UNCRD

International Training Workshop on Smart Cities in Asia and the Pacific

"Building safe, resilient, inclusive, livable and sustainable cities and communities"

13-15 May 2025
JICA Kansai Center, Kobe, Hyogo, Japan

1. Background:

The Asia-Pacific region is the most populous and rapidly urbanizing region in the world, home to 60 percent of the global population. As of 2024, the region's population reach up to 4.8 billion, with projections indicating an increase to 5.2 billion by 2050[1]. With this rapid population growth, significant economic expansion and accelerating urbanization across the region. However, alongside this growth, Asian cities are facing with a range of complex socio-economic and environmental challenges. These include the serious effects of climate change, increasing disaster risks, and ongoing environmental degradation. Moreover, the rising frequency and severity of natural disasters, like earthquakes, floods, and typhoons, highlight the urgent need for innovative and resilient urban planning and development.

In light of the recent 7.7-magnitude earthquake that struck Myanmar and Thailand on 28 March 2025, causing widespread devastation, there is an urgent need to strengthen earthquake monitoring, preparedness, and resilient reconstruction efforts. This disaster highlights the critical importance for developing seismic-resistant infrastructure and ensuring effective emergency response mechanisms to mitigate future risks. A strong commitment to building high-quality, resilient infrastructure, reinforcing existing structures, and planning for post-earthquake recovery—guided by the "build back better" approach—is essential for strengthening structural resilience through upgrading building-codes, enhancing community preparedness, and promoting long-term sustainability.

To address these challenges, it is essential to design cities and communities that not only tackle present-day issues but also anticipate and mitigate future risks. This requires designing inclusive, adaptable, and environment-friendly urban development that enhances the quality of life for both current and future generations. One of the most effective approaches to achieving this vision is through the development of smart and resilient cities. Smart and resilient cities play a crucial role in sustainable urban development by leveraging data-driven decision-making, encouraging low-carbon and green growth, ensuring economic growth and enhancing quality of life by providing better access to public services. By integrating advanced technologies and digital innovations with physical infrastructure, these cities enhance urban services, optimize resource management, and strengthen disaster preparedness and response mechanisms.

At the Summit of the Future on 22 September 2024, world leaders adopted the "Pact for the Future and its annexes - the Global Digital Compact and the Declaration on Future Generations"[2]. This landmark agreement underscores the vital role of science, technology, and innovation in addressing global challenges, advocating for reduced disparities and increased investment in SDG-related research. In particular, digitalization and smart technologies are key to building safer, more resilient, and sustainable cities. These advancements enhance protection against hazardous weather, water, and climate events through life-saving early warning systems, supporting the UN Secretary-General António Guterres' "*Early Warnings for All initiative*"[3], set for completion by 2027.

[1] https://repository.unescap.org/bitstream/handle/20.500.12870/7687/ESCAP-2024-Population-data-insight.pdf?sequence=1&isAllowed=y
[2] https://www.un.org/en/summit-of-the-future/pact-for-the-future
[3] https://www.un.org/en/climatechange/early-warnings-for-all

As we commemorate the 30th anniversary of the Great Hanshin-Awaji Earthquake, this milestone offers an opportunity to reflect on lessons learned and the progress made in building smart, resilient, and sustainable cities both in Japan and globally. In this context, the United Nations Centre for Regional Development (UNCRD), with the support of the Ministry of Land, Infrastructure, Transport, and Tourism (MLIT), Government of Japan, is organizing an international capacity-building workshop on smart cities for developing countries in Asia and the Pacific. This workshop will focus on disaster prevention, preparedness, and risk reduction to create cities that are safe, resilient, inclusive, livable, and sustainable. It will also explore targeted policies, smart technological solutions, and strategies for designing disaster-resilient infrastructure. These efforts will contribute to advancing the outlined targets and priority actions of the Sendai Framework for Disaster Risk Reduction by helping to prevent new and reduce existing disaster risks. The training workshop will also promote broader urban sustainability initiatives at the city and local levels, while supporting the achievement of the Sustainable Development Goals (SDGs).

2. Objective:

The capacity-building programme aims to equip city leaders, policymakers and urban planners with the knowledge and practical tools necessary to design and implement smart, earthquake- and flood-resilient cities across Asia and the Pacific. The workshop will highlight the use of innovative technologies, promote sustainable urban development, and strengthen community resilience. The outcomes of the International Training Workshop on Smart Cities in Asia and the Pacific are expected to be presented at the upcoming International Mayor Forum in Toyota, Japan, which will take place from 14-16 October 2025.

3. Theme:

This year marks the 30th anniversary of the Great Hanshin-Awaji Earthquake, and considering the recent Myanmar-Thailand earthquake, the workshop will emphasize disaster prevention, preparedness, and risk reduction under the theme "*Building Safe, Resilient, Inclusive, Livable, and Sustainable Cities and Communities.*" It will showcase innovative strategies and smart solutions to strengthen urban resilience and sustainability.

4. Targeting Participants:

Participation in the training workshop is by invitation only. The international training workshop is expected to be attended by approximately 20 cities from Asia-Pacific countries including city mayors, urban planners, and local government officials. Given that the workshop focuses on earthquake and water-induced disaster risk reduction and resilience, we anticipate the participation of cities that are particularly vulnerable to these disasters.

5. Venue and Date:

The workshop will be held from 13 to 15 May 2025 at JICA Kansai Center, Chuo-ku, Kobe City, Hyogo Prefecture, Japan.

6. Supporting organizations and partners:

It is expected that the International Training Workshop on Smart Cities in Asia and the Pacific will be supported by numerous organizations including United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP), United Nations Office for Disaster Risk Reduction (UNDRR)-Kobe Office, United Nations Human Settlements Programme (UN-Habitat), and JICA Kansai Center, among others.

7. Agenda and Programme:

Opening Session: UNCRD and MLIT

Session 1: Smart City Implementation: Role of Policy Makers and Planners

The successful implementation of smart cities depends on the collaboration between policymakers and urban planners to create resilient, livable, and sustainable urban environments. Policymakers establish supportive regulations, allocate resources, and set strategic priorities, while urban planners design and integrate technology and infrastructure to foster safe, smart, and inclusive communities. Central to this process is the creation of an enabling environment- a foundation that supports smart city development through coherent policy and institutional frameworks, effective organizational structures, sound and transparent governance, innovative financing mechanisms, and active community participation.
This session will explore the critical roles of policymakers and planners in shaping smart city initiatives, focusing on strategies to advance resilience, sustainability, and inclusiveness in urban development. It will highlight key elements of these initiatives and their impact on creating resilient, sustainable, and inclusive urban development, supported by relevant case examples.

Session 2: Smar City: Disaster Preparedness & Recovery: Advancing the Goals of the Sendai Framework for Disaster Risk Reduction

Disaster Risk Reduction (DRR) aims to minimize the impact of disasters through proactive measures such as hazard identification, vulnerability assessment, and resilience strategies. In alignment with the Sendai Framework for Disaster Risk Reduction, which promotes a shift from disaster response to disaster risk management, integrating smart technologies into DRR efforts significantly enhances urban resilience. These technologies support the strengthening of critical infrastructure, improvement of early warning systems, and enable data-driven, inclusive, and timely decision-making. This session will focus on how smart city solutions can help cities and communities better withstand and recover from disasters, ensuring long-term safety, sustainability, and adaptability in the face of evolving risks due to disasters and climate impacts.

Session 3: Smart City: Earthquake Risk Reduction & Preparedness

Smart cities play a crucial role in reducing earthquake-related risks by leveraging state-of-the-art technologies to enhance preparedness, enable rapid response, and ensure more effective recovery. Real-time monitoring systems, early warning technologies, and earthquake-resistant infrastructure are instrumental in minimizing damage and saving lives during seismic events. Moreover, smart communication tools facilitate seamless coordination among authorities and communities, significantly improving resilience. This session will explore innovative smart city solutions for earthquake disaster risk reduction, emphasizing successful case studies, and strategies to enhance urban safety, preparedness, and response capabilities in the face of seismic hazards.

Session 4: Smart City: Water-related Disaster Risk Reduction

Smart cities leverage technology to predict, monitor, and respond to water-related disasters, such as floods, storms, and rising sea levels. Advanced sensors and data analytics improve early warnings, while smart infrastructure helps mitigate damage and boost urban resilience. This session will explore innovative approaches and best practices for integrating smart solutions into water-related disaster risk reduction, strengthening the safety and sustainability of cities and local communities.

Session 5: Group Exercise on Water-related Disaster Risk Reduction

In this session, participants will work in small groups to address critical water-related disaster risks, including flooding, landslides, sea-level rise, drought, and water scarcity. Through case

study analysis and scenario-based discussions, they will devise strategies to strengthen resilience and adaptive capacity in vulnerable communities. The session will also emphasize innovative solutions such as integrated water management, early warning systems, and sustainable infrastructure to mitigate water-related risks in cities and urban areas.

Session 6: Group Exercise on Earthquake Risk Reduction & Preparedness

This session will engage participants in small group collaboration focused on earthquake risk reduction and preparedness strategies. Through practical scenarios and interactive discussions, participants will develop actionable plans to strengthen resilience and improve emergency response capabilities in earthquake-prone urban areas within their cities. The session will also highlight innovative solutions, including building codes, and sustainable infrastructure, with an emphasis on seismic hazards to enhance earthquake resilience.

Closing Session: Representative of participating city, UNCRD and MLIT-Japan

Session 7: Technical field visit (half-day)

In Kobe City: Participants will visit at the Disaster Reduction and Human Renovation Institution (DRI) and Hyogo Earthquake Engineering Research Centre/E-defense.

8. Training Materials

Training Materials for Implementing Smart Cities in Asia and the Pacific for Inclusive, Resilient, and Sustainable Societies has been developed by UNCRD.

- Smart Cities
- Water-related Disaster Risk Reduction
- ASEAN Smart City Planning Guidebook (Prepared by Ministry of Land, Infrastructure, Transport and Tourism (MLIT) of Japan in consultation with the ASEAN Smart Cities Network (ASCN) and the ASEAN Secretariat (ASEC))

9. Contact details

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Programme Agenda (Provisional)

Day 1: 13 May 2025 (Tuesday)	
09:00-09:30 (30 min.)	**Registration** **Venue:** Looby on the 1st floor at JICA Kansai Center
09:30-10:15 (45 min) **Venue:** Seminar Room 31 & 32 on 3rd floor	**Opening Session** **Welcome Address:** - **Mr. Shigeo Murata,** Head, United Nations Centre for Regional Development (UNCRD) (5 min) - **Mr. Toru Ishikawa,** Counsellor for Global Strategies, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Government of Japan (5 min.) (online) **Opening Remarks:** - **Ms. Kazuko Ishigaki,** Regional Director, UN-HABITAT Regional Office for Asia and the Pacific (ROAP) (5 min) - **Dr. Yuki Matsuoka,** Head, United Nations Office for Disaster Risk Reduction (UNDRR)-Kobe Office, Japan (5 min) - **Mr. Shigeri Ueyama**, Chief Crisis Management Officer, Kobe City Government (5 min.) **Special Address:** Each participating governor/mayor will deliver a special address for 3 min. - **Hon. Mrs. Mia Amalia,** Deputy, Nusantara Capital City Authority, Government of Indonesia - **Hon. Mr. Linne Yun,** Deputy Governor, Siem Reap Provincial Administration, Cambodia - **Hon. Mr. Prakad Pin,** Deputy Governor, Battambang Provincial Administration, Cambodia - **Hon. Mr. Ashok Kumar Shrestha,** Mayor, Dhulikhel Municipality, Nepal - **Hon. Ms. Aliyah Mustika Ilham,** Vice Mayor, Makassar City, Indonesia **Group Photograph** All participants are kindly invited to join the group photo session
10:15-10:45 (30 min.)	**Scope and Objective of the Workshop** - **Dr. Ganesh Raj Joshi,** Researcher, United Nations Centre for Regional Development (UNCRD) (10 min.) - **Introduction of Workshop Participants** (20 min)
10:45-11:00 (15 min.)	**Tea/ Coffee Break**

11:00 -12:15 (1hr 15 min.) **Venue:** Seminar Room 31 & 32 on 3rd floor	**Session 1:** **Smart City Implementation: Role of Policy Makers and Planners** Facilitator: **Dr. Ganesh Raj Joshi,** Researcher, United Nations Centre for Regional Development (UNCRD) - **Thematic Presentation 1:** Smart and Resilient City Implementation: Role of Policy Makers and Planners to Shape Urban Innovation – by **Dr. Ganesh Raj Joshi,** Researcher, United Nations Centre for Regional Development (UNCRD) (15 min.) - **Thematic Presentation 2:** Toward Smart and Resilient Cities: A Risk-Based Policy Perspective on Integrating Infrastructure, Urban Planning, and Evacuation Preparedness – by **Prof. Tomoo Inoue,** Visiting Professor, Disaster Prevention Research Institute, Kyoto University and Former Director General of the Water Management and Land Conservation Bureau of MLIT-Japan (15 min.) **Smart City Guidelines:** - **Presentation 1:** People-Centered Smart Cities: UN-Habitat's International Guidelines and Vision – by **Ms. Kazuko Ishigaki,** Regional Director, UN-HABITAT Regional Office for Asia and the Pacific (ROAP) (15 min.) - **Presentation 2:** The Asia-Pacific Regional Guidelines for Smart Cities-*People-Environment-Technology Nexus* – by **Ms. Sanjeevani Dilanthi Singh**, Economic Affairs Officer, Environment and Development Division, United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP) (15 min.) Open Discussion and Q & A: (15 min.)
12:15-13:15 (1 hr.)	**Lunch Break**
13:15-14:30 (1hr 15 min.) **Venue:** Seminar Room 31 & 32 on 3rd floor	**Session 1:** **Smart City Implementation: Role of Policy Makers and Planners (continued…..)** Facilitator: **Dr. Ganesh Raj Joshi,** Researcher, United Nations Centre for Regional Development (UNCRD) - **Thematic Presentation 3:** Leveraging Japanese Technologies for Disaster-Resilient Cities: The Role of UNIDO's Sustainable Technology Promotion Platform (STePP)– by **Ms. Azusa Matsumoto**, Project Coordinator, Investment and Technology Promotion Office, United Nations Industrial Development Organization (UNIDO) (15 min.) - **Country Presentation:** Thailand's Smart City Journey: Implementation Challenges and Success Stories – by **Dr. Non Arkaraprasertkul,** Senior Expert in Smart City Promotion, Digital Economy Promotion Agency, Thailand (15 min.) - **Special City Presentation 1:** Implementing Smart City Approaches to Solve Urban Issues in Siem Reap – by **Mr. Linne Yun,** Deputy Governor, Siem Reap Provincial Administration Siem Reap city and **Mr. Naomichi Murooka,**

	Deputy Director General and Group Director for Urban and Regional Development**,** JICA-Japan (10 min. each) - **Special City Presentation 2:** Evacuation Simulation using super computers– by **Dr. Nobuyasu Ito**, Team Principal of Discrete Event Simulation Research Team and Unit Leader of Quantum Computing Simulation Unit, RIKEN Center for Computation Science and **Mr. Ryohei Kuramoto**, Assistant Director, Disaster Prevention Bureau, Kobe City Government (15 min.) Open Discussion and Q & A: (10 min.)
14:30-15:20 (50 min.) **Venue:** Seminar Room 31 & 32 on 3rd floor	**Special City Session:** The following cities/municipalities will deliver a presentation for 8 minutes each Facilitator: **Ms. Taeko Yokota**, Programme Expert on DRR and Water, UNCRD ***Cambodia*** - Battambang Provincial Administration (8 min.) - Preah Sihanouk Provincial Administration (8 min.) ***Indonesia*** - Makassar City Government (8 min.) - Nusantara Capital Authority (8 min.) Open Discussion and Q & A: (10 min.)
15:20 -15:35 (15 min.)	**Tea/ Coffee Break**
15:35 -16:20 (45 min.) **Venue:** Seminar Room 31 & 32 on 3rd floor	**Special City Session Cont…** The following cities/municipalities will deliver a presentation for 8 minutes each Facilitator: **Ms. Taeko Yokota**, Programme Expert on DRR and Water, UNCRD ***Malaysia*** - City Council of Penang Island (8 min.) - Seberang Perai City Council (8 min.) ***Thailand*** - Chiang Mai City (8 min.) Open Discussion and Q & A: (10 min.)
16:20 -17:50 (1hr 30 min.) **Venue:** Seminar Room 31 & 32 on 3rd floor	**Session 2:** **Smart City: Disaster Preparedness & Recovery: Advancing the Goals of the Sendai Framework for Disaster Risk Reduction** Facilitator: **Mr. Paul Elliott Rosenberg,** Associate Programme Management Officer, UNDRR- Kobe Office, Japan - **Thematic Presentation 1:** Building Resilient Cities and Communities: Smart Solutions for Disaster Preparedness and Recovery Aligned with the Sendai Framework– by **Mr. Paul Elliott Rosenberg,** United Nations Office for Disaster Risk Reduction (UNDRR)- Kobe Office, Japan (15 min.)

	- **Thematic Presentation 2:** Fostering Resilience and Sustainability in Urban Infrastructure: Asia-Pacific Initiative on Electric Mobility– by **Dr. Madan B. Regmi,** Lead, Sustainable Urban Mobility, and Low Carbon Transport, UN ESCAP (15 min.) - **Country Presentation:** Japanese Experience in Building Smart and Resilient Cities and Communities – by **Mr. Daisuke Kakuya,** Director, International Strategies for Construction Industry, Ministry of Land, Infrastructure, Transport and Tourism, Government of Japan (15 min.) - **Special City Presentation:** Smart City in Susami Town Utilizing 3D City Model – by **Mr. Atsushi Kimura,** Susami Town (15 min.) - **Private Sector Presentation:** Decentralized Coldchain Logistics is a key to solve social problems– by **Mr. Daigo Goto**, ECO, Cold Storage Japan Inc. (15 min.) Open discussion and Q&A: (15 min.)
18:00 – 20:00 (2hr.)	**Networking Reception** **Venue: Orientation Room 1 & 2 on 2nd floor**

Day 2: 14 May 2025 (Wednesday)	
9:30 -11:15 (1hr 45 min.) **Venue:** Seminar Room 31 & 32 on 3rd floor	**Session 3:** **Smart City: Earthquake Risk Reduction & Preparedness** Facilitator: **Dr. Ganesh Raj Joshi,** Researcher, United Nations Centre for Regional Development (UNCRD) - **Thematic Presentation 1:** Safer Cities, Stronger Communities: UN-Habitat's Approach to Building Code Implementation– by **Ms. Kazuko Ishigaki, Regional Director,** UN-HABITAT Regional Office for Asia and the Pacific (ROAP) (15 min.) - **Special City Presentation 1:** Disaster Risk and Countermeasures in Osaka Prefecture– by **Ms. Fumie Morikage**, Osaka Prefectural Crisis Management Office, Disaster Prevention Planning Division, Assistant Director (15 min.) - **Special City Presentation 2:** Earthquake Risk Reduction and Preparedness: a case from Nusantara Capital city, Indonesia– by **Mrs. Mia Amalia,** Deputy for Land and Planning, Nusantara Capital City Authority, Government of Indonesia (15 min.) - **Special City Presentation 3:** Building Resilient Communities: Disaster Risk Reduction and Preparedness Plan for Dhulikhel Municipality – by **Mr. Ashok Kumar Shrestha,** Mayor of Dhulikhel Municipality, Nepal (15 min.) - **Presentation by Private Sector: –** by **Mr. Kazuya Tanaka,** scheme verge lnc., Co-Founder & CSO/CTO (15 min.) Open discussion and Q&A: (15 min.)
11:15 -11:30 (15 min.)	**Tea/ Coffee Break**
11:30-13:00 (1hr 30 min.) **Venue:** Seminar Room 31 & 32 on 3rd floor	**Session 4:** **Smart City: Water-related Disaster Risk Reduction** Facilitator: **Ms. Taeko Yokota**, Programme Expert on DRR and Water, UNCRD - **Thematic Presentation 1:** DX-based Water-related Disaster Risk Reduction in Urban Areas – by **Mr. Takahiro Konami,** Director, International Affairs Office, Water and Disaster Management Bureau, MLIT, Japan (15 min.) - **Thematic Presentation 2:** Real-time Stormwater Management System (Blitz-GIS) – by **Mr. Tatsuya Tobe,** Manager in Charge of Project Strategy, Nihon Suido Consultants Co., Ltd. (15 min.) - **Special City Presentation 1:** Observation Data and Effective Groundwater Preservation Efforts Using Scientific Techniques– by **Mr. Nagata,** Executive Policy Supervisor, Water Conservation Section, Kumamoto City**,** Japan (15 min.)

	- **Special City Presentation 2:** Role of Twin Digital City in Flood Management: Case study of Penang Island City Council– by **Mr. Mohd Nasrul Nizam Bin Nasri**, Engineer, City Council of Penang (15 min.) - **Presentation by Private Sector:** Role of Big Data and AI for Building Resilient cities and communities– by **Mr. Satoshi Negoro,** Head of Global Business Group, COO Spectee Inc. Japan (15 min.) Open discussion and Q & A (15 min.)
13:00-14:00 (1hr.)	**Lunch Break**
14:00-15:30 (1 hr 30 min.) **Venue:** Seminar Room 31 & 32 on 3rd floor	**Session 5:** **Group Exercise on Water-related Disaster Risk Reduction** Facilitator: **Ms. Taeko Yokota**, Programme Expert on DRR and Water, UNCRD **Group Discussion and Exercise** (1hr 30 min.) - Participating cities will be divided into 4–5 groups to conduct practical exercises focused on water-related disaster risk reduction.
15:30-16:00 (30 min.)	**Tea /Coffee Break with Group discussion cont…**
16:00-17:00 (1 hr.) **Venue:** Seminar Room 31 & 32 on 3rd floor	**Session 5:** **Group Exercise on Water-related Disaster Risk Reduction (cont….)** **Group Reporting** (45 min.) - Presentation of Group Discussion Outcomes – by Rapporteurs from each group - **Expert intervention** (15 min.)

Day 3: 15 May 2025 (Thursday)	
9:00-10:15 (1hr. 15 min.) **Venue:** Seminar Room 31 & 32 on 3rd floor	**Session 6:** **Group Exercise on Earthquake Risk Reduction & Preparedness** Facilitator: **Dr. Ganesh Raj Joshi,** Researcher, United Nations Centre for Regional Development (UNCRD) **Group Discussion and Exercise** (1hr. 15 min.) - Participating cities will be divided into 4–5 groups to conduct practical exercises focused on earthquake risk reduction, preparedness, and recovery.
10:15-10:30 (15 min.)	**Tea /Coffee Break with Group discussion cont…**
10:30-11:15 (45 min.) **Venue:** Seminar Room 31 & 32 on 3rd floor	**Group Reporting** (35 min.) - Presentation of Group Discussion Outcomes – by Rapporteurs from each group **Expert intervention** (10 min.)
11:15-12:00 (45 min.) **Venue:** Seminar Room 31 & 32 on 3rd floor	**Closing Session** - **Wrap-up:** Discussion and Evaluation of the Training Workshop (15 min.) - Distribution of the Certificates (15 min.) **Closing Remarks:** - Representative of the participating city (5 min) - **Mr. Shigeo Murata**, Head, United Nations Centre for Regional Development (UNCRD) (5 min) - **Mr. Kazuya Yamauchi,** Director for Global Market Development, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Government of Japan (5 min)
12:00-13:00 (1 hr.)	**Lunch Break**
13:00-14:30 (1 hr 30 min.)	**Technical Field Visit 1:** **Disaster Reduction and Human Renovation Institution (DRI)** Facilitator and guidance by: **Mr. Takashi Takami**, Deputy Executive Director, DRI
14:30-14:45 (15 min.)	**Tea /Coffee Break**
15:30-17:00 (1 hr 30 min.)	**Technical Field Visit 2:** **Hyogo Earthquake Engineering Research Centre/E-defense** Facilitator: Hyogo Earthquake Engineering Research Centre/E-defense Presentation and Facility Tour by: **Dr. Kentaro Tabata,** Associate Director of Hyogo Earthquake Engineering Research Centre/E-defense (60 min.) Open discussion and Q & A (30 min.)

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