C40 Climate Action Planning

Approach and lessons learned

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World Bank Cities & Climate Masterclass

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Agenda

- CAP Programme
- CAP Examples
- Conclusions and lessons learned
CAP Programme
C40’s Deadline 2020 research

- Published 1 year after Paris Agreement signed

- Identified C40 cities’ share of the remaining global carbon budgets to 2100 for 1.5 and 2 degrees scenarios

- Presented detailed pathway of what C40 cities’ need to do to play their part in converting the Paris agreement from aspiration into reality
  - To keep within 1.5 degrees warming, C40 cities must collectively peak emissions at 2020, drop to 3 tCO2e by 2030 and reach net zero by 2050
  - Segmented cities by GDP and emissions to establish 4 pathways for emissions

- Set a science-based roadmap for cities to deliver the high ambition & urgency of the Paris Agreement

- C40 decided in 2016 to make a requirement that all of our cities have Deadline 2020 plans by end 2020
But what does this mean for cities?

FROM ASPIRATION TO REALITY

What does a climate action plan that is compatible with the Paris Agreement look like?

How do I know if my climate action plan is compatible with the Paris Agreement?
Developing the Climate Action Planning Framework

Launched Climate Action Planning pilot programme: Boston, Durban, London, Los Angeles, Melbourne, Mexico City, New York, Paris

Outlines the essential components of a climate action plan to deliver low-carbon resilient development consistent with the ambitions of the Paris Agreement.
The framework has evolved over time – particularly to focus on 2030 and identify most essential criteria.
C40 Climate Action Planning Framework Pillars
Climate action planning is a process

1. Evidence base
2. Goals, targets, strategies
3. Climate action plan
4. Implementation
5. Monitoring and evaluation
6. Continuous integration and stakeholder engagement
Climate action plan development process

GET STARTED
- City leadership commitment
- Establish team
- Strategic appraisal

BUILD THE EVIDENCE BASE
- Climate risk assessment
- GHG emissions inventory
- Socio-economic needs assessment

GOALS, TARGETS & STRATEGIES
- Strategy identification
- Adaptation goals and targets
- Emissions targets

ACTION & PLAN DEVELOPMENT
- Action selection & detailing
- Monitoring framework
- Plan drafting
Climate Action Planning Programme: Direct Support

- Designed to help cities develop or update their climate action plans in line with the ambitions of the Paris Agreement
- Technical assistance, delivered by C40 in partnership with expert city climate planners, covers a wide range of support including training, workshops, peer-to-peer collaboration, stakeholder engagement, planning tools, research and much more

Deliverables:
- Climate action plans: Ambitious; evidence-based; inclusive; integrated; and city owned
- Enhanced capacity: Individual and Institutional
- Actions ready for further scoping or project preparation
Guidance, Resources and Inspiration

Visit the C40 Knowledge Hub for case studies, tools, guidance, data dashboards and access to climate action plans for C40 member cities

www.c40knowledgehub.org/s/guide-home
www.c40knowledgehub.org/s/article/Mapped-Cities-with-a-climate-action-plan
CAP Examples
**Buenos Aires Climate Action Plan**

**Document overview in numbers**

- **4** Themes
- **24** Main targets
- **24** Priority actions
- **166** Sub actions
- **2015** Year of previous plan
- **30** Stakeholder engagement events (21 in person + 9 virtual)
- **1538** people engaged

**Link(s) to the key CAP document(s)**

- **Plan de Acción Climática 2050 Ciudad de Buenos Aires**
- **Plataforma BA Cambio Climático**: Open data platform that offers climate action related visualizations and will keep track of progress and targets of CAP implementation.
**Buenos Aires GHG Inventory / Hazards**

*Tonnes CO2e / capita: 3.9 (2017)*

**GHG emissions per sector (2017)**

- **Residuos sólidos**: 14%
- **Transporte**: 30%
- **Edificios residenciales**: 28%
- **Automotor**: 29%
- **Industrias**: 4%
- **Emissions fugitivas**: 1%

**Priority hazards (2020)**

- Higher temperatures and longer and more frequent heat waves
- Floods: increase in annual average rainfall (more intense and in a shorter period of time)

**Priority impacts**

- High impact on most vulnerable people, particularly those living in informal settlements due to flooding.
- High impact on the elderly, particularly due to heat waves, which also increase the risk of power outages.

**Min and max temperature in BA (1969-2019)**

- Expected increase in annual average rainfall:
  - **Esquema intermedio, compensado**: +44 mm
  - **Esquema aumeneto absoluto**: +51 mm
  - **Esquema intermedio, compensado**: +80 mm
  - **Esquema aumeneto absoluto**: +62 mm
**Buenos Aires’ 2050 Targets & Pathway**

**Carbon reduction target**
- 52.9% reduction by 2030 (against 2015 baseline)
- 84.4% reduction by 2050 (against 2015 baseline) with offsetting strategies to reach **carbon neutrality by 2050**

*National government target: 37% reduction to 2030 vs BAU*

**Mitigation targets (by 2050)**
- 70% new buildings with solar PV
- 80% retrofitted residential buildings
- 30% residential buildings with solar PV
- 100% zero emission buses
- 100% cars low emissions
- 80% passengers using public and non-motorized transport
- 80% organic waste (food waste) treated
- 100% paper and cardboard treated

**Adaptation goals & targets**
- **100,000** trees (23% more) by 2023
- 15 pedestrian zones by 2030
- 100% access to basic public services (related to population affected by slum upgrading process in charge of the IVC) by 2030
- 0 evacuated persons due to 10-year repetition storms by 2050
- 100% accomplishment of the WHO AQ standards by 2050
# Buenos Aires Priority Actions

## Energy & Buildings
- Improving our households (energy efficiency in residential buildings)
- More efficient new buildings
- Efficiency in public buildings
- Towards clean energy (solar energy)

## Food, Water, Waste
- More and better source separation
- Waste treatment
- Sustainable food

## Transport & Urban Planning
- More and better green spaces
- Pedestrian priority areas
- “Calles de encuentro” (pedestrian streets and recreational spaces)
- More bikes, less emissions
- More efficient public transport
- Low emissions public transport
- Efficient urban logistics

## Adaptation
- Major works to reduce risk (hydraulic infrastructure plan)
- Nature as a solution (NBS) *
- Prepared for storms (hydrometeorological monitoring and alert system)
- More and better trees *
- More and better green spaces
- More prepared neighbours (training on climate change to the elderly)

## Air Quality
- Buenos Aires Limpios (Clean Air Plan)

## Inclusive and Equitable
- Neighbourhood integration (social and urban integration / slum upgrading)
- Public health network (guarantee access to the public health service to every citizen + access to a health center to a 15 minute distance)
- Green schools

*actions that also have an impact on mitigation
Buenos Aires Stakeholder Engagement

Stakeholder engagement
Externally
- External Advisory Council (experts/academics), Climate change forum (general citizens), Consultation Council (youth), private sector, elderly population.
- Participation in 15 interinstitutional meetings with National Government, provinces and other municipalities (COFEMA).
- 30 events (1538 participants) including: 9 dissemination events/workshops (1085 people); 16 public participation events (238 people); 5 action prioritization events (215 people).

Internally
- 9 Ministries, 12 Secretariats and 28 Under-secretariats involved in 91 coordination meetings.
- 13 political level meetings.

Wider benefits
- 5 actions under the pillar “Inclusive city”, focusing on the impacts particularly towards people living in informal neighbourhoods, people under the line of poverty, the elderly and children.
- 2 quantitative benefits analysis developed for PV and extension of cycling lanes projects.

Results
- Jobs /economic: generation of PV energy in 200 public buildings, 15% of residential buildings and 27% of commercial buildings (most ambitious scenario) by 2030 would create est. 38,000 jobs in construction and 1,800 jobs in maintenance, including low-skilled workers.
- Air quality / health: Extension of cycling lanes -- 2400 kg PM10 emissions reduction a year / 450 avoided deaths due to cycling lanes extension by 2029.
Buenos Aires CAP Governance + Financing

Monitoring & Reporting
- **Entities responsible**: CAP focal point - APrA (Agencia de Protección Ambiental) + Planning Secretariat (SECPEC).  
- **Reporting frequency**: 1) bilateral meetings between SECPEC and specific departments (frequency can be monthly or every two months) and 2) climate change cabinet with the Mayor or Chief of Staff (monthly)
- **Monitoring method**: 1) control table in charge of SECPEC, 2) report to the Mayor, 3) report to the city Parliament; 4) open data platform
- **Revisions**: Law 3.871 (Climate Change Law) formalizes the obligation to update the CAP every 5 years. GHG inventory updated every year (BA just presented the 2018 GHG inventory to C40). Commitment to review CCRA every 5 years.

Financing the CAP
**Most expensive actions**
1) Waste treatment  
2) Low emissions public transport*  
3) Improving household EE*  
4) Clean energy (solar energy)*  
5) Major works to reduce risk (hydraulic infrastructure plan)  
6) Neighbourhood integration (social and urban integration / slum upgrading)

**Key funding sources**
CAF (pilot project for low emission public transport) / World Bank (hydraulic infrastructure) / IADB (social and urban integration), city budget.

**Next steps**
Identification of priorities within the city level and accordance with the 2021 planning.
*actions that require national budget or private investment

Stakeholder engagement (top)  
CAP political kick-off, Buenos Aires, July 2019
Document overview in numbers:

- 12 Main Strategies
- 24 Priority actions
- 12 Outcomes and targets
- 100+ Stakeholders consulted
- 2016 Year of previous plan

Link(s) to the key CAP document(s)

Internal link to latest version of QC's Enhanced LCCAP 2021-2050:
https://c40.ent.box.com/file/797317544183?si=w8tq4hcafja0dpq4fsnv3qzxk4uwr391
Quezon City GHG Inventory / Hazards

Tonnes CO2e / capita (2016)
2.7

Priority hazards and impacts

Social Impacts
- Decrease in fresh water availability.
- Displacement & loss of lives due to storms & floods.
- Increase of drought related health impacts.
- Post-flood disease outbreaks.
- Heat stress causing illnesses & loss of life (especially livestock).
- Increase of water and vector borne diseases.
- Threatened access to safe drinking water after flooding.
- Threatened food security.

Natural Impacts
- Heat causing change in distribution & structure of biodiversity.
- Threatened biodiversity because of drought.

Economic Impacts
- Drought & flood-related decline in food production.
- Disruption of traffic.
- Increased energy consumption & emissions.

Cyclones & Flooding

Drought

Heat

Stationary Energy

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>% Share</th>
<th>MtCO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Building</td>
<td>14.2%</td>
<td>1.54</td>
</tr>
<tr>
<td>Commercial and Industrial Building</td>
<td>30.7%</td>
<td>2.46</td>
</tr>
<tr>
<td>Manufacturing Industries and Construction</td>
<td>15.0%</td>
<td>1.20</td>
</tr>
</tbody>
</table>

Waste

Transport

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>% Share</th>
<th>MtCO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landfill Disposal and Open Burning</td>
<td>12.9%</td>
<td>1.63</td>
</tr>
<tr>
<td>Biological Treatment</td>
<td>0.0%</td>
<td>0.00</td>
</tr>
<tr>
<td>Wastewater</td>
<td>5.8%</td>
<td>0.46</td>
</tr>
</tbody>
</table>
Quezon City 2050 Targets & Pathway

Headline carbon reduction target
Reduce GHG emissions by 30% in 2030 compared to the projected BAU scenario from 2016, and commit to pursue net-zero emissions by 2050

Official national government target: The Philippines commits to a projected GHG emissions reduction and avoidance of 75%, of which 2.71% is unconditional and 72.29% is conditional, representing the country’s ambition for GHG mitigation for the period 2020 to 2030 for the sectors of agriculture, wastes, industry, transport, and energy

Mitigation targets by 2030:
- Power all public schools and key government-owned buildings with solar energy by 2030
- Work with the private sector to establish green, energy-efficient and resilient buildings, aiming for 80-100% full compliance to an amended Green Building Code
- Develop 350 kilometres of cycle lanes by 2030
- 50% waste diversion from landfills by 2030
- Improve air quality monitoring to meet the WHO’s air quality guidelines by 2030

Adaptation goals & targets by 2030:
- Develop fully operational rainwater harvesting facilities for 30% of our communities, prioritizing drought-stricken and vulnerable groups
- Ensure sufficient local supply of fresh produce and actively promote healthy diet in all city-initiated projects
# Quezon City Priority Actions

## Energy & Buildings
- Amend the City’s Green Building Code
- Incentivize medium to large scale renewable installation in high-energy consuming sectors
- Three-staged solarization of all City government-owned facilities
- Leverage renewable energy policy mechanisms
- Mainstreaming of the local energy efficiency and conservation plan in government-owned buildings
- Mainstreaming energy efficiency at the residential, commercial and industrial sectors

## Food, Water, Waste
- Urban farming and food production
- Promotion of water conservation and rainwater harvesting
- Organic waste resource circulation
- Waste avoidance through the Green Procurement Plan & Single Use Plastic Ban
- Wastewater treatment system and facilities upgrade
- Recycling targeting plastic and paper waste
- Circular business models

## Transport & Urban Planning
- Upgrades for informal climate-vulnerable neighborhoods by providing public services
- Policy mechanisms for new developments near mass transit stations
- Review of the Comprehensive Land Use Plan (CLUP)
- Comprehensive cycling and walking pathways
- Complement national mass transits with connectivity facilities
- Local bus rapid transit system
- Procurement of zero-emission government-owned buses and vehicles

## Adaptation
- Nature-based solutions such as drainage basins and flood water storage tank
- Green corridor network
- Urban biodiversity sustainability action plan

## Air Quality
- Air quality monitoring and information system

## Knowledge and Capacity Development
- Deliver capacity building trainings on monitoring, evaluation and reporting
- Expand the delivery of information, education and communication (IEC) campaigns on climate initiatives
- Deliver capacity building to support updating of city-wide GHG Inventories and Climate Risk Assessments
Quezon City Stakeholder Engagement

Stakeholder engagement

Externally
- National Agencies, Private Sector Partners, Academic Institutions, Local and International Partners and Consultants

Internally
- Members of the QC Environment Policy Management Council (19 senior officials) and QC Climate Action Planning Technical Work Group (13 city departments)

Wider benefits

- Increased availability, stability, and accessibility of safe and healthy food
- Increased availability, stability, and equitability of access to water resources
- Optimized urban water systems management contributing to flooding mitigation
- Reduced waste impact or pressure on the environment and ecosystems
- Increased accessibility of key public services to men and women and other vulnerable groups
Monitoring & Reporting

- Which department in the city is responsible: Environmental Protection and Waste Management Department (Climate Change and Environmental Sustainability)
- Monitoring /reporting frequency: Quarterly for MER Strategy-Level Coordinators
- Monitoring /reporting methodology (e.g. online reporting platform): Annual Report and Ecological Profile, CDP, social media channels, Mayor’s State of the City Address
- GHG Inventory to be updated every two years
- Climate Risk Assessment to be updated every four years
- The year the CAP is planned to be updated/reviewed every five years

Financing the CAP

- Top 3-5 most expensive actions: Three-staged solarization of all City government-owned facilities, Local bus rapid transit system, Amend the City’s Green Building Code, Upgrades for informal climate-vulnerable neighborhoods by providing public services, Organic waste resource circulation
- Top 3-5 funding sources: Local budget, National Government Funding, National Disaster Risk Reduction and Management Fund, and Public-Private Partnerships

MER Governance Framework
Conclusions and lessons learned
Benefits of developing a CAP

CAP development is a process with significant benefits beyond its key outputs

• Strengthens commitment to ambitious actions from across different departments and establishes climate as a cross-cutting priority
• Helps build consensus among city departments
• Spurs creation of new processes to ensure climate considerations are integrated
• Helps identify critical resources needed for implementation
• Enables cities to build citizen and stakeholder support for climate action
• Strengthens city’s capacity to act
Outcomes from CAP development

Highlights from cities:

• Connected mitigation and adaptation agendas– previously seen as conflicting priorities
• Creation of cross-cutting climate change units that have a life beyond the CAP development
• Identification of political leads for climate change
• Changed projects under planning (eg, shift away from waste incineration)
• Enable national govt to strengthen NDC
• Creation of criteria to assess all capex projects on basis of climate impacts and assess climate action in all policies and plans
• Increased resources to climate team
• Training of officials across the city on equity and inclusivity
• Creation of M&E plans
• Mayors that went from being climate skeptics to champions
• Integration of climate action across departmental targets and plans
• Inspired national govt to require CAPs for all cities
• Secure national govt support to take on climate action
• For the first time assessed projects in terms of how they addressed women, elderly and marginalized communities
Lessons learned

• Importance of having adequate resources, governance structure, coordination mechanisms and creating ownership across administration
• Understanding how CAP will fit in with other planning processes within administration
• Understanding finance options and context
• Challenge of data collection
• Having clear scope but recognizing the importance of capacity building during the process
• Intensive TA over 2yr period may not be replicable—need for "rapid CAP"
• Embedding and mainstreaming CAP is essential – C40 exploring climate budgeting to support this
• Linking to other programmes for support - eg, Gap fund
Epilogue: What’s happened since Deadline 2020 first published

- About 70 C40 cities have published CAPs
- D2020 one of 3 approved methodologies for Science based targets
- National CAP programme established in Denmark with 80 municipalities
- Commitment brought to the COP26 Cities Race to Zero – 1049 cities
- Net zero tracker established to raise the bar