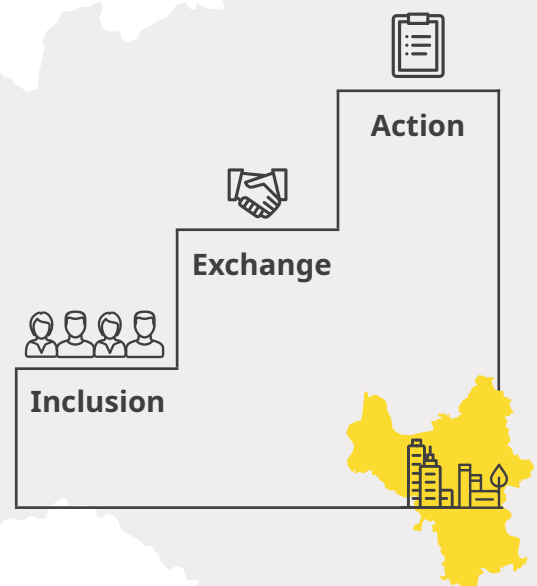




HANOI, VIETNAM

EXCHANGE: HOW KNOWLEDGE SHARING DRIVES INNOVATIVE CLIMATE ACTION

This case study series features key findings from the 4.5-year-long Ambitious City Promises Project (ACP) that co-created climate action policies with stakeholders in Southeast Asian megacities. Three core principles guided ACP's efforts: Inclusion, Exchange, and Action. This case study highlights the innovative potential of exchange activities, with project implementation pilot projects and eventual integration into Hanoi's climate action policies as proof of bottom-up exchange benefits. Hanoi ultimately reoriented its existing policies towards a whole-of-society approach that emphasizes cross-cutting sectoral interventions and inclusivity.



City of Hanoi: Facts and figures

Hanoi is the thousand-year-old, bustling capital of Vietnam and one of Southeast Asia's fastest-growing cities. Hanoi almost tripled in land area in 2008 when it expanded city boundaries to encompass neighboring provinces and districts, including ACP satellite project partners Sóc Sơn and Sơn Tây. Although Hanoi shows low emissions relative to its other Southeast Asian megacity peers and generates considerable energy from hydropower, rapid growth in carbon emissions is underway and will accelerate if there are no proper interventions.

Population

8,053,663 (2019)

Total area

3,358 km²

GHG Emissions

18 million tCO₂e (2015)

Per capita emissions

1.24 tCO₂e/capita



Figure 1: Map of Hanoi

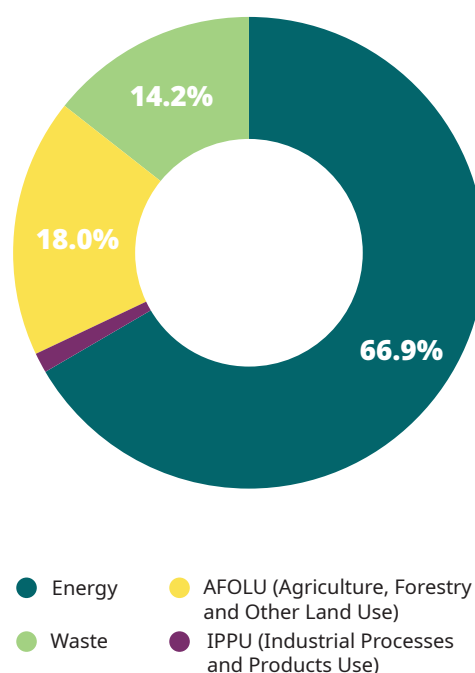


Figure 2: Hanoi GHG emissions per sector, 2015

According to Hanoi's 2015 GHG inventory, the city generated GHG emissions of approximately 18,192,000.76 tCO₂e. More than half of these emissions were shared by the energy sector including transportation (265,000.38 tCO₂e).

Bottom-up Knowledge Sharing as a Key Project Focus

Metropolitan areas face similar challenges in providing socially inclusive, environmentally sustainable, and economically stable development. Proactive engagement – through a process of discovering, interpreting, and utilizing new information – only becomes more arduous with formidable learning barriers (i.e. funding and staff limitations) on the municipal level. Actively engaging with local stakeholders unlocks potential for collaboration, participation, and resource mobilization. Inclusive and value-laden engagement with various representatives and community groups enables policy makers to diversify their perspectives and action plans.

In the context of the ACP project, city-to-city learning served as one of the enabling mechanisms to spark inspiration for pursuing stakeholder-driven strategies towards low emission development pathways. Direct exchange encouraged municipalities to draw lessons from the experience of their peers. It recognizes that

city government staff, irrespective of context, encounter similar realities in executing their mandates to provide for the basic needs and welfare of their citizens. When a city-to-city process is actively guided and facilitated, it can accelerate the transfer of knowledge in the partner cities.

The proven example of Seoul shows that the city's rigorous stakeholder engagement greatly contributed to a 11% reduction of household sector GHG emissions. In fact, many city-level policies require consensus and stakeholder participation in order for them to be fully realized. Engaging stakeholders in city-level climate action plans can further elevate local governments' climate ambitions. To facilitate the process in Southeast Asian cities, ACP enabled peer-to-peer learning through capacity building, training, study tours and deep exchanges at the city level. Such exchange of knowledge, experience and good practices forms a foundation for cities to develop evidence-based policies.



Core Horizontal Exchange Opportunities

One of the first steps taken for a solution - oriented exchange was to conduct a capacity needs assessment that revealed areas of focus and how core exchange opportunities could support them, like policy and technical training support for transportation and air quality. Hanoi was particularly interested in effective means to reduce its fine particles through low carbon mobility options; strategies to secure stakeholder buy-in in all sectoral mitigation interventions were also identified as a cross- cutting subject of interest.

These findings are consistent with the city's identified priority sectors in its Promise of Hanoi. In the Vietnamese capital's path towards its City Promise, Seoul Metropolitan Government (SMG) experts, policies, and principles alike gave Hanoi inspiration and points of reference across all sectors.

SMG's guidance was particularly beneficial in the following strategic areas:

- Promoting and adopting an electric vehicle network (as well as public transport) to begin transitioning from Hanoi's near-universal motorbike use;
- Improvement of air quality monitoring systems by creating a network of monitoring sensors and devices to inform advocacy interventions, and
- Expansion of urban green spaces to counteract rapid urbanization that leaves Hanoi's citizens sorely deprived of necessary greenery (as seen in the following section).

ICLEI survey findings informed capacity building support through training activities, workshops, and dialogues. In particular, horizontal exchange opportunities among peer local governments in project countries, across project city partners, and internationally among fellow ICLEI Members proved instrumental in sourcing innovative climate action approaches for eventual inclusion into City Promises.





Here is a selection of exchange opportunities that benefited the City of Hanoi:

- **Joint Project Meetings:** Two intensive and interactive meetings were designed to facilitate creative discussion among ACP cities and SMG to identify the visions of project cities' climate strategies, as well as pilot and investment projects, through scenario planning exercises.
- **Expert Meetings:** Experts from SMG streamlined support and explored avenues for knowledge transfer targeted to projects cities' specific challenges.
- **Urban LEDS European Study Tour:** This three-country tour included a visit to Bologna's "District Labs" initiative, which fostered a culture of co-creation by local government and communities in designing public spaces that strongly resonated with ACP cities.
- **ICLEI-SHRDC¹ Capacity Building Program for ACP cities:** SHRDC and ICLEI East Asia Secretariat co-organized a workshop to serve as a venue for knowledge transfer about sustainable environmental policies and experiences in Seoul. Seoul's Pedestrian and Public Transportation Policy and Transport Operation and Information Services Center (TOPIS) were of particular interest.
- **In-Country Study Tour:** In Vietnam, site visits discussed collating climate activity data as a sound basis in local climate action planning (Ho Chi Minh City) and explored a model of nature conservation providing a sustainable source of livelihood to nearby communities (An Giang).

1 Seoul Human Resource Development Center

Demonstrating Inclusivity with Bottom-Up Exchange

From the inspiration of Seoul Metropolitan Government, part of the intent of Ambitious City Promises was to spur unconventional approaches to inclusivity, particularly in contexts where bottom-up planning would constitute a pivot from typical planning approaches. Although there are climate policies at the national and sub-national government levels, participation of the public in the planning and implementation process of the policy is limited. As a result, a strong discrepancy between the public climate policies and its implementation, especially when citizens' action is needed, can occur.

With the aim to increase the space of public engagement and participation into local climate action, ICLEI sought to both demonstrate the potential of inclusivity and plant seeds for expanded community engagement and co-creation efforts. The City of Hanoi facilitated a series of public consultations, gathering more than 300 participants from key non-government organizations (NGOs), civil society organizations (CSOs), private sector, and other relevant stakeholders.

These engagement activities were conducted to improve the public knowledge on climate change, greenhouse gas emissions, urban sectors, and corresponding civic action. This participatory approach opened up feedback mechanisms to discuss the citizens' insights regarding climate action and to a larger extent urban planning. These engagement activities with citizens also aimed to bridge the gap between policy makers and the larger public; ensuring that public interest is reflected into climate plans, targets, project, and policies. This in turn, created mutual trust between stakeholders and their duty bearers, which can compel the public to support the implementation and compliance with policy and public action.

Developing sector goals for the eventual Promise of Hanoi required combinations of horizontal (bilateral across peer governments) and vertical (within Hanoi both bottom-up and top-down) exchange.

Figure 3: Hanoi residents, civil society, local government officials, and private sector representatives identifying stakeholder-led actions to feed into the Promise of Hanoi



Hanoi's expansion of green spaces and fight for clean air – a few of aforementioned strategic areas within the Seoul Metropolitan Government's expertise – are perhaps the preeminent example of Hanoi's willingness to venture beyond typical methods of exchange in sourcing ingenuity from its citizens.

Pilot project displayed the community's active role as an agent of change. The following four pilot projects provided examples a digital mechanism to collect citizens' climate action pledges, then co- designing a public space aligned with local needs:

- Built a Stakeholder Engagement Platform to collect community action pledges;
- Launched a design contest to inspire transformative visions for Hanoi;
- Expanded the capacity of a playground entirely out of eco-friendly materials, supplemented by installation of rooftop solar panels and an air quality monitoring station, and
- Developed a guidebook on creating low carbon public spaces.

Each of ACP's three model cities developed a stakeholder engagement platform that collects citizens' individual climate action pledges towards sustainable lifestyles, drawing from Seoul's EcoMileage initiative that engaged 2 million Seoul residents. The platforms are dynamic, accessible, and real-time communication tools that act as a counterweight to traditional top-down engagement. Ultimately, each city's platform translates the City Promise into citizens' commitments, including a GHG calculator to visualize the collected pledge and induce further citizen engagement. Here is a screenshot of Hanoi's platform, which also appeared in Vietnamese.

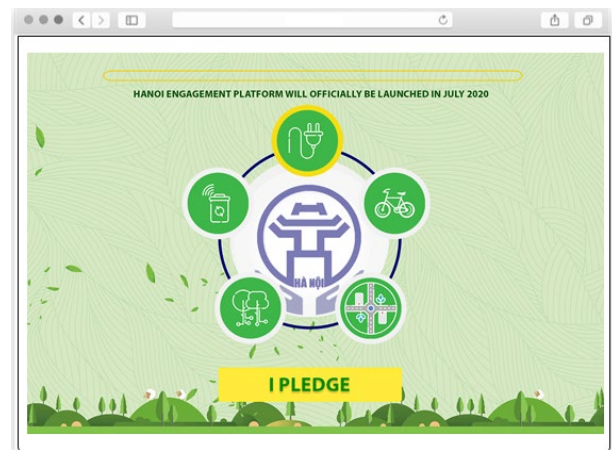
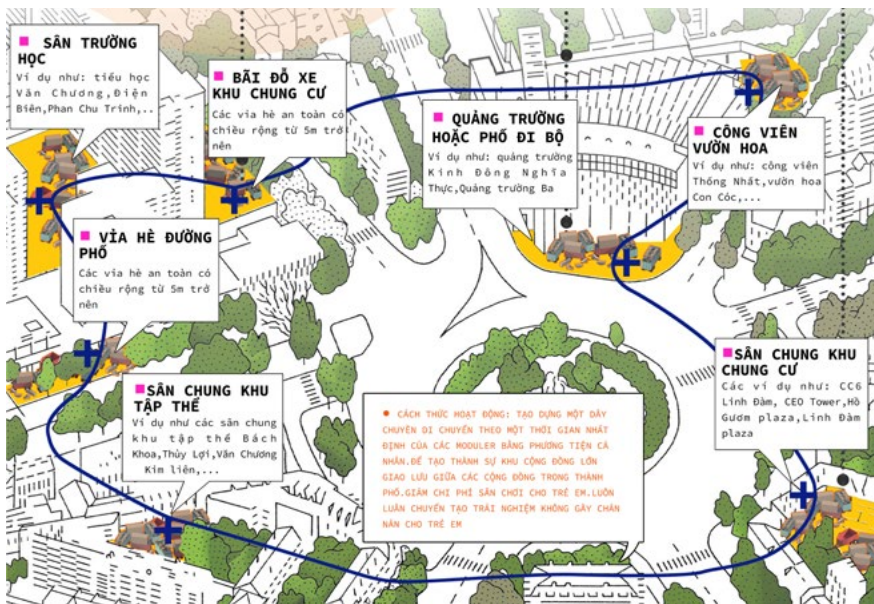


Figure 4: Hanoi's stakeholder pledge platform

The ACP project aimed to create a public space that serves as a center for cooperation and awareness raising of local communities on climate change and air quality issues. The selected site is located in Hanoi's centrally-located Cầu Giấy District, where new developments are taking place at a fast pace. This project built Hanoi's first model of a low emission community center with a combination of solutions, such as a playground built with upcycled materials, installation of rooftop solar panels, real-time air quality monitoring system, and waste segregation system. This space is co-designed with the local community members, including the Cầu Giấy District Women's Union.



Figure 5: Launching event of the Hanoi's stakeholder pledge platform



Figures 6-8: Red Sparrow's proposal, overall winner and Practical Prize winner (left) and how the proposal was implemented at the recycled playground (right).

Together with ICLEI and Vietnamese partners, DONRE launched the “Green Design Contest: Green Public Space for a Peaceful Living” on March 26, 2021, giving residents and young urban specialists the chance to showcase design ideas for green spaces.

The purpose of the contest is to take the winning entries into consideration for Hanoi's climate action plan, and for immediate implementation in Cầu Giấy District, where the recycled playground was being installed. The contest received 47 full proposals from a myriad of stakeholders – including private individuals, women's groups and architecture students – for innovative repurposing and reimagining of Hanoi's public spaces into spaces that foster social connections and respond to climate challenges. In addition to aesthetic considerations, judges considered the potential for integration into Hanoi's urban landscape, and how these proposals could contribute to scaling local climate actions. The complete renderings of the four eventual winners can be found [here](#).

Three of the winning proposals informed the design for a children-focused public space in Cầu Giấy. There was a strong demand from the Cầu Giấy district to increase the capacity of the playground as it was not meeting the growing demands from the neighboring schools.

The project was able to expand the capacity of the playground with more than one ton of upcycled materials – such as pine pallets, milk boxes, and tires – that would have otherwise ended up in the landfill. These three winners complement each other and the entire proposal, diversifying the range of what can be considered green and sustainable. In doing so, they have created a holistic playground intervention: one that welcomes the entire community's participation, incorporates ecological design principles, and, most of all, creates spaces for children to play. A real-time air quality monitoring sensor, which measures particulate matter (PM2.5) is installed in the open space of the community center.

This helps the city to communicate to the public the quality of the outdoor air in the area at certain times through the Air Quality Index (AQI). The AQI of this area will be posted on the existing mobile apps of the service provider (on an existing mobile platform) so that the community can be informed of the level of real-time air quality of the site when they wish to visit.

In addition to the upcycled playground, 20 kwp solar panels were installed on the rooftop of the community cultural centre to power streetlights of the center's playgrounds and electrical devices. The community cultural center is able to sell the generated electricity from the rooftop solar panels to EVN (Vietnam Electricity, the national electricity corporation). EVN purchases the generated electricity that will be distributed to the grid, while the earnings from electricity generation will be spent on the monthly electricity bills of the community center. This solution optimizes the efficiency of installing solar panels, in accordance with local practical conditions, taking advantage of and responding to national policies.

As a result, it is expected that the new infrastructure installed in the public space will avoid 206 tons of carbon emissions CO₂eq of emissions throughout their life cycle. The pilot projects also demonstrated a path to simultaneously meet green space goals while prioritizing public spaces and playgrounds, contributing to the city's goal to quadruple green space per capita by 2025, and to achieve 13-15 m² of green space per capita by 2030 as stated in the Promise of Hanoi.



Figures 9-11: Expanded playground made of upcycled materials in the Cầu Giấy District Office

Integration into Hanoi People's Committee Policy

Particularly with regards to exchange, project cities' active participation in project activities enabled them to identify and modify initiatives deemed replicable in their own low emission development pathways. The Promise of Hanoi was formulated following an exhaustive review of Hanoi's relevant existing policies, activities, and programs, as well as a series of consultations with more than 300 participants from different stakeholder groups.

Vietnam's capital is committed to GHG emissions reductions of 12.14% (equivalent to 6.68 million tCO₂e) by 2025, and of 18.17% (equivalent to 13.76 million tCO₂e) by 2030 compared to the business-as-usual scenario. Mitigation interventions will help realize targets in the industry, agriculture and forestry, residential, urban management, and transport sectors.

The mitigation strategies to fulfill this target were elaborated in the Hanoi Green Growth Action Plan 2020-2025, Hanoi Climate Action Plan 2021-2030, and Programme 05/CTr-TU 2021-2025. The Hanoi People's Committee Council shifted its direction towards a whole-of-society approach to climate action to urgently meet its targets and further commit to climate neutrality by 2050.

Therefore, the Promise of Hanoi was formulated – after consultations and solicitation of pledges from city departments and various stakeholder groups – to expand the Hanoi Climate Action Plan 2021-2030 (CAP3). The CAP3 compiles Hanoi People's Committee Councils' robust adaptation and mitigation goals and strategies in the next decade. The Hanoi People's Committee and its departments will spearhead implementing a series of overarching actions outlined in Hanoi's revised Green Growth Action Plan 2025-2030.

The Promise of Hanoi adds value by compiling pledges of stakeholder-driven climate actions that are consistent with the Council's priority strategies. The 118 climate actions can yield a potential GHG emissions reduction of 2.15 million tCO₂e by 2025, and 2.30 million tCO₂e by 2030 to fortify Hanoi's existing GHG reduction targets. A total of 11 strategies by the city administration, businesses, CSOs/NGOs, and citizens across the sectors of energy, transport, waste, air quality, and urban agriculture & ecology constitute the Promise of Hanoi.



| Sector | Strategies | GHG emissions reduction potential in tCO ₂ e by 2025 | GHG emissions reduction potential in tCO ₂ e by 2030 |
|-----------------------------|--|---|---|
| Energy | Enforce the National Standards on Energy Efficient Buildings | 676,500 | 1,645,800 |
| | Promote rooftop solar photovoltaic systems | 1,200 | 2,700 |
| Transport | Promote low carbon, efficient, and reliable public transport | 87,700 | 97,500 |
| | Promote CNG buses | 16,400 | 19,000 |
| | Promote e-vehicles | Not applicable | 49,400 |
| Waste | Reduce waste disposals to landfill through improved recycling and composting | 54,000 | 72,000 |
| | Reduce plastic waste generation | | |
| | Improve water conservation efforts and wastewater treatment efficiency | | |
| Air quality | Improve air quality monitoring systems | Not applicable | Not applicable |
| | Prohibit straw burning in rural areas | 1,094,000 - 1,109,000 | |
| Urban agriculture & ecology | Expansion of urban green spaces | 204,000 | 409,800 |

Table 1: GHG emissions reduction potential of each sectoral strategy in tCO₂e by 2025 and 2030

Lessons Learned

Each model city's Promise orients all of society towards ambitious climate action goals. Hanoi's efforts to incorporate approaches from domestic, regional and global peers – and simultaneously create legacies for localized bottom-up knowledge transfer – will enable the Vietnamese capital to innovate upon its existing policies and inspire wholesale community participation. Here are exchange-specific takeaways for fellow local governments looking to harmonize the many benefits of exchange in their own locales:



Reevaluate the scope of climate action

Southeast Asian countries and cities have long regarded adaptation strategies as priority climate interventions. Mitigation, however, has only recently gained traction, necessitating continued learning exchanges with mitigation experts. Cities leading in mitigation may unsuspectingly find themselves in need of adaptation support, too, allowing cities like Hanoi to become examples and facilitators of international exchange.

Trust in opportunities for personal dialogue

City-to-city interactions and dialogues between city staff and citizens allow for faster, practical, and meaningful knowledge transfer, resulting in grounded replication of best practices. This approach allows city staff to widen their perspectives and create space for unconventional program implementation methods. Pivots towards personal interaction also recognize that city staff often know what solutions would best fit their contexts.

Complementary modes of exchange strengthen interventions

Hanoi's ambitious green space expansion policy goal required both expert knowledge and community intervention to co-create lasting interventions. Bilateral exchange with SMG experts informed the logic of Hanoi's Green Design Contest, while local design ideas built the playground pilot intervention. Horizontal and vertical exchange enhanced each other, and the ultimate goal: a greener Hanoi.

This series of local case studies is produced within the Ambitious City Promises project funded by the German Federal Ministry of the Environment, Nature Conservation and Nuclear Safety (BMU) through its International Climate Initiative (IKI). They represent solely the views of the authors and cannot in any circumstances be regarded as the official position of the BMU.

The media are free to use the case studies and may download content at www.iclei.org/publications



**AMBITIOUS
CITY PROMISES**
Engaging citizens. Driving climate action.



Supported by:



Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

based on a decision of the German Bundestag

Authors

Pamela Cabacungan, ICLEI Southeast Asia Secretariat

Tim Lazaroff, ICLEI World Secretariat

Collaborators

Alfredo Bernarte, ICLEI Southeast Asia Secretariat

Jiwon Lee, ICLEI World Secretariat

Mary Jane Alvarez, ICLEI Southeast Asia Secretariat

Design

Olga Tokareva, ICLEI World Secretariat

Alice Fraccaro, ICLEI World Secretariat

COPYRIGHT

© 2021 ICLEI – Local Governments for Sustainability e.V. All rights reserved. The ICLEI World Secretariat holds the copyright of this publication, including text, analyses, logos and layout designs. Requests to reproduce or to quote material in part or in full should be sent to iclei.ws@iclei.org. ICLEI encourages use and dissemination of this report, and permission to reproduce this material without modification will usually be permitted without charge for noncommercial use.

ICLEI – Local Governments for Sustainability is a global network of more than 2500 local and regional governments committed to sustainable urban development. Active in 125+ countries, we influence sustainability policy and drive local action for low emission, nature-based, equitable, resilient and circular development. Our Members and team of experts work together through peer exchange, partnerships and capacity building to create systemic change for urban sustainability.

Contact Us

Kaiser-Friedrich-Str. 7
53113 Bonn | Germany
Tel. +49-228 / 97 62 99-00