-city learning platforms. This approach had a significant impact on gathering the commitment of local leaders and organizations to take concrete steps towards enhancing the resilience of their communities.

During the urban lab focused on the call to action, we highlighted the importance of using city-to-city learning platforms to facilitate the exchange of ideas and best practices. We also emphasized the need for local leaders and organizations to take an active role in shaping the agenda for enhancing the resilience of their communities.

By bringing together diverse perspectives and experiences, we were able to identify novel approaches and innovative solutions to address the challenges of climate change, enhance the resilience of school buildings, and achieve SDG 4, 11 and 13. Moving forward, we must continue to build upon the

momentum generated during this UTC and leverage the power of city-to-city learning to drive positive change in our communities.

Based on the discussions, the “Potential Action Steps” to effectively adapt to climate change, enhance the resilience of infrastructure as well as achieving SDG 4, 11, 13 can be summarized into:

1. **Knowledge Exchange:** Foster regular knowledge exchange and sharing of best practices between German and Indian stakeholders, including government agencies, academic institutions, NGOs, and other relevant actors, to facilitate mutual learning and innovation.
2. **Capacity Building:** Develop and implement capacity-building programs to enhance the technical, managerial, and leadership skills of stakeholders involved in school building resilience, including architects, engineers, policymakers, and community members, through training programs, workshops, and certifications.
3. **Policy and Regulatory Framework:** Collaborate on the development and improvement of policy and regulatory frameworks related to school building resilience, including building codes, standards, guidelines, and enforcement mechanisms, through joint research, advocacy, and engagement with relevant authorities.
4. **Innovation and Technology:** Foster innovation and technology adoption for enhancing school building resilience, including exploring new materials, construction techniques, and digital tools, through joint research, pilot projects, and demonstrations to test and scale innovative solutions.
5. **Community Engagement:** Engage with local communities and involve them in the decision-making, planning, and implementation processes related to school building resilience, through community mobilization, awareness campaigns, participatory planning, and capacity-building programs for community members.
6. **Monitoring and Evaluation:** Develop and implement monitoring and evaluation mechanisms to track progress, assess impacts, and identify areas for improvement, through joint data collection, analysis, and reporting to measure the effectiveness of interventions and inform evidence-based decision-making.
7. **Resource Mobilization:** Collaborate on resource mobilization efforts to secure funding, expertise, and support from various sources, including government budgets, development agencies, private sector partnerships, and community contributions, through joint fundraising campaigns, grant applications, and advocacy efforts.
8. **Advocacy and Awareness:** Collaborate on advocacy and awareness campaigns to raise awareness about the importance of school building resilience and advocate for policy changes, investments, and community participation, through joint communication strategies, media campaigns, and public outreach efforts.
9. **Monitoring and Review Mechanisms:** Establish monitoring and review mechanisms to assess the progress of the collaborative efforts, identify challenges, and make necessary adjustments, through regular review meetings, progress reports, and feedback loops to ensure the successful implementation of the action agenda.
10. **Documentation and Knowledge Management:** Collaborate on documentation and knowledge management efforts to capture and share the lessons learned, best practices, and success stories related to school building resilience.

10. Background and Objectives of your Campus: *(Please explain the background and provide the list of objectives your campus aims to achieve)*

The Jammu and Kashmir region has a history of natural disasters due to its unique topography, rugged terrain, extreme weather conditions, and underdeveloped economy. Earthquakes, floods, fires, droughts, avalanches, and landslides have resulted in the loss of human lives and significant damage to public and private property. Unfortunately, schools in high-risk zones are particularly vulnerable to disasters, putting school children and teachers at risk.

It's critical to build the capacity of schools to cope with extreme weather events and develop updated approaches to address the changing scenarios. UNICEF actively works in the region to increase the resilience of vulnerable groups exposed to disasters, including school children. A recent audit of 100 government schools by UNICEF partner ELFA International found that only 30% of schools are entirely safe for children, highlighting the urgent need to increase school building resilience and the capacity of school children and teachers.

To address these challenges, the UTC brought together a diverse range of experts, academic, local communities, practitioners, and implementing partners to discuss and develop a comprehensive

understanding of challenges and showcase proposed solutions in a clear, structured roadmap, action plan, roles and responsibilities, commitments, and priority actions that align with the New Urban Agenda (NUA) and related Sustainable Development Goals (SDGs).

The campus's objectives:

1. Raising awareness of extreme weather events' impacts on vulnerable people
2. Strengthening multi-stakeholder engagement
3. Integrating indigenous knowledge with a scientific perspective
4. Localizing related SDGs.

Based on the achievement of this UTC, we will develop a mainstream action plan and roadmap to increase school building resilience and vulnerable people's capacity to cope with extreme weather events.

11. Relation of your Campus to the New Urban Agenda and the Sustainable Development Goals: *(Please explain how the theme of your campus relates and contributes to the New Urban Agenda and the SDGs (maximum 200 words)*

The campus brought together key stakeholders from government, civil society, private sectors, and local communities (including students) to develop innovative and cost-effective solutions for increasing the resilience of critical infrastructure and target groups. The focus was not only on the use of new technologies but also on incorporating indigenous knowledge, institutional and process-based innovation to foster positive change in society. The primary objective was to make the Jammu and Kashmir region more resilient to climate change and natural disasters while promoting environmentally sustainable practices.

The campus's efforts aligned with multiple Sustainable Development Goals (SDGs), including SDG 3 (Good Health and Wellbeing), SDG 9 (Industry and Innovation), SDG 11 (Inclusive, Safe and Resilient Cities), SDG 13 (Climate Action), and SDG 17 (Partnerships for Sustainable Development). The multi-stakeholder partnerships aimed to localize the related SDGs by implementing locally-tailored solutions unique to the area.

12. The City We Need Now - ACTION AREAS *(Please indicate which actions areas below that your UTC covers)*

1. Health and Well-being
2. Peace and Safety
3. Climate Adaptation and Resilience
4. Inclusion and Gender Equality
5. Economic Opportunities for All
6. Culture and Identity
7. Local Governance
8. Urban Planning and Design
9. Housing, Services and Mobility
10. Learning and Innovation

13. List of Speakers: *(Provide name, job title and organization for each speaker and the moderator)*

1. Mr. Junaid Azeem Mattoo, Hon. Mayor of Srinagar, Government of Jammu & Kashmir, India
2. Ms. Daphne Gross-Jansen, Deputy Head of Department, German Federal Ministry for Economic Cooperation and Development
3. Dr. Christine Auclair, Head, Advocacy and Campaigns Unit, World Urban Campaign, UN-Habitat, Nairobi, Kenya
4. Mr. Nazim Zai Khan (IAS), Secretary, Department of Disaster Management, Relief, Rehabilitation and Reconstruction
5. Mr. Syed Abid Rasheed Shah (IAS), CEO J&K Economic Reconstruction Agency
6. Mr. Athar Aamir (IAS), Commissioner, Srinagar Municipal Corporation
7. Mr. Christian Hübel, City of Mannheim, Germany, Head of Department of Democracy and Strategy
8. Mr. Danish Aziz, Education Specialist, Jammu & Kashmir, UNICEF India

9. Dr. Parisa Kloss, Executive director, Resilient Urban Planning and development (RUPD) GbR, Germany
10. Mr. Mehran Khan, CEO, ELFA International
11. Mr. Vikrant Mahajan, CEO at Sphere India
12. Mr. Sarbjit Singh Sahota, Emergency Specialist, UNICEF India
13. Mr. Didier Vancutsem, Vice-President IFLA Europe Professional Practice
14. Mr. Punit Gandhi, Lead (Projects), Climate Centre for Cities, NIUA
15. Mr. Marcus Hantsche, the State Representative for the State Association of Hesse, Rhineland-Palatinate, Saarland, Technical Aid Organization, Germany
16. Mr. Peter Seidel, Caritas Germany international Department
17. Mr. Deep Raj Kanethia (KAS), Project Director at Samagra Shiksha J&K, Department of School Education
18. Mr. Abhinav Walia, Program Advisor – Disaster Resilience, Miyamoto International
19. Major General Manoj Kumar Bindal, Former ED, NIDM
20. Ms. Louisa Moos, Mannheim Youth Fire Brigade
21. Prof. Saswati Paik, Azim Premji University

14. KEY RESULTS: *(Explain the results achieved during your campus, in particular how it will impact cities and communities and help implement the SDG and the New Urban Agenda)*

The key results achieved during this campus include:

1. Increased awareness: The discussions and sharing of best practices during the campus have increased awareness among cities and communities about the importance of enhancing the resilience of school buildings and vulnerable groups in the face of climate change and natural disasters.
2. Development of a 10-year road map: based on this UTC, a 10-year road map to effectively adapt to climate change and increase the resilience of school buildings will be developed by engaging several stakeholders. This road map will guide cities and communities in taking concrete steps towards achieving the SDGs and the New Urban Agenda.
3. City-to-city learning: The campus has facilitated city-to-city learning and knowledge sharing, which will help cities and communities in implementing innovative solutions to enhance the resilience of their school buildings and vulnerable groups.
4. Increased partnerships: The campus has fostered partnerships among cities and organizations to collectively work towards a more resilient future for our communities. This will increase the capacity of cities and communities to address the challenges of climate change and natural disasters.

15. SOLUTIONS: *(Describe at least 4 solutions presented in your campus that demonstrate how to accelerate the SDG implementation in cities and communities. Explain WHERE (country, city, area), WHAT (what purpose), HOW (how it is achieved), WHO (by whom and for which beneficiary) and IMPACTS.)*

**WHERE:** Germany, Bayern region

**WHAT:** Retrofitting of school buildings

**HOW:** retrofitting several school buildings to make them more resilient to climate change and natural disasters. This involved upgrading the building envelope, HVAC systems, lighting, and other elements to increase energy efficiency, reduce emissions, and improve indoor air quality

**WHO:** The project was carried out by the city government and local contractors

**IMPACTS:** Being safer and healthier learning environments for students, as well as reduced energy costs and emissions

**WHERE:** Germany, Mannheim

**WHAT:** City-to-city learning

**HOW:** By emphasizing the importance of city-to-city learning in accelerating the implementation of the SDGs in cities and communities.

**WHO:** Lesson learned shared by several partners with other cities

**IMPACTS:** The impact of this approach is expected to be increased collaboration and knowledge sharing among cities, leading to more effective and efficient implementation of the SDGs

**WHERE:** Srinagar, India

**WHAT:** Retrofitting of several school buildings to make them more resilient to earthquakes and other natural disasters

**HOW:** By strengthening the structural elements of the buildings

**WHO:** The project was carried out by the city government and local contractors

**IMPACTS:** Providing safer and more resilient learning environments for students

**WHERE:** Srinagar, India

**WHAT:** Community engagement in building resilience in schools and communities

**HOW:** They involved local residents and parents in the retrofitting project, and also organized community events to raise awareness about the importance of school building resilience

**WHO:** Local community

**IMPACTS:** Increasing community ownership and participation in building resilience, leading to more sustainable and effective solutions.

16. GAME CHANGERS: *(Describe at least 2 INDIVIDUALS AND THEIR ORGANIZATIONS presented in your campus that demonstrate how to accelerate the SDG implementation in cities and communities. Explain WHERE (country, city, area), WHAT (what purpose), HOW (how it is achieved), WHO (by whom and for which beneficiary) and IMPACTS.)*

One of the most impactful moments of our UTC was when we had the opportunity to engage with a student from Ladakh, who is truly a GAME CHANGER in his community. He emphasized the crucial role of accelerating SDG implementation in cities and communities for achieving sustainable development.

**WHERE:** Ladakh region, Himalaya-India

**WHAT:** He personally advocates for climate change and SDG implementation in his own community.

**HOW:** His advocacy efforts are achieved through two key approaches:

1. He raises awareness through campaigns where he takes photos of the challenges and issues in his community and shares them on various social media platforms.
2. He mobilizes his friends and classmates as well as other local communities to join him in advocating for climate change and amplifying their voices to the larger community.

**WHO:** His advocacy efforts target the local community

**IMPACTS:** His impacts are already being felt. Through his actions, he has helped increase awareness about climate change and the importance of implementing the SDGs in his community. He has also inspired other young people to get involved and take action, leading to a growing movement for sustainable development in his region. His contributions have the potential to make a significant impact towards achieving the SDGs in Ladakh and beyond.



feroz\_malik\_1 We won't have a society if we destroy the environment. Environment is no one's property to destroy, it's everyone's responsibility to protect. #kargil #kargilstudents #mckargil #ceckargil... more



feroz\_malik\_1 The future depends on what We do in the present. #ladakhtimes #wastemanagment #kargil #kargilstudentuniondelhi #kargilstudents... more

17. RECOMMENDATIONS - NEW URBAN AGENDA

*RECOMMEND which areas of the New Urban Agenda should be PRIORITIZED in the next 5 years (SHORT/MEDIUM term) and 15 years (LONG term):*

SHORT/MEDIUM TERM (next 5 years):

1. **Climate Change:** Cities must prioritize measures to address climate change, including reducing greenhouse gas emissions, improving energy efficiency, and adapting to the impacts of climate change. This could include investing in renewable energy, green infrastructure, and low-carbon transportation.
2. **Affordable Housing:** The shortage of affordable housing is a critical challenge in many cities, and it is necessary to prioritize this area to ensure access to housing for all citizens. This could include measures such as providing incentives for developers to build affordable housing, increasing public investment in social housing, and implementing rent control policies.
3. **Transportation:** Improving transportation systems is essential to reduce traffic congestion, air pollution, and improve access to employment opportunities. Cities can prioritize the development of public transportation systems, such as bus and rail networks, bicycle lanes, and pedestrian-friendly infrastructure.

LONG TERM (next 15 years):

1. **Resilience:** Building resilient cities that can withstand natural disasters and other shocks is critical to ensure the sustainability of urban development. This could include measures such as investing in disaster preparedness, strengthening building codes, and developing green infrastructure.
2. **Inclusive Cities:** Creating inclusive cities where all citizens have equal access to opportunities and services is a long-term goal that requires a comprehensive approach. This includes addressing inequality in access to education, healthcare, and employment, and ensuring that marginalized communities are not left behind.
3. **Smart Cities:** The use of technology can enhance the efficiency and sustainability of urban systems. Investing in smart city infrastructure, such as intelligent transportation systems, energy management, and smart waste management, can improve the quality of life for citizens while reducing the environmental impact of cities.

18. STRENGTHENING - NEW URBAN AGENDA: *EXPLAIN which areas of the New Urban Agenda should be STRENGTHENED in the next 5 years (SHORT/MEDIUM term) and 15 years (LONG term) and HOW:*

SHORT/MEDIUM TERM (next 5 years):

1. **Urban Governance:** Effective governance is essential for ensuring the success of urban development. Cities can strengthen urban governance by promoting transparency and accountability, engaging citizens in decision-making, and building partnerships with other stakeholders and avoid working in silo.
2. **Sustainable Land Use:** The efficient and sustainable use of land is crucial for creating livable and sustainable cities. Cities can strengthen sustainable land use by promoting compact and mixed-use development, protecting natural areas, and promoting green infrastructure.
3. **Social Inclusion:** Inclusive cities ensure that all citizens have access to basic services and opportunities. Cities can strengthen social inclusion by addressing inequality in access to education, healthcare, and employment, and providing affordable housing.

LONG TERM (next 15 years):

1. **Resilience:** Building resilience is critical for ensuring the sustainability of urban development in the face of climate change and other shocks. Cities can strengthen resilience by investing in disaster preparedness, developing early warning systems, and promoting nature-based solutions such as green infrastructure.
2. **Innovation:** Innovation can help cities address complex challenges and improve the quality of life for citizens. Cities can strengthen innovation by promoting the use of new technologies and digital solutions, building networks of innovators, and fostering collaboration between the public and private sectors.
3. **Circular Economy:** A circular economy approach can help cities reduce waste and promote sustainable consumption and production patterns. Cities can strengthen the circular economy by promoting waste reduction, reusing and recycling materials, and developing closed-loop systems for resource use.



19. **COMMITMENTS:** *List a set of clearly defined commitments by stakeholders involved in the proposed priority actions (individual and joined commitments).*

1. Governments commit to allocate a specific portion of their annual budget towards improving the safety and resilience of school buildings in their cities.
2. Education authorities commit to developing and implementing standardized guidelines for assessing and improving the safety and resilience of school buildings in their jurisdiction.
3. Practitioners commit to incorporating green building materials and practices into the construction of new school buildings to increase their energy efficiency and reduce their environmental impact.
4. Local communities commit to actively participating in the planning and design of school buildings to ensure they meet the unique needs of their community and promote a sense of ownership and pride.
5. Non-governmental organizations (NGOs) commit to providing technical assistance and capacity building support to local governments, education authorities, and building contractors to improve the safety and resilience of school buildings.
6. Private sector companies commit to investing in innovative technologies and solutions that can help improve the safety and resilience of school buildings, such as earthquake-resistant materials and renewable energy systems.
7. Universities and research institutions commit to conducting research and developing best practices for improving the safety and resilience of school buildings, and sharing this knowledge with local governments and communities.
8. Students commit to being actively engaged in the safety and resilience of their school buildings, by reporting any safety concerns and participating in emergency preparedness drills.
9. Media outlets commit to providing regular coverage of issues related to the safety and resilience of school buildings, in order to raise public awareness and generate support for needed improvements.
10. Local governments commit to developing and implementing a road map and action plan for school building safety and resilience, with a focus on vulnerable areas, by 2025.
11. International and national organizations commit to supporting the development and implementation of the road map and action plan through technical assistance and funding.
12. Private sector stakeholders commit to investing in sustainable school building design and construction practices, and to partnering with local governments to support the implementation of the road map and action plan.
13. Community members commit to participating in the development and implementation of the road map and action plan, and to promoting awareness and education around the importance of school building safety and resilience.
14. All stakeholders commit to regular monitoring and reporting on the progress of the road map and action plan, and to holding in-person UTCs to facilitate learning and collaboration.

20. **ROLES AND RESPONSIBILITIES:** *List the roles of all stakeholders involved in the action plan(s) with responsibilities aligned to the same actions.*

**1. Government agencies:**

- Conducting building safety audits and assessments
- Developing and implementing building codes and regulations
- Allocating resources and funding for school building safety improvements
- Collaborating with other stakeholders to promote school building safety awareness and education
- Enforcing building safety standards and regulations

**2. School authorities:**

- Conducting regular safety inspections of school buildings and facilities
- Developing and implementing emergency response plans and procedures
- Providing training for staff and students on safety protocols and procedures
- Ensuring the maintenance and repair of school buildings and facilities
- Collaborating with other stakeholders to promote school building safety awareness and education

**3. Community organizations:**

- Promoting school building safety awareness and education among the local community
  - Advocating for increased resources and funding for school building safety improvements
  - Mobilizing community volunteers to support school building safety initiatives
  - Providing support services and resources for vulnerable and disadvantaged students
  - Collaborating with other stakeholders to promote school building safety awareness and education
- 4. Parents and students:**
- Participating in safety drills and procedures to ensure preparedness
  - Reporting safety concerns to school authorities and other stakeholders
  - Advocating for improved school building safety measures and resources
  - Promoting safety awareness and education among peers and the wider community
  - Supporting and engaging in community-led safety initiatives

21. ACTION PLAN: *(Explain your action plan(s) to address the priority actions above)*

1. **Conduct a thorough assessment of existing school buildings:** Start by conducting a comprehensive assessment of existing school buildings to identify potential safety hazards and weaknesses. This includes assessing the structural integrity of buildings, identifying potential risks associated with natural disasters, and evaluating the adequacy of safety and security systems.
2. **Develop and implement safety guidelines:** Based on the assessment, develop and implement safety guidelines that address critical issues related to school building safety. This includes guidelines related to fire safety, structural safety, natural disaster preparedness, and emergency evacuation procedures.
3. **Retrofit existing school buildings:** In many cases, existing school buildings may require significant retrofits to meet current safety standards. This includes upgrades to building materials, structural components, and safety systems such as sprinkler systems, smoke detectors, and emergency lighting.
4. **Incorporate green infrastructure:** Incorporating green infrastructure such as green roofs, rain gardens, and permeable pavement can help to mitigate the impact of extreme weather events, such as heavy rainfall and floods. Green infrastructure can also improve air quality and reduce urban heat island effects, creating healthier and more livable school environments.
5. **Develop partnerships with local organizations:** Building partnerships with local organizations such as emergency responders, community groups, and other stakeholders can help to improve school building safety. These partnerships can provide access to expertise, resources, and funding, as well as help to build community support for safety initiatives.
6. **Train school staff and students:** Providing regular safety training for school staff and students is critical to ensuring that everyone knows what to do in the event of an emergency. This includes training on emergency evacuation procedures, first aid, and other safety protocols.
7. **Monitor and evaluate safety initiatives:** Regularly monitoring and evaluating safety initiatives to ensure that they are effective and achieving their intended outcomes. This includes collecting and analyzing data on safety incidents and implementing continuous improvement measures based on the findings.

22. ROAD MAP FOR NEXT STEPS: *(Provide a roadmap showing the key milestones, quick wins and longer-term landmarks to reach achievable goals)*

1. **Milestone 1 (quick win):** Conduct a comprehensive assessment of all school buildings in the target area/city to identify potential safety hazards and risks. Engage local school authorities, parents, and community members in the process to increase awareness and participation.
2. **Milestone 2:** Develop and implement a prioritized plan to address identified safety hazards and risks in school buildings. This may include retrofitting or renovating existing buildings, designing and constructing new buildings with enhanced safety features, and ensuring compliance with building codes and standards.
3. **Milestone 3:** Establish a monitoring and evaluation system to track progress and ensure that the plan is being implemented effectively. This should include regular inspections of school buildings and gathering feedback from students, teachers, and parents.
4. **Milestone 4:** Strengthen the capacity of local school authorities and communities to manage and maintain safe school buildings over the long term. This may involve providing training and



resources to school administrators and staff, as well as engaging parents and community members in ongoing maintenance and monitoring efforts.

5. **Milestone 5 (longer-term landmark):** Achieve 100% safe and resilient school buildings in the target area, with all students able to learn in a safe and supportive environment. Once achieved, this successful model will be replicated in other cities throughout the Himalaya region.

Other potential quick wins and longer-term landmarks can be added depending on the specific context and goals of the action plan.

23. MEDIAS: *(Provide links to articles or stories published in relation to this UTC)*

24. PHOTOS: *(Please provide a link to pictures that best illustrate your event (preferably using Flickr, otherwise through Google or Dropbox folders)*

<https://drive.google.com/drive/folders/1e1mRjmWw4-90xEw3h-VRug0lwp668805?usp=sharing>