

Technical Deep Dive

Cities and Climate Change

April 17 – 21, 2023

The World Bank Tokyo Development Learning Center (TDLC) in collaboration with the Sustainable City Infrastructure and Services Global Solutions Group (GSG), the Global Facility for Disaster Reduction and Recovery (GFDRR), the Disaster Risk Management and Resilience GSG, and the Climate-Smart Cities Community of Practice (CoP) is organizing a Technical Deep Dive (TDD) on Cities and Climate Change from April 17 to 21, 2023.

Activities in cities are responsible for around 70% of greenhouse gas emissions and thus cities have an important role to play in mitigating climate change. Emissions in cities could double by 2050 with no mitigation efforts or reduce to nearly net zero emissions with aggressive and immediate mitigation efforts. While cities in low- and middle-income countries have contributed minimally to climate change thus far, they must act now to ensure that they remain on low-carbon trajectories despite the increases in urban populations and incomes that are projected in coming decades. Cities must also adapt to the impacts of climate change. They are already disproportionately impacted by coastal flooding, extreme heat, and other hazards that are exacerbated by climate change. As urban populations continue to rise, particularly in South Asia and Africa, regions which are highly vulnerable to climate change, cities must adapt in order to enhance their resilience.

Objectives

The TDD will provide an opportunity for World Bank client country delegations to develop a deeper understanding of good practices in urban climate adaptation and mitigation, including transit-oriented development and resilient infrastructure, nature-based solutions, resilient and energy-efficient buildings, and solid waste management. The TDD is organized into sectoral themes, in which the presentations and site visits will emphasize cross-sectoral actions and integrate elements of social inclusion and participation, highlighting how individual investments can address several climate goals simultaneously. To make the sessions tangible and link them to the site visits, the focus will be on spatial planning and physical investments in the built and natural environment (as opposed to technological or financial aspects). The TDD will also connect city, provincial, and national level officials; public and private sector planning, urban design and finance experts; and other stakeholders across regions and departments to mainstream urban resilience and the green growth agenda in WB operations.

The TDD will provide a platform for knowledge exchange and structured learning on multisectoral and cross-sectoral actions that cities can take to achieve their climate change adaptation and mitigation goals, from strategic planning to implementation of projects. The TDD will focus on the following topics:

1.	Transit-oriented development/ resilient infrastructure	Coordinating the development of public transportation infrastructure with land and housing development in order to encourage the use of low-carbon transportation modes; ensuring that this infrastructure is resilient to climate change and other hazards, e.g., flooding, extreme heat, and seismic risk.
2.	Resilient and low-carbon buildings	Promoting the construction of buildings that are resilient to natural hazards as well as low-carbon in terms of material use and energy efficiency
3.	Nature based solutions	The use of nature-based solutions in cities for climate change adaptation and mitigation, e.g., urban forests, green roofs, natural flood protection and drainage systems
4.	Solid waste management	Promoting recycling, improved waste disposal, and low-carbon transport of waste to reduce emissions from solid waste management, alongside adaptation benefits, such as reduced blockage of drainage systems, etc. due to the proper disposal of waste

Case studies, knowledge and experience from Japan and other countries will be highlighted as well as the experiences of the participating countries.

Technical Deep Dive Format

TDD is a **cohort-based knowledge acceleration program**, which brings together groups of World Bank clients and Task Team Leaders (TTLs) who are primarily responsible for the implementation of Bank projects in client countries.

TDDs are uniquely positioned as an effective tool for **synthesizing, packaging, and delivering key global and Japanese best practice knowledge**, which can be leveraged by WBG teams and clients to maximize the development impact of operations on the ground.

TDDs are comprehensive in their sectoral coverage, emphasizing areas of urban development and resilience, where Japan has a strong comparative advantage while maintaining a worldwide outlook. The program integrates workshops, site visits, peer-to-peer knowledge sharing and action planning activities.

Main benefits of the TDD	Key characteristics of the TDD
<p>Cutting edge policy thinking and technical knowledge delivered through engaging learning sessions;</p>	<ul style="list-style-type: none">• “Objective” focused session structure: Demand driven and problem-solving orientation, with possible technical assistance, including consultation and expert visit to client nations through TDLC’s City Partnership Program and other programs;
<p>Peer learning and networking through experience exchange sessions;</p>	<ul style="list-style-type: none">• Experiential Learning: Site visits and presentations on the client’s local context;
<p>Tacit knowledge exchanges through virtual field visits;</p>	<ul style="list-style-type: none">• Strengthening of Knowledge Networks: Contribution to CoPs to support the development of knowledge assets such as case studies and best practice lessons, and to diffuse them to the broader community.
<p>Opportunity to engage directly with the Japanese academia, municipalities, ministries and the private sector to learn of innovative solutions and to identify areas of further collaboration and knowledge exchange;</p>	<ul style="list-style-type: none">• Knowledge exchange to foster operations: Knowledge exchange and Rapid Support and potential technical assistance for clients and World Bank Task Teams;• Follow-up Support from the World Bank: Technical assistance to successfully apply knowledge gained from the TDD through the TDLC Operational Support program.

Agenda

TDD Session DAY 1. MONDAY, April 17, 2023

Theme Framing / Solid Waste Management

Start-End	Title Description	Speakers (Organization)	Moderators (Organization)
08:30-09:00 (30 min)	Registration at Pacifico Yokohama 304		
09:00-10:00 (60 min)	Welcome and TDD Objectives <i>Agenda Setting Welcome Remarks and TDD Overview Icebreaker</i>	Toru Hashimoto (City of Yokohama) Chris Pablo (World Bank)	James Lee (World Bank)
10:00-10:45 (45 min)	Framing Presentation <i>This session will set up the tone and objectives of the week. It will focus on the overall importance of climate resilience and mitigation in cities, through risk identification, planning and participatory approaches to investment and action in key sectors particularly vulnerable to climate impacts and prone to high levels of emissions. In keeping with the multisectoral nature of the TDD, this session will highlight holistic planning and cross-sectoral actions, including those that combine adaptation and mitigation goals.</i> <i>Format: Presentation and Q&A session</i>	Technical team (World Bank)	Zoe Trohanis (World Bank)
10:45-11:00 (15 min)	Coffee Break		
11:00- 11:45 (45 min)	Tokyo's Approach to Decarbonization <i>Overview of TMG's zero emissions strategy, visions, master plan and sectoral approaches. Focused examination of TMG's initiatives on green building, renewable energy, and energy generation.</i>	Ryo Hanai (Tokyo Metropolitan Government) Kumiko Sugawara (Tokyo Metropolitan Government)	Haruka Miki Imoto (World Bank)
11:45- 12:00 (15 min)	Group Photo		
12:00 – 13:00 (60 min)	Lunch		
13:00-14:15 (75 min)	Shift & Share Presentations		James Lee (World Bank)

14:15 – 15:00 (45 min)	Thematic Session (1) – Solid waste management <i>Discuss mitigation and adaptation benefits of actions that cities can take to improve solid waste management. Mitigation actions include improving waste disposal to reduce emissions of methane (an important greenhouse gas particularly in low- and lower-middle income countries), reducing emissions from transportation of waste, and using waste-to-energy systems to reduce emissions from energy production. The session will also discuss resilience of SWM systems as well as how improvements in SWM can aid resilience, e.g., how better waste collection and disposal can reduce blockages in flood protection infrastructure.</i>	Augustin Maria (World Bank)	Natalia Romero (World Bank)
15:00 - 15:45 (45 min)	Jamaica & Azerbaijan Case Study	Zoe Trohanis (World Bank)	Natalia Romero (World Bank)
15:45 – 16:00 (15 min)	Coffee Break		
16:00 - 16:15 (15 min)	Intro to Action Planning and TDLC OS <i>TDLC Operational Support</i>	Haruka Miki Imoto (World Bank)	James Lee (World Bank)
18:30 – 20:00	Welcome Dinner Reception		

TDD Session DAY 2. TUESDAY, April 18, 2023
Theme Resilient and Low-Carbon Buildings

Start-End	<i>Title Description</i>	Speakers (Organization)	Moderators (Organization)
09:00-09:10 (10 min)	Agenda Setting for Day 2 at Pacifico Yokohama 304	Dao Harrison (World Bank)	TDLC (World Bank)
09:10-09:55 (45 min)	Thematic Framing <i>This session will focus on buildings as a key component of the urban built environment. It will discuss the importance of building regulations and design considerations that can improve the resilience of buildings to climate and other hazards such as earthquakes, storms, and floods. It will also discuss how buildings can reduce their carbon emissions and designs for passive cooling of buildings, which both reduces vulnerability to climate.</i>	Keiko Sakoda (remote) (World Bank)	Zoe Trohanis (World Bank)
09:55-10:40 (45 min)	Indonesia Case Study	Dao Harrison (World Bank)	Zoe Trohanis (World Bank)
10:40-10:55 (15 min)	Coffee Break		
10:55-11:40 (45 min)	International Case Study (3)	Vasudevan R Kadalayil (World Bank)	Zoe Trohanis (World Bank)
11:40-12:40 (60 min)	Lunch		
12:40-14:10 (90 min)	Yokohama City Case Study : -Yokohama's experience in financing climate-resilient infrastructure -Overview on Yokohama City Hall -Minato Mirai Waterfront Case Study <i>Broader take on urban development and greening followed by an examination of the Yokohama City Hall Building.</i>	Toru Hashimoto (International Affairs Bureau) Kazuhiro Kanno (Housing and Architecture Bureau) Yuki Katsura (Urban Development Bureau) Taku Hanzawa (Urban Development Bureau)	James Lee (World Bank)

14:10-16:55 **Site Visit of the Minato Mirai and Nihon Green Corridor**
(165 min)

TDD Session **DAY 3. WEDNESDAY, April 19, 2023**

Theme **Nature-Based Solutions**

Start-End	<i>Title Description</i>	Speakers (Organization)	Moderators (Organization)
09:30-09:40 (10 min)	Agenda Setting for Day 3 at Pacifico Yokohama 304	Chandan Deuskar (World Bank)	TDLC (World Bank)
09:40-10:25 (45 min)	Thematic Framing <i>This session will discuss the various ways in which nature-based solutions can contribute to cities' adaptation and mitigation goals. The session will explain how relatively simple and low-cost investments such as urban parks can be used for both urban resilience (e.g., by reducing the urban heat island effect, absorbing stormwater runoff, and serving as a safe space to gather and organize residents during emergencies) and for reducing emissions (e.g., by reducing temperatures and therefore reducing energy consumption for cooling, by absorbing some carbon dioxide from the atmosphere, and by making dense development more livable). Besides parks the session will also discuss other nature-based solutions such as green infrastructure for drainage, green roofs, etc.</i>	Brenden Jongman (remote) (World Bank)	Chandan Deuskar (World Bank)
10:25-10:50 (25 min)	NBS Interactive Quiz		
10:50-11:05 (15 min)	Coffee Break		
11:05-11:50 (45 min)	Kigali Case Study <i>Flood, wetland rehabilitation</i>	Natalia Romero (World Bank)	Chandan Deuskar (World Bank)
11:50-13:00 (70 min)	Lunch		

13:00-13:40 Bus Ride to Shin-Yokohama*(40 min)*

13:40-16:00 Site Visit of Tsurumi River Basin
(140 min) Lecture followed by site visit in the park

Tomohiro Oono
(MLIT)

Isao Tsunakawa
(Yokohama Sport Association)

18:30-20:00 Dinner Reception at Hotel

TDD Session DAY 4. THURSDAY, April 20, 2022**Theme** Transit-oriented development / Resilient infrastructure

Start-End JST	Title Description	Speakers (Organization)	Moderators (Organization)
09:00-09:10 <i>(10 min)</i>	Agenda Setting for Day 4 at Pacifico Yokohama 304	Augustin Maria <i>(World Bank)</i>	TDLC <i>(World Bank)</i>
09:10-09:55 <i>(45 min)</i>	Thematic Framing <i>This session will discuss the relationship between transport infrastructure and a city's climate mitigation and resilience goals. It will demonstrate how TOD development – i.e., the coordination of land use and transportation – can reduce distances travelled by residents and, by doing so, reduce the emissions associated with urban transportation, and how urban design can allow this to be done without sacrificing livability. It will also discuss how transportation infrastructure can be used to serve resilience goals, e.g., by incorporation of heat and flood adaptation measures into stations, roads, and other infrastructure, as well as how transportation infrastructure itself can be made more resilient to climate and other natural hazards.</i>	Natalia Romero <i>(World Bank)</i>	Augustin Maria <i>(World Bank)</i>
09:55-10:25 <i>(30 min)</i>	Medellin Case Study <i>Introduction of a TOD case and Resilient case</i>	Zoe Trohanis <i>(World Bank)</i>	Augustin Maria <i>(World Bank)</i>
10:25-10:35 <i>(10 min)</i>	Coffee Break		
10:35-12:10 <i>(95 min)</i>	Interactive Groupwork Exercise	TDLC	
12:10-13:10 <i>(60 min)</i>	Lunch		

13:10-13:50 (40 min)	Bus Ride to Minami Machida Grandberry Park Station		
14:00-14:40 (40 min)	Decarbonizing Mass Transit and Planning with TOD	Toshiaki Yamanari (Tokyu)	Shoko Tawara (World Bank)
		Kumiko Gunji (Tokyu)	
14:40-15:20 (40 min)	Grandberry Park Regeneration Case Study	Hirose Kitazawa (Tokyu)	Shoko Tawara (World Bank)
		Mio Fujii (Tokyu)	
15:20-16:20 (60 min)	Grandberry Park Site Visit		

TDD Session DAY 5. FRIDAY, April 21, 2023

Start-End JST	<i>Title Description</i>	Speakers (Organization)	Moderators (Organization)
09:30-09:40 (10 min)	Housekeeping at Pacifico Yokohama 304		TDLC (World Bank)
09:40-11:00 (80 min)	Action Plan Presentations Round 1 <i>Each country delegation presents their action plan</i>	Country Delegations	TDLC (World Bank)
11:00-11:15 (15 min)	Coffee Break		
11:15-12:20 (65 min)	Action Plan Presentations Round 2 <i>Each country delegation presents their action plan</i>	Country Delegations	TDLC (World Bank)
12:20-13:20 (60 min)	Lunch		TDLC (World Bank)
13:20-13:50 (30 min)	Post-TDD Resources <i>Gap Fund GFDRR Support Programs DRM Hub TF</i>	Augustin Maria (World Bank)	
		Zoe Trohanis (World Bank)	
		Keiko Saito (World Bank)	
13:50 – 14:50 (60 min)	Calligraphy		

14:50-15:00
(10 min)

Wrap-up, Next Steps and Closing Remarks

**Augustin Maria
and Zoe Trohanis**
(World Bank)

TDLC
(World Bank)
