ICLEI Local Governments for Sustainability

AMBITIOUS CITY PROMISES
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Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
based on a decision of the German Bundestag

JAKARTA, INDONESIA

INCLUSION: ENERGIZING COMMUNITY NETWORKS WITH BOTTOM-UP STAKEHOLDER ENGAGEMENT

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 both the need for inclusivity and how the Special Capital Region (DKI in Bahasa Indonesia) Jakarta's pilot initiatives fostered bottom-up climate action. Activities targeted specific stakeholder groups who could serve as outreach conduits to inspire wider community action. These activities then informed the creation of climate action pledges in the Ikhtiar Jakarta – half of these pledges would be impossible to meet without stakeholders.

City of Jakarta: Facts and figures

Jabodetabek, the largest metropolitan region in Southeast Asia and the world's second most populous, features the Indonesian capital of DKI Jakarta and two satellite city partners, Bekasi and Tangerang. Home to 31 million people – and counting – Jakarta is simultaneously sinking, growing, and becoming increasingly vulnerable to flood risk, while also generating enough waste to stretch the region's landfill in Bekasi to capacity. Increased manufacturing activity in Tangerang and economic growth across Indonesia leaves Jabodetabek delicately balancing incentives in its push to co-create a low emissions development pathway.

Population

10,562,088 (2020)

Total area

699 km^2

GHG Emissions

38 million $tC0_2eq$ (2010)

Per capita emissions

3.60 tCO_2eq/capita

Figure 1: Map of DKI Jakarta

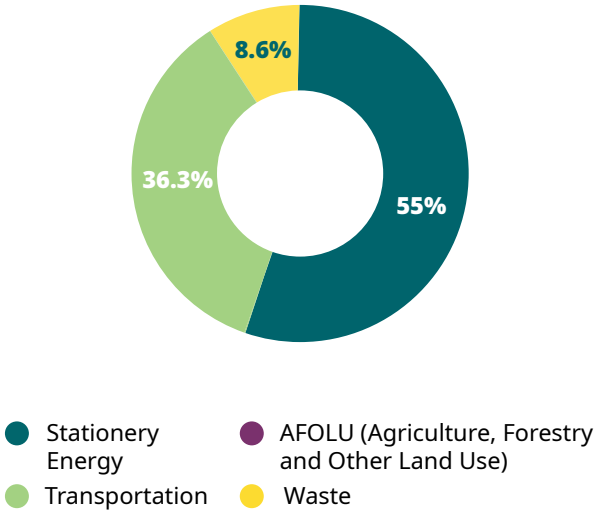

Figure 2: DKI Jakarta's GHG emissions per sector, 2010

In 2019, DKI Jakarta commenced the updating process of its existing Regional Action Plan for GHG Emission Reduction (RAD-GRK) and was compelled to also update its GHG inventory using 2010 as base year and recalculate its projected emissions up to 2030. Based on this inventory, it was determined that the province emitted approximately 38 million tCO_2e in 2010. The stationary energy sector contributed to more than half of the total emissions (55.0%); the remaining emissions were shared by the transport sector (36.3%), waste (8.6%), and AFOLU (0.08%) sectors. Based on the 2010 baseline emissions, it was projected that DKI Jakarta could generate up to 106 million tCO e by 2030 and 189 million tCO_2e by 2050 under a BAU scenario.

Why inclusivity matters

Just climate action planning must incorporate engagement across all levels of society and government if global climate targets are to be met. Paris Agreement goals are positioned as Nationally-Determined Contributions (NDCs), with emissions reduction decisions most often in national governments' hands. Within this framing, discussions on the positive impact that sustainable village-level waste management or youth involvement can have are rendered mute. When individuals ask "What can I do?", and potential engagement opportunities are neutered by centralized governmental climate planning, generations of future climate activists are stifled.

Ambitious City Promises offered a bottom- up approach that fostered inclusion. Endogenous knowledge (per Rist et. al., 2011) is core to designing, delivering and expanding climate action, particularly in post-colonial contexts. Without community leaders, project aims misalign with local needs, critically missing the potential multiplier effects of innovation-laden, lasting engagement. ACP's hope to create legacies of climate action in Southeast Asia would be token, at best, if community networks in Indonesia, the Philippines and Vietnam were not leading the way.

Bridging the principle - policy gap: Formulating the Ikhtiar Jakarta

Jakarta's colonial history and cultural diversity lend unique complexity to inclusivity. The risk of tokenizing community engagement is greater in such contexts, and climate action policies must create seats at the table if there are not enough ones already. 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 can exist between the public climate policies and its implementation, especially when citizens' action is needed.

To mitigate potential inclusion pitfalls, ACP's project design incorporated methods from the Seoul Metropolitan Government (SMG), which is accustomed to encountering complexity and diversity of such magnitude. SMG's Promise of Seoul model continually co-creates climate action with citizens, charting paths for the next decade of climate action in tandem with community stakeholders.

Inspired by SMG's approach, DKI Jakarta tailored the notion of engaging citizens in climate policies to its local context when crafting the Ikhtiar Jakarta, the Indonesian capital's decade-long City Promise commitment of climate actions co-created with citizens.

The project mission – to raise local government ambition in meeting their contributions towards national goals – would be impossible without stakeholders' committed participation. In fact, half of Ikhtiar Jakarta's planned climate actions are entirely stakeholder-led.

Ikhtiar Jakarta fulfills the key characteristics of a City Promise


Ambitious GHG reduction targets


Inclusive


Integrated & cross-sectoral


Actionable for all partners


Measurable and verifiable

Figure 3: ACP brought together religious leaders to spearhead faith-based climate action

Pilot projects as manifesting visions in real time

Part of ACP's philosophy was to demonstrate the immediate returns on an inclusivity investment for local governments. If pilot demonstrations succeeded immediately and showed prospects for future success, project partners in Jabodetabek and across Indonesia would be inspired to innovate further, fortifying goals and climate actions co-created within the Ikhtiar Jakarta. Idea co-creation is embedded in another pillar of ACP: Exchange, the subject of our case study on Hanoi, Vietnam. In DKI Jakarta, the city led four different pilot projects through ACP to spearhead future promised actions:

Assembled an Interfaith Coalition of Jakarta's six main religious groups to drive action-oriented engagement

Determined a best community waste management strategy, culminating in a Black Soldier Fly organic waste facility

Built a Stakeholder Engagement Platform to collect community action pledges

Launched a behavioral change intervention initiative as a soft pilot project 'Youth Energizers' student leadership group

CiBiX (City-Business Accelerator)

CiBiX (City-Business Accelerator), ICLEI's service model for City-Business Collaboration, connected ACP cities to state-of-the-art technology and to overarching smart city concepts to support developing the Ikhtiar Jakarta. DKI Jakarta led a CiBiX Ideator workshop to share perspectives and identify mutually beneficial innovative solutions with business stakeholders, one of ACP's major target groups in Indonesia. Participants explored potential public-private partnerships for installing solar panels on public and private buildings, retrofitting the existing building stock, building waste-to-energy power plants, introducing electric vehicles, installing sustainably-powered backup power generators, and raising awareness about energy-saving practices. DKI Jakarta can attract more attention to the transition to renewable energy and create stronger ties between the public and private sectors that encourage energy efficiency.

Figure 4: ICLEI led the Jakarta CiBiX workshop on December 4, 2018

Interfaith Coalition

Figure 5: Religious leaders, DKI Jakarta. © ICLEI 2019

Nowhere are these principles of engagement more prominently on display than in the religious communities of Jakarta. ICLEI coordinated an interfaith coalition among Jakarta's six main religious groups − Islam, Protestantism, Catholicism, Hinduism, Buddhism and Confucianism − to help raise awareness about climate change and create support for climate and sustainability action. Religious groups were among the nine key stakeholder groups identified during the consultations and special attention went to this group due to their power as key allies to engage a larger public in support of emissions reduction.

Engaging religious groups in environmental movements is not unheard of and was most recently undertaken by Majelis Ulama Indonesia – Islam Scholars Assembly of Indonesia in 2015. However, to collect the religious teachings related to climate change and develop educational modules from this perspective is a novel approach. For many Jakartans, spirituality inspires them to live more sustainably and the interfaith coalition – made up of religious leaders from each main group – committed to bringing the message of environmentalism to their congregations.

"Climate action requires a multidisciplinary approach, not just collaboration with local and national governments, but also religious leaders. Why? Science and policy are very important, but they are not enough. What matters is the change in behavior."

Dr. Hayu Prabowo,
representative of the interfaith coalition

In addition to facilitating the set up of the interfaith coalition, ICLEI worked with the interfaith coalition to publish a series of guidebooks addressing the role of faith in responding to the climate crisis. These guidebooks provide insights as well as holistic solutions for sustainable human life and living, sourced both from scripture and environmental studies.

Published in the Bahasa Indonesia language, the guidebooks refer the spiritual community to religious teachings on environment and climate change, on eco- friendly worship, and on how congregations can engage in behavioral change and adopt sustainable lifestyles in line with their faith.

The series includes:

- A Religious Perspective on Humans and Climate Change, which documents the efforts of the six religions in guiding their communities to protect and preserve the Earth from the threat of damage. It also includes proposed mitigation solutions.

- A guide on Eco-Worship Building that details how places of worship can function not only as places of spiritual guidance, but also as incubators of climate action movements.

- An Eco-Preaching guide for Islam, Catholic, Protestant, Buddhist, Hindu, and Confucian preachers that collects religious sermon material, guiding them in how to treat the earth, water, land, and air, as well as addressing issues of climate and environmental crises in the daily lives of their faithful.

- Lastly, to ensure that the contents of the guidebooks are broadcasted on the widest scale possible, religious leaders and preachers were invited to participate in various 'Training of Trainers' activities from March 2020 to February 2021.

Figure 6: Copies of all 8 guidebooks. © ICLEI 2019

Stakeholder Engagement Platform

The climate action pledges created a multilevel alignment among stakeholders, fostering a vision of co-created climate action. The most effective and integrated way to give stakeholders a seat at the table was to meet stakeholders where they were, and to pinpoint those stakeholders able to act as outreach conduits.

All three model cities led public consultations jointly with ICLEI with focus groups to identify sector-specific challenges that residents encountered and to understand how climate change exacerbates these. Guided by empirical evidence, the conversations explored concrete climate action pledges, considering stakeholders' daily lives, local knowledge, urgent needs, capacities and consistency.

Direct engagement with stakeholders bred further direct participation, with the hope that the baton could eventually be passed to community leaders, who would then head subsequent climate action efforts.

ICLEI Southeast Asia Secretariat identified three key actor groups, and involved these in the following pilot projects. They were:

Children and youth

Business and industry

Religious groups

Drawing on Seoul's EcoMileage initiative, which engaged 2 million Seoul residents, ACP's three model cities each developed a stakeholder engagement platform to collect citizens' individual climate action pledges towards sustainable living. The platforms are dynamic, accessible, and are real-time communication tools that act as a counterweight to traditional top-down engagement. Ultimately, each city's platform enables measuring the citizens' commitments that are in line with the City Promises. Below is a screenshot of Jakarta's platform, which also appeared in Bahasa Indonesia.

Figure 7: Ikhtiar Jakarta Validation Workshop

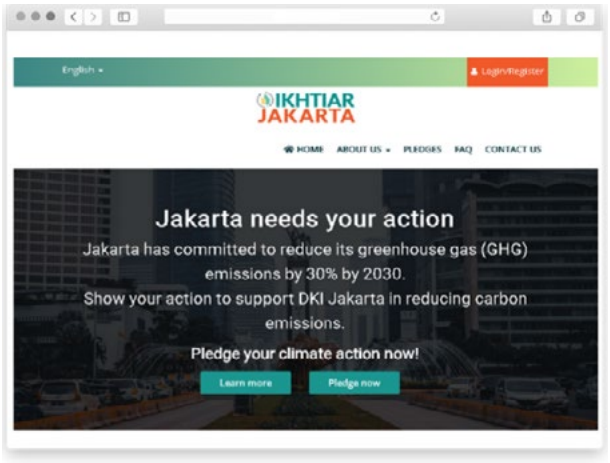

Figure 8: Jakarta's stakeholder pledge platform

Pilot Infrastructure: Black Soldier Fly solid waste management treatment system

Jakarta's waste management crisis can feel daunting, but the provincial government prefers proactivity to cynicism. In waste management, ACP strove to generate a localized approach to DKI Jakarta's 3R (reduce, reuse, recycle) policies at the generation source level.

As of 2017, 95 percent of DKI Jakarta's waste is transported to the Bantar Gebang Landfill in Bekasi, which is soon expected to reach full capacity. Only 10 percent of the province's remaining waste is managed through composting and recycling. Therefore, DKI Jakarta hopes to prolong the life of the landfill and secure sustainable waste management solutions. Organic waste − which constitutes half of Jakarta's overall daily waste generation of 7,165 tons − is a top priority.

The pilot project enabled DKI Jakarta to begin locally implementing BSF processing. Cooperation with the DKI Jakarta Environment Agency helped obtain a site in TPS (temporary dumpsite) Rawasari. The hope for this pilot site was to determine BSF's potential as a complementary solution to existing composting programs in the province. The TPS Rawasari BSF facility is expected to treat at least one ton of organic waste per month and contribute to GHG emission reductions of 400 tCO_2e annually. ICLEI sees such hyperlocal solutions, geared towards engagement and empowerment, as community waste management best practices and is confident this pilot will inspire future BSF efforts across Indonesia.

Figure 9: Black Soldier Fly treatment system at Rawasari temporary waste disposal site.
© ICLEI 2019

Black Soldier Fly Processing

Black Soldier Fly (BSF) processing is an emerging low-tech solution in organic waste treatment, which uses maggots to process waste. These insects recycle carbon into edible insect proteins and oils, avoiding their breakdown into methane and harmful pollutants, and creating multiple benefits. BSF processing requires minimal technical expertise, and its low operation, low maintenance costs and economically valuable end products make it a commercially viable as well as low GHG emission option. Easy access to machinery providers in Jakarta means the infrastructure for establishing Black Soldier Fly processors is already there. This low-tech solution has much to offer holistic design. The community is able to generate alternative and additional sources of income through selling the end products. This demonstrates a new solution to the waste management system in DKI Jakarta with a model of cooperation between local government and community, an adequate management system to ensure sustainability, and a financing scheme which promotes a circular economy.

Behavioral Change Intervention: Youth Energizers

ACP's project legacy will extend only as far as Jakartans carry it. Youth were quickly identified as a key actor group for supporting emissions reductions activities. Youth have tremendous potential to be beacons of collective climate action effort, as a quarter of Jakarta's population is under 18 years of age. ICLEI, along with the Indonesian Institute for Energy Economics (IIEE), and the Provincial Government of DKI Jakarta, launched the pilot project 'Youth Energizers: Student Leaders as Champions of Energy Efficiency and Environmental Sustainability' in October 2020. The pilot project involved a series of youth behavioral change intervention activities.

From the objectives outlined in the box, concrete actions were conceived: from learning modules, awareness-raising and capacity building activities, to an energy-saving school competition. Participating schools had student 'Energy Ambassadors' and one teacher 'Energy Manager' to spearhead community involvement. Learn more from the Southeast Asia Secretariat on the project launching and closing ceremony.

Youth Energizers' Objectives

Build youth capacities (specifically students in becoming active and knowledgeable advocates of energy efficiency and conservation.

Raise awareness and facilitate peer-to-peer exchange via enabling mechanisms that allow student leaders to campaign and mobilize both the student population and the broader community.

Inspire other sectors of the community to organize and mobilize themselves in support of the city's low emission development goals.

Support DKI Jakarta's agenda to reduce business-as-usual levels of GHG emissions in the energy sector, particularly in commercial buildings and residential areas.

Figure 10: Focus group discussion with youth stakeholders and DKI Jakarta government leaders

City Promise Results

DKI Jakarta has committed to net zero emissions by 2050, as stipulated in its Regional Low Carbon Development Plan, an updated version of its RAD-GRK, issued in October 2021. This ambitious target is the product of rigorous stakeholder engagement that translates international goals into tangible, practical and local actions.

According to DKI Jakarta's 2010 GHG inventory, the province generated approximately 37.91 million tCO_2e of GHG emissions. Just under three quarters of these emissions were attributed to the energy sector (74.5%), which also included transport-related emissions. The remaining emissions were shared by power generation (19%) and waste (6.5%) sectors. Based on the 2010 baseline emissions, it was projected that DKI Jakarta could generate up to 106.50 million tCO_2e by 2030 and 189.55 million tCO_2e by 2050 under a business-as-usual scenario. In an effort to continuously track its emissions performance, DKI Jakarta recently estimated its GHG emissions using a 2018 base year. This inventory showed a decrease in its emissions to 29 million tCO_2e compared to its 2005 and 2010 baseline levels.

However, by including a consumption-based inventory approach, as opposed to a production-based one, it was determined that the province generated a total 57.55 million tCO_2e GHG emissions. Almost half of these emissions was shared by electricity consumption (49%), while the remaining emissions were shared by stationary fuel use (33%), power generation (14%), and waste (4%) sectors. The Long-Term Strategy to Achieve DKI Jakarta's Low Carbon Society 2050 report showed that to bring down these emissions, more than half of mitigation strategies to

Sector	Mitigation Strategy
Energy	Promote energy efficiency, conservation, and renewable energy
Transport & Air Quality	Shift from private vehicle use to public transportation use and active mobility
Waste	Reduce solid waste disposal to landfill with reduction and treatment at source
Water	Improve access to safe and clean water as well as domestic wastewater treatment
Ecology & Urban Agriculture	Expand productive green spaces in DKI Jakarta
Health & DRRM	Build a resilient and health environment for everyone

Table 1: Selected sector goals in the Ikhtiar Jakarta

be pursued by the provincial government should be directed towards the energy sector (67.14% or equivalent 21,689,000 tCO_2e), followed by the power generation (28.43% or 9,185,000 tCO_2e) and waste sectors (4.4% or equivalent to 1,429,000 tCO_2e).

Ultimately, the Ikhtiar Jakarta was developed to expand the stakeholder engagement reach of the RAD-GRK and to provide a mitigation roadmap in alignment with the provincial government's long-term strategy. DKI Jakarta government officials identified six mitigation strategies and actions in the following sectors: energy; transport and air quality; waste; water; ecology and urban agriculture, and health and disaster risk reduction & management (DRRM). Local stakeholder efforts will support DKI Jakarta's commitment for a **30% GHG emissions reduction (equivalent to 35.24 million tCO_2e) by 2030 compared to a BAU scenario as stipulated in its RAD-GRK, with an ambitious scenario of a 50% reduction this decade**.

Lessons Learned

The mechanisms of stakeholder engagement that have been adopted in Jakarta, Hanoi and Pasig City through ACP have begun a critical shift in how local governments conduct engagement processes. DKI Jakarta's deliberate focus on inclusivity enabled project partnerships that further catalyzed bottom-up stakeholder engagement. The Ikhtiar Jakarta is an example of that rigorous collective effort to co-create sustainable futures and enabling mechanisms for future empowerment. For fellow local governments looking to harmonize the many benefits of exchange in their own locales, below are inclusion-specific takeaways:

Make communication on stakeholder engagement accessible

While technical climate action is critically important, stakeholder engagement gives meaning to data and statistics. Understanding what goals represent and why local climate action is relevant to daily life is imperative for stakeholder engagement. Inspiring stakeholders' active support and cooperation starts by creating a collective understanding and appreciation of the city's vision. Once that has been communicated, stakeholders need to know the role they will play in the low emission development journey.

Meet cities where they are, especially technologically

High-tech solutions may appear as an urban panacea, but the most viable options (in waste management, for example) may lie elsewhere. Jakarta and nearby Bogor recognized the holistic potential of maggots for processing organic waste in Indonesia. Respecting local context is essential for ensuring the sustainability of the pilot project and fostering resilience.

Create engagement multiplier effects

ACP quickly identified targeted active, hyper- connected and underutilized groups. This helped deliver project outcomes and will create future climate action with these empowered constituencies. Students successfully engaged local residents to implement energy-efficiency measures using various media methods and in-person campaigns. Their effectiveness lies in their energy and interconnection to preexisting networks. Similarly, religious leaders engaged their congregations to develop interfaith guidebooks and pledged to promote the guidebooks during services. Their success has opened government officials' eyes and increased religious groups' visibility as essential agents of climate action.

Integrate initiatives into pre-existing policies, wherever possible

Due to the bureaucratic nature of city governments, it is easier (and more democratic) to create and find linkages between project goals and existing policies than to circumvent local procedures. This also rings true for community engagement; existing community groups, NGOs and business initiatives became primary considerations for selecting action areas in the resulting Ikhtiar Jakarta.

Stakeholder engagement must always be a core activity

Bottom-up communication drives people-centric and needs-based implementation. Proposed policies should undergo a robust and transparent stakeholder engagement process; one that provides stakeholders access to a range of engagement mediums with their representatives. Feedback mechanisms should consider the public's limitations, be responsive, and, where possible, capable of addressing stakeholders' questions or concerns.

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.

Supported by:

Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

based on a decision of the German Bundestag

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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.

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