# PROMISE OF PASIG: LOW EMISSION DEVELOPMENT STRATEGIES 2020-2030





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Climate Core Team of Pasig City • City Environment and Natural Resources Office (CENRO) • Office of the City Mayor • Engineering Department • City Solid Waste Management Office (CSWMO) • City Health Office (CHO) • City Disaster Risk Reduction and Management Office (CDRRMO) • City Planning and Development Office (CPDO) • City Transport Development and Management Office (CTDMO) • Traffic and Parking Management Office (TPMO) • Tricycle Operation and Regulatory Office (TORO) • Public Information Office (PIO) • Management Information System Office (MIS) • Association of Barangay Council President (ABC) • and General Services Office (GSO) • Business Permitting and Licensing Office (BPLO) • Sangguniang Kabataan Federation • National **Project Advisory Group** • Department of Environment and Natural Resources (DENR) • Climate Change Commission (CCC) • Department of Energy (DOE) • Department of Transportation (DOTr) • Department of the Interior and Local Government (DILG) • League of Cities of the Philippines (LCP) • UN-Habitat Philippines • Private Sector • Manila Water Company Inc. • Manila Electric Company (MERALCO) • Pag-Asa Steel Works Inc. • Pioneer Float Glass Manufacturing • Lunar Steel Corporation • OCAI • SM Pasig • The Grove by Rockwell • Universal Rubina Corporation • Ayala Land - MDC • DMCI Homes • Academic Institutions • Rizal Technological University (RTU) • Pasig City Science High School • Pamantasan ng Lungsod ng Pasig • Rizal High School • Civil Society Organizations • Youth United for Pasig • Local Youth Development Council • AKKAP PWD • Market Association • YES-O • Sumulong PWD • Transport ACTO • TODA • PUST • UPAO • Sumilang Elderly Association • Kapasigan Senior Citizen • PCMMLSHAI • Bayanihan sa Daan • Federation of Tricycle Drivers and Operators • Firefly Brigade • Global Project Advisory Group • ICLEI World Secretariat • Seoul Metropolitan Government • ICLEI Southeast Asia Secretariat •

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#### **Document Information**

This report consists of the Promise of Pasig, a document outlining the low emission development strategies of the City Government of Pasig. This report reflects the inputs gathered from a series of public consultations as well as those with the members of the National Project Advisory Group (NPAG) and City Climate Core Team of Pasig City. This proposed action plan is expected to serve as inputs to the integrated Local Climate Change Action Plan (LCCAP) of the City Government of Pasig. The Promise of Pasig incorporated the results of the City-Level Greenhouse Gas (GHG) Emissions Inventory Report of Pasig City of 2017. This report was prepared with supervision from ICLEI Southeast Asia Secretariat and World Secretariat under the project: Ambitious City Promises.

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# I. LIST OF ACRONYMS

Annual investment Program
German Federal Ministry for the Environment, Nature
Conservation, and Nuclear Safety
Climate Change Commission
Climate Change Expenditure Tagging
Comprehensive Development Plan
City Disaster Risk Reduction and Management Office
City Environment and Natural Resources Office
City Health Office
Comprehensive Land Use Plan
Carbon Dioxide Equivalent
Civil Society Organizations
City Solid Waste Management Office
City Transport Development and Management Office
Development Academy of the Philippines
Department of Budget and Management
Department of Interior and Local Government
Department of Energy
Department of Finance
Department of Transportation
Disaster Risk Reduction Management Office
Global Covenant of Mayors for Climate and Energy
Greenhouse Gas
Intended/Nationally Determined Contributions
International Climate Initiative
Local Climate Change Action Plan
The Local Development Investment Plan
Local Government Unit
National Capital Region
Nationally Determined Contributions
National Economic and Development Authority
National Framework Strategy on Climate Change
Tons of Carbon Dioxide Equivalent
Traffic and Parking Management Office
United Nations Framework Convention on Climate Change
Waste Analysis Characterization Study

# **II. BACKGROUND**

The Philippines is extremely vulnerable to climate change with its associated disaster and climate risks. As the country steps forward to finalize and submit its Nationally Determined Contributions (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC), it will continue to align its philosophy of addressing the changing of the climate through mitigation as a function of adaptation, thereby promoting lowemission development and sustainable-inclusive growth. Sub-national governments' support for the national governments' directions is crucial to achieving these goals.

The Climate Change Act of 2009 (Republic Act of 9729) is the primary national law regarding climate action of the Philippines. It aims to "systematically integrate the concept of climate change in various phases of policy formulation, development plans, poverty reduction strategies and other development tools and techniques by all agencies and instrumentalities of the government." RA 9729 led to the formulation of the National Framework Strategy on Climate Change (NFSCC) 2010-2022, which outlines the country's strategic response to climate change in terms of planning, research and development, extension, and monitoring activities. The framework envisions a "climate risk-resilient Philippines with healthy, safe, prosperous and self-reliant communities and thriving and productive ecosystems." This guidance document views mitigation as a function of adaptation. RA 9729 reaffirms the important role of LGUs in addressing climate change as "the frontline agencies in the formulation, planning, and implementation of climate change action plans" (Section 14, RA 9729). LGUs are mandated to develop Local Climate Change Action Plans (LCCAPs) reflective of their social, economic, and environmental conditions. The LCCAP should also be consistent with the Local Government Code of 1991 (RA 7190) and with national priorities and strategies as described in the NCCAP.

As one of the oldest and most prosperous cities in the Philippines, Pasig City is located in a busy and compact Metro Manila, the National Capital Region (NCR) of the country. With a dynamic economy, hosting at least 755,000 people in its residential, industrial, and commercial hubs, it is among the top ten most populous cities in the Philippines.

Pasig City's vision states that **"We envision Pasig City to be a model community of empowered citizens with high quality of life."** The City Government's mission seeks to empower its constituents and make Pasig a livable community through:

(1) People-centered development that nurtures caring, innovative, healthy and locally-rooted but globally-competitive Pasigueños;

(2) Business-friendly policies that foster competitiveness and inclusive economic growth;(3) Resilient, safe and sustainable riverine place-making;

(4) Good governance marked by inclusivity, participation, transparency, competence and sound fiscal management, and

(5) All supported by a responsive and inter-connected digital and physical infrastructure.

Pasig City is also a member of the Global Covenant of Mayors for Climate & Energy (GCoM) the largest global alliance for city climate leadership. Together with more than 10,000 cities and local governments worldwide, Pasig City shares a long-term vision to work towards a resilient and low-emission society. To operationalize

this, Pasig City joined selected cities from Indonesia, the Philippines, and Vietnam in the formulation and implementation of their respective City Promises.

The City Promise is characterized by strong GHG emissions reduction commitments and a local climate action plan directed by concrete targets, enhanced multi-stakeholder engagement, and integrated strategies. It draws inspiration from the "Promise of Seoul", the South Korean capital's ambitious, comprehensive strategy and climate action plan to reduce 20 million tons of greenhouse gas (GHG) emissions by 2030. The plan's core feature is its strong engagement of stakeholders. The Promise of Seoul expands participatory governance with enhanced citizen involvement, engaging 3.5 million of Seoul's 10 million residents in various initiatives. Citizens played a vital role in shaping the action plan and making their pledges to reduce GHG emissions.

The Promise of Seoul is an integrated plan and a comprehensive strategy covering ten (10) urban sectors: *energy, transport, air quality, resource circulation, water, ecology, urban farming, health, safety, and urban planning.* More importantly, it is an action-oriented plan with strong vision, priority areas, and specific action plans in identified priority areas for citizens, businesses, and the city administration. As a means of implementation and monitoring, concrete performance indicators are in place to measure performance of every initiative.

The formulation of the Promise of Pasig is supported by the Ambitious City Promises (ACP) project, an international initiative implemented by ICLEI – Local Governments for Sustainability in cooperation with the Seoul Metropolitan Government and with funding support from the International Climate Initiative (IKI) program of the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU).

# III. SETTING THE SCENE: UNDERSTANDING PASIG CITY'S LOCAL CONTEXT

### **A. City-level GHG Emissions Profile**

One of the initial steps undertaken by Pasig City in defining its "City Promise" was developing its community-level GHG inventory. This was initiated with ACP support and was jointly administered by ICLEI and the City Environment and Natural Resources Office (CENRO) of Pasig City. Results of this inventory informed Pasig City in setting measurable, reportable, and verifiable GHG emissions reduction targets and associated mitigation actions.

2017 was selected as the base year for Pasig City's GHG inventory; there was no recorded calamity or abnormal occurrences during this year, thus serving as an "average" year for the city. The selected year was used as a basis for setting and tracking performance progress towards an established GHG emissions reduction target over a predetermined time. Upon

the completion of its community-level GHG emissions inventory, three (3) sectors were identified as major contributors of GHG emissions: Stationary Energy (*electricity consumption*, *stationary fuel consumption*), Transport (*on-road*), and Waste (*solid waste, wastewater*).



City-level GHG Emissions Inventory of Pasig City, 2017

Figure 1. City-level GHG emissions inventory of Pasig City 2017

As depicted in Table 1, the overall calculated GHG emissions of Pasig City resulted in an estimated value of **1,482,272.30 tCO**<sub>2e</sub> for 2017. In terms of its share of the total GHG emissions of the country, Pasig City accounts for **0.67%**<sup>1</sup>. The stationary energy accounted for the majority of the overall GHG emissions of Pasig City. The breakdown of the sectors and sub-sectors are as follows:

1. Electricity consumption and stationary fuel consumption of residential, commercial, and industrial sub-sectors yielded the highest share of emissions (86%) with 1,236,456.73 tCO<sub>2e</sub> (83%) for electricity and 38,821.26 tCO<sub>2e</sub> (3%) for stationary fuel.

2. The transport sector (on-road) yielded 170,948.59 tCO<sub>2e</sub> (12%).

3. Finally, GHG emissions from the waste sector amount to  $36,045.72 \text{ tCO}_{2e}$  (2%). This included municipal solid waste ( $30,609 \text{ tCO}_{2e}$ ) disposed by the city in a landfill facility located outside the city's territorial boundary in Rodriguez, Rizal, as well as domestic wastewater treated and disposed ( $5,435.96 \text{ tCO}_{2e}$ ) within Pasig City.

	GHG Emissions in tCO <sub>2e</sub>					
Sector and sub-sector	Scope 1 (Direct emissions)	Scope 2 (Indirect emissions)	Scope 3 (Emissions occurring outside the city boundary as a result of in-city activities			
Stationary energy > Residential buildings	24.52	350,834.80	Not Estimated			
Stationary energy > Commercial buildings & facilities	32,166.71	642,357.18	Not Estimated			
Stationary energy > Institutional buildings & facilities	Included Elsewhere	Included Elsewhere	Not Estimated			
Stationary energy > Industrial buildings & facilities	6,630.03	243,264.75	Not Estimated			
Transportation > On-road	170,948.59	Included Elsewhere	Not Estimated			
Waste > Solid waste disposal	30,609.75	Included Elsewhere	Not Estimated			
Waste > Wastewater	10,435.13	Included Elsewhere	Not Estimated			

### Table 1. Pasig City's GHG Inventory Analysis for the Energy,Transport, and Waste Sectors2

### **B. Policies and Programs Supporting Climate Change**

The pronouncement of President Rodrigo Roa Duterte at the ASEAN 2020 Summit strengthened the direction of the country for climate action. Per the President of the Philippines, *"The NDC will communicate to the world our resolve to pursue low-carbon development, as well as the support we need from developed countries in terms of climate finance, capacity building, and technology transfer in accordance with the Paris Agreement"*<sup>3</sup>.

As part of this assertion, the Climate Change Commission submitted and communicated the NDC<sup>4</sup> of the Philippines. These commit to a projected GHG emissions reduction and avoidance of 75%—2.71% of which will be unconditional and 72.29% conditional—for the sectors of agriculture, wastes, industry, transport, and energy from 2020 to 2030. This commitment is referenced against a projected business-as-usual cumulative economy-wide emission of 3,340.3 MtCO<sub>2e</sub> for the same period. Aligning the NDC with the Climate Change Act (RA 9729) is the legal basis for the formulation of the National Climate Change Action Plan (NCCAP).

As the strategic priorities identified in the NCCAP—namely, the Environmental and Ecological Stability, Human Security, Sustainable Energy, Climate-Smart Industries and Services, and Knowledge and Capacity Development—also fall under the sectoral development concerns of the CDP, Local Government Units (LGUs) are able to enhance their programming, project identification, investment programming and prioritization towards adaptation and mitigation. This complements the Climate Change Act with Memorandum Circular No. 2014-135 (or the Guidelines for the Formulation of the LCCAP, as released by the DILG. Section 3.3.5 of the Memorandum Circular) that strongly suggests LGUs to identify mitigation options to help reduce their carbon footprints and contribute to efforts in addressing climate change.

Highlighted from the Department of the Interior and Local Government's (DILG) "Local Planning Illustrative Guide: Preparing and Updating the Comprehensive Development Plan (CDP)", the Local Government Code (RA 7160) provides the legal basis for the formulation of the CDP. It serves as a guide to the promotion of the general welfare of residents through the identification of multi-sectoral programs, projects, and activities. The Local Development Investment Plan (LDIP) is the principal instrument for implementing the CDP. It translates the CDP into programs and projects, then prioritizes and selects those worthy of LGU funding in the annual general fund budget or through special fund generation schemes. Conversely, the Comprehensive Land Use Plan (CLUP) facilitates long-term management of the local territory. As the skeletal-circulatory framework of the territory's physical development, it identifies areas where development can and cannot be located and directs public and private investments accordingly.

Subsequently, climate investment programming was introduced through the framework of Climate Change Expenditure Tagging (CCET). It is the systematic identification and prioritization of climate programs, projects, and activities. Then, CCET matches these with financial resources to be implemented within a specified time frame (adapted from DILG-NEDA-DBM-DOF JMC 1 Series 2007). This resulted in a Joint Memorandum Circular 2014-01 issued in August 2014 by DBM, CCC and DILG, encouraging LGUs to track their climate expenditures in their Annual Investment Programs. In addition, Joint Memorandum Circular 2015-01 introduced the revised guidelines for tagging and tracking climate change expenditures in the local budget (Annex A, pages 25-30). Local Budget Memorandum No. 70 (issued June 2015 by the DBM) requires LGUs to prepare their Annual Investment Program (AIP) using the revised AIP form.

The Promise of Pasig's framework aligns existing local policies, programs, and activities for climate action, outlining clear entry points from different decision-makers, actors, and stakeholders to effectively support and implement the City Government's LCCAP. This also includes strengthening its LCCAP's M&E system through a developed MRV structure that meets global standards to achieve an ambitious goal for climate change.

Table 2 presents the list of city-level plans reviewed and considered during the formulation of the Promise of Pasig.

The Promise of Pasig's framework aligns existing local policies, programs, and activities for climate actions.

	Pasig City Community – Level Greenhouse Gas (GHG) Inventory Report 2017
AMBITIOUS CITY PROMISES Dependenters from and a more PASIG CITY COMMUNITY - LEVEL GREENHOUSE GAS (GHG) INVENTORY REPORT 2017	The inventory report describes and accounts for the GHG emissions of Pasig City from the following sectors: Stationary energy, Transport (in-boundary road transport), and Waste (solid waste and wastewater). Specifically, the objectives of the inventory are as follows:
	<ol> <li>Define and understand the current GHG emissions scenario of the city as attributed to its activities;</li> <li>Develop and provide an informed basis for assessing mitigation opportunities (i.e., policies and technologies) to reduce emissions and/or increase carbon sinks, and</li> <li>Establish data sets to monitor and assess local mitigation actions.</li> </ol>
	Pasig City Local Climate Change Action Plan (LCCAP): A Convergence of Mitigation and Adaptation 2016-2026
	Pasig City's LCCAP vision and mission is to:
Pasig	"Envision Pasig City to be a model community of empowered citizens with high quality of life." and seek to empower its constituents and make Pasig a livable community through:
Pasig City Local Climate Change Action Plan (LCCAP): A Convergence of Mitigation and Adaptation 2016-2026	<ol> <li>People-centered development that nurtures caring, innovative, healthy and locally-rooted but globally-competitive Pasigueños;</li> <li>Business-friendly policies that foster competitiveness and inclusive economic growth;</li> <li>Resilient, safe and sustainable riverine place-making;</li> <li>Good governance marked by inclusivity, participation, transparency, competence and sound fiscal management, and</li> <li>All supported by a responsive and inter-connected digital and physical infrastructure.</li> </ol>

 Table 2. Policies and Programs Supporting Climate Change

	CLWUP Brief Profile and the CLWUP
	(LCCAP ANNEX A)
LCCAP 2016-2026 ANNEX A  1. Structure Plan of Pasig City The Brocks The present is the should be address to be present. It examples that the present is the should be address of the present of the prese	This Plan presents the physical translation of ideas before any land-use change can be proposed. It indicates, in general terms, various activity settings across the city based on an assessment of physical constraints and potentials, among others. The goals of the Structure Plan are as follows:
<text><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><text></text></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></text>	<ol> <li>To present existing and emerging growth areas based on an analysis of recent trends;</li> <li>To identify areas within the city where human activities should not occur for environmental or ecological reasons;</li> <li>To identify areas to be retained in their present use, maximizing only those with high growth potentials; and</li> <li>To identify possible new or enhanced routes to improve local, metropolitan, and international connectivity.</li> </ol>
	Although the LCCAP covers both adaptation and mitigation, hydrometeorological hazards are yet to be included in the plan, thus somewhat constraining it.
LCCAP 2016-2026 ANNEX B Tate 2: A Additional Transmission and Augusta for the Societ State Allow the Vision State Andrea	CDP – LDIP
No         Description         Descripion <thdescription< th=""> <thdescr< td=""><td>(LCCAP ANNEX B)</td></thdescr<></thdescription<>	(LCCAP ANNEX B)
	<ul> <li>The Plan outlines the following programs and projects for the following:</li> <li>1. Institutional Sector,</li> <li>2. Social Sector,</li> <li>3. Economic Sector,</li> <li>4. Environment Sector,</li> <li>5. Land Use Sector,</li> <li>6. Infrastructure Sector, and</li> <li>7. Utilities Sector.</li> </ul>
LICEAP 2016-2026 AMPER C LIST OF OH-GONG AND PROPOSED LOW EMISSION ALTERNATIVE DEVELOPMENT STRATEGY (LEADS) FUTURE PROGRAM	LCCAP 2016-2026
PRADEX ITTLE     PRADO OF OPERATION UNDER PRADO OF OPERATION     RELEXANDED UNDER PRADO OF OPERATION     RELEXANDED UNDER PRADO OF OPERATION     LED Anto Fitting all government     20.000.000 00 2002-2002     traiting and anto Fitting     10.000.000 00 2012-2000     Toglerening Department	(LCCAP ANNEX C)
Control         Provide         Englishing         Eng	List of Programs (ongoing, proposed, and future): Low Emission Alternative Development Strategy (LEADS)





### Stakeholder Engagement in Local Climate Action Planning

Assessment current of Pasig City's showed that inclusivity processes and equality are embedded in the city's planning processes including an feedback mechanism. existina Pasiq City has a multi-sectoral and integrated approach to climate action with their inter-office linkages framework in their Climate Change and Greenhouse Gas (GHG) Management Council as shown in Figure 4. The governance framework provides a robust and strong integration of key stakeholders in the climate action planning and implementation process. Owing to the cross-cutting nature of climate actions, there are several departments and sectors within and outside the Pasig City government that have a role in preparing climate policy or delivering city's climate actions—through the engaging and building partnerships with external stakeholders, such as national government agencies, the private sector, non-profit organizations, universities, sectoral organizations, frontline groups, and citizens.

There are existing stakeholder engagement strategies being implemented in each city department where they understand the needs, interests, and influence of key stakeholders. It is supported by their existing feedback mechanism through the city government's previous "e-complaints application", which was later relaunched as "Ugnayan sa Pasig" in July 2019—a hotline for a 24-hour information access and complaints service lodged in the city's Public Participation, Accountability, and Transparency Unit. The project explored this current feedback channel and through the public consultation series, it has created meaningful dialogue between the City and its stakeholders establishing a sense of trust in the community knowing that their voices are heard and that they are contributing towards the planning and implementation of the City's policies, ordinance, and climate actions. Specifically, to achieve the ambitious climate target that is more ambitious than the one of the national governments, active engagement of the relevant stakeholders in changing the consumption behaviors is inevitable.





Inclusivity and equality are embedded in Pasig City's planning processes including an existing feedback mechanism.

### Methodology of Engaging Stakeholders in Climate Action Planning

Inclusive and value-laden engagement with various representatives and societal groups of the community enabled policy makers and technical staff of Pasig City to diversify their perspectives and action plans. While scientific data provides a basis for identifying priority sectors, engaging with stakeholders presents an opportunity to discover indigenous and local knowledge uncovering possible new solutions. Therefore, actions of citizens, especially mobilized by the civil society organizations, play irreplaceable roles in the achievement of GHG reduction targets.

The identification of actions and strategies employed methodological and participative processes to ensure that contributions from public and private stakeholders will be considered and given focus in the Promise of Pasig. Various areas of cooperation and support among the different stakeholders within Pasig City were identified to raise the probability of achieving the targets.

Putting the local stakeholders at the center of the Promise of Pasig presented an opportunity for the City to communicate about their climate efforts in a compelling and empowering way to the stakeholders. The local stakeholder mapping exercise has provided significant insights on the different stakeholders that the city has worked with and are currently working with who can be affected or influenced by the project's successful implementation. Following this, a two-part series of consultation and validation workshops were conducted and attracted more than 410 participants in total to solicit inputs of different stakeholder groups such as citizens, community groups, private sector, non-profit organizations, and cooperatives. It is understood that the local government of Pasig City works with a wide array of stakeholders internally and

externally. In particular, the stakeholders were asked of their existing strategies and programs which were deemed contributory to addressing climate change impacts and mitigating greenhouse gas (GHG) emissions.

The Public Consultation series provided a venue for different stakeholders to have a more transparent and active communication framework between stakeholders and their city officials. The first series of public consultation was conducted in 2018 that introduced the ACP project to the stakeholders of Pasig City; stimulated the discussion about the City Promise; and encouraged stakeholders to be involved in its development and subsequent implementation to convene all relevant and concerned stakeholders to gather their insights and feedback supplemented by popularized discussions about the concepts of climate change, low emission development, and citizen engagement. It also served as a scoping activity to surface the stakeholders' insights, concerns, and commitments regarding the urban sectors tackled by ACP.



Figure 2. The framework of stakeholder engagement as followed by ACP implementation in Pasig City It was followed by specific consultations to carefully dissect and discuss issues and opportunities related to energy efficiency and conservation, solid waste management and water conservation, ecology and urban agriculture, health and safety, and transportation and air quality that can support in developing and implementing the Promise of Pasig through pledges and identified citizen engagement activities. This allowed stakeholders to evaluate the urban sectors' several strategies, policies, and programs espoused on existing development plans regarding the City's pursuit of low emission development as part of the Promise of Pasig. The activity also involved identification of activities that stakeholders believe will impact the environment, the commitments stakeholders are ready to pledge in support of the Promise of Pasig, and the necessary backing from the local government to follow through with these commitments.

Following the results and recommendations of the first series of public consultation, the second series aimed for a sustained conversation and debate regarding local climate action in Pasig City. Its target was to continue drawing up recommendations for appropriate citizen engagement strategies andfortheresults of the public consultation to inform the local government's development planning and institution of relevant local policies. Its particular intentions were to: 1) discuss and validate the City Promise of Pasia *City; 2) Present the results and significance of* the Greenhouse Gas (GHG) Inventory of Pasig City; and 3) Gather sectoral, organizational and individual pledges and commitments.

It featured more participant-centered discussions where the participants validated and shared their views and perspectives not only on the presentations but to the whole discussion process facilitated through focused group discussions (FGD), documented and presented by the sectoral groups in which they identified the challenges, recommendations, and

commitments and indicated which among these they deem should be prioritized by the local government. Through this process, it ensured that the perspectives of the participants were surfaced, guided by the items discussed in the Promise of Pasig presentation and the open forum discussion that followed. More importantly, the consultation surfaced definitive input to the targets, goals, and strategies outlined in the Promise of Pasig.



#### Stakeholder Engagement Platform

In order to reach a large number of stakeholders, including that of private individuals, a citizen engagement platform was established to solicit pledges and commitments in achieving the ambitious climate targets of Pasig City. The citizen engagement pledges collected from the public consultations and citizen survey ranged from making smarter choices (i.e., minimizing food waste and the use of plastic) to becoming more active in terms of civic duty (ensuring that the community segregates waste, that individuals keep themselves informed of environmentrelated news, and that the transport sector ensures that their members, the jeepnev drivers are always sharing the road with bikers and pedestrians). These pledge statements are then grouped according to the emerging priority sectors: energy, solid waste, and transport and air quality. Further, these were processed and analyzed in a way that each statement can be supported with a calculation of its emissions equivalent and GHG emission reduction or avoidance potential. It also provides a source of information for facts, trivia, and tidbits regarding the particular pledge statement.

A symbolic commitment setting also became a way to garner individual commitments from the stakeholders. This formalized the commitment of the participants to their participation and support to the Promise of Pasig. It reinforced amongst the participants their significant role in governance: that what they have to say about the local policies and programs matter; that there is a space for them to air their sentiments and grievances; and that

healthy, energy-efficient, green, and

they can influence the decision-making process of their local government in terms of priorities and relevance of policies and programs of the city. Moreover, it is hoped that behavioral changes have been instilled among the participants as there had been deepening of discussions prior to the pledges. The commitments received through the pledge boards are categorized in the following themes:

#### 1. Lifestyle Changes:

Received commitments recorded a high number of individuals pledging to make certain lifestyle changes that promote a low emission lifestyle. Commitments such as practicing proper waste disposal, biking or walking to work or school, saving electricity were common entries in the pledge board.

#### 2. Compliance to Policies and Ordinances:

The participants openly gave their thoughts to local policies related to the presented City Promise and requested clarification on local regulations that are either not clear or are not implemented with transparency. They also took advantage of the opportunity to engage other stakeholders, such as the representatives of electricity providers, among others, to clarify on existing policies adversely affecting them as consumers or to air sentiments of discontent. They have articulated their concerns and sentiments and were able to come up with recommendations on how to address the issues and challenges they have identified. Stakeholders also committed to being more proactive in knowing certain policies



and ordinances relevant to environmental management. The participants to the sessions were high-level representatives of their respective sectors. They were decision-makers from the organizations that they represented and were considered genuine representatives of the advocacies and sectors that they belong to.



#### 3. Knowledge Sharing and Dissemination:

Overall, the participants have also pledged to share their knowledge and tips about a more environment-friendly lifestyle to their peers, colleagues, and network.

Stakeholder engagement has shown its importance in the effective design and delivery of inclusive climate actions. Further, Pasig City must continue to map out and engage external stakeholders, particularly those hard-to-reach groups to understand and address the root causes and drivers of disproportionate climate risks and make informed policies and strategies. Better and more even representation among the different sectors can help harmonize between the issues raised by the different sectors which helps governance in distinguishing priorities in terms of policy development and implementation. The buy-in of both the local government's officials as well as the people who work on the ground are equally important in the public consultations to ensure sustained and genuine people's participation in the LGU's programs and project implementation. Acknowledging that the public consultations series is just the beginning of a healthy, transparent,

and inclusive dialogue between policy makers and the stakeholders should be embedded in the strategies that support the implementation of the Promise of Pasig. This has led to a grounded, bottom-up approach that can deliver policies and plans that address the peoples' concerns.

Moreover, an important step in the stakeholder engagement process is to develop a monitoring and evaluation framework in order to evaluate the impacts in achieving the objectives and in strengthening the relationships between the city government and the stakeholders. This will promote ownership in a way that the stakeholder's involvement is recognized in the monitoring and evaluation of the Promise of Pasig implementation.

In conclusion, the possibilities of the existing civil society organizations (CSOs) in the city ought to be additionally amplified by charging their participation as sectoral organizations. Their commitment to further success of public consultation is the ability to mobilize a greater number of participants and recognize the individuals who can significantly contribute to the conversations, henceforth guaranteeing better-quality outputs of the consultations. More importantly, this ensures that the Promise of Pasig is being driven towards the common and greater good of the Pasigueños. With this foundation, Pasig City can develop and implement climaterelated action plans and priorities that are informed by public interest.

Stakeholder engagement has shown its importance in the effective design and delivery of inclusive climate actions.



# C. Challenges and Opportunities

Although climate action plans, frameworks, and strategies are being transformed into a climate-focused lens (i.e., objectives and channels), a majority of these areas should be adequately supported to set the climate change goal in motion. The achievement of this goal can be supported through finance, policy, technology, infrastructure, labor, and information, among others. This would ensure increased capacity across modes for progress towards climate change mitigation goals, as well as adaptation targets mutually agreed upon by different actors and stakeholders.

Therefore, the Promise of Pasig is envisioned to progress towards developing a sustainable model city that would not only address climate change but also its local economy and—more importantly its constituents' prosperity. To realize this, the Promise of Pasig cuts across five key characteristics: (1) ambitious GHG reduction targets; (2) inclusive; (3) integrated & cross-sectoral; (4) actionable for all partners, and (5) measurable & verifiable.

The Promise of Pasig cuts across five key characteristics: (1) ambitious GHG reduction targets; (2) inclusive; (3) integrated & cross-sectoral; (4) actionable for all partners; and (5) measurable & verifiable.



Ambitious GHG reduction targets A conditional commitment to reduce or limit the increase of GHG emissions or emissions intensity by a specified quantity, to be achieved by a future date.



A climate change action plan that is longlasting and attains consensus from all relevant stakeholders, where continuous stakeholder engagement generates ownership, encourages cross-sectoral collaboration, increases awareness, and builds capacity.



A comprehensive, integrated, and crosssectoral approach, encompassing at least eight (8) different sectors, namely: (i) Energy, (ii) Air, (iii) Transport, (iv) Resource Circulation, (v) Water, (vi) Ecology, (vii), Urban Farming, (viii) Health, and (ix) Safety, to encourage multiple agencies to integrate the objectives of the City Promise (together with climate resilience) into their sectoral plans.



Actionable for all partners

**Integrated &** 

cross-sectoral

Inclusion of various types of policies and actions as well as plans which include sufficient detail so that they are actionable by the appropriate stakeholder groups.



Measurable & verifiable

Well-defined key performance indicators that will be used to track the performance of the policies or actions for the climate change action over time. Where, through the continuous monitoring of implementation, the progress of the climate change targets, and action plans shall be reported through an MRV platform designed uniquely for the City of Pasig. This, in conjunction with regular updates through, assessment, re-calculation, and reporting of its GHG inventory.

### Figure 3. Key Characteristics of a City Promise

# IV. FORMULATION PROCESS OF THE PROMISE OF PASIG

The Promise of Pasig was developed through comprehensive, methodological, and participatory processes. It is made consistent with the Philippines Intended/Nationally Determined Contributions (I/NDC), Pasig City's LCCAP, CCET Methodology, the National Disaster Risk Reduction and Management Plan, and other nationally published documents by the Philippine government on how to combat climate change.

1. Conduct of the 2017 Community-Level Greenhouse Gas (GHG) Inventory.

2. Consultations on the formulation of the Promise of Pasig were organized and conducted with various institutions, civil society organizations (CSO), academia, and relevant business sectors, among other actors including:

a. **National Project Advisory Group (NPAG) of ACP:** An NPAG was convened to provide technical and policy guidance to the local government unit (LGU) and ICLEI to ensure that the processes undertaken and outputs delivered are consistent with the national policies and priorities. The NPAG is composed of the following members: *Department of Environment and Natural Resources (DENR), Climate Change Commission (CCC), Department of Energy (DOE), Department of Transportation (DOTr), Department of the Interior and Local Government (DILG), League of Cities of the Philippines (LCP), and UN-Habitat Philippines.* Figure 4 shows the composition of the NPAG.

b. **Climate Core Team of Pasig City:** Concurrently, the City Climate Core Team of Pasig City (formulated through Executive Order No. 08, series of 2017) was revived. Recommendations to expand composition and functions of relevant LGU departments were identified and forwarded to CENRO for consideration and endorsement from the City Council. The proposed City Climate Core Team is composed of the following: *City Environment and Natural Resources Office (CENRO), Office of the City Mayor, Engineering Department, City Solid Waste Management Office (CDRRMO), City Health Office (CHO), City Disaster Risk Reduction and Management Office (CDRRMO), City Planning and Development Office (CPDO), City Transport Development and Management Office (CTDMO), Traffic and Parking Management Office (TPMO), Tricycle Operation and Regulatory Office (TORO), Public Information Office (PIO), Management Information System Office (MIS), Association of Barangay Council President (ABC), and General Services Office (GSO), Business Permitting and Licensing Office (BPLO). Figure 4 shows the proposed composition of the Climate Core Team of Pasig.* 





Figure 4. National Project Advisory Group of the ACP project in the Philippines



Figure 5. Proposed structure and composition of the Enhanced City Climate Core Team of Pasig City<sup>5</sup>

<sup>&</sup>lt;sup>5</sup> A full report of the proposed structure and composition of the enhanced City Climate Core Team of Pasig City is accessible with CENRO.

In the formulation of the Promise of Pasig, stakeholder engagements were organized and conducted with various city departments, institutions, civil society organizations (CSOs), non-government organizations (NGOs), and relevant business sectors among others during the public consultation series. Stakeholder engagements manifest in the form of a series of consultation and validation workshops among key stakeholder groups, such as the following:

c. Priv	vate	organ	izatios	tha	t support	and	deliv	ver	essential
public	serv	/ices	such	as	business	es,	electr	icity,	water
supply,	wast	ewater	sanitat	ion	infrastructure	es, ar	nd ot	ther	systems.

d. **First Series of Public Consultations:** This consultation series introduced the Ambitious City Promises project to the stakeholders of Pasig City. This series of public consultations was conducted in 2018 and was attended by 260 participants. Of the 260 participants, 111 were female while 142 were male. There were 7 attendees who did not share information about their sex and gender. Most attendees were officials and staff of Pasig City, while there were representatives that came from various barangays, and the private sector, which included businesses and industries within the city, academe, transport groups, and youth groups.

e. **Second Series of Public Consultations:** This series aimed for a sustained conversation and debate regarding local climate action in Pasig City. Two (2) consultation-workshops and one (1) validation session were conducted. The three (3) activities were attended by about 150 participants from at least thirty (30) different organizations representing the sectors of energy, solid waste, transport and air quality, ecology, DRRM and urban agriculture and representatives from different offices of the local government of Pasig.

3. Internationally recommended frameworks (i.e., GHG Protocol for cities), methodologies, and tools were used to identify potential opportunities to address climate change that served as an input to the Promise of Pasig.



## V. GHG EMISSIONS REDUCTIONS TARGETS OF PASIG CITY

Pasig City aims to undertake a **GHG emissions reduction target of approximately 20% by 2030 relative to its base year emissions of 2017.** This reflects an ambitious and robust cut of sectoral emissions through effectively monitored climate action. Ultimately, Pasig will be able to anticipate the trajectory of emissions as envisioned by the Paris Agreement, and identify needs filling the gap towards a 1.5°C Pathway and current trajectories.

Before the end-of-goal period, Pasig City will reach an intermediate goal in 2025, when Pasig is assumed to have already reduced 8% of GHG emissions relative to its baseline. Under this end-of-goal period, the Pasig City government is assumed to undertake transformative action to support the reduction of  $CO_2$  emissions in the sectors of energy, transport, and waste.

To support this overall target, Pasig City also acts in accordance with the current directions of the Philippines' NDC as it looks into increasing access to climate finance, technology development and transfer, capacity building, and the implementation of climate policies and measures. Pasig City will continue to align its philosophy of addressing climate change to promote low-emission development and sustainable-inclusive growth. The uptake of circular economy, sustainable consumption, and sustainable production practices should prove essential.

Commitments will be realized through bilateral, regional, and multilateral cooperation. In addition, the benefits of the market and non-market mechanisms under the Paris Agreement Rulebook will continue to be explored, consistent with national circumstances and sustainable development aspirations. Mitigation actions which contribute to the City's recovery to the COVID-19 pandemic are also integrated.



Table 3 displays the GHG emissions targets on a sector-level vis-à-vis the emissions that will be reduced.

	Base year emissions (tCO <sub>2e</sub> )	Mitigation Goal Period					
		Interim		End of Goal Period			
Sector	2017	2025 emission value at 8% Reduction (tCO <sub>26</sub> )		2030 emission value at 20% Reduction $(tCO_{26})$			
		Emissions value for 2025	Emission reduced	Emissions Value for 2030	Emissions reduced		
Energy	1,275,277.99	1,118,320.70	156,957.29	1,020,222.39	255,055.60		
Transport	170,948.59	149,908.76	21,039.83	136,758.87	34,189.72		
Waste	36,044.96	31,608.66	4,436.30	28,835.97	7,208.99		
Total	1,482,271.54	1,299,838.12	182,433.51	1,185,817.84	296,454.46		

Table 3. GHG Emission Reduction Targets per Sector

The mitigation goal of Pasig City is presented in Figure 6. Based on the average multiyear emissions goal, the reduction of 20% sector emissions will result in 1,185,817.84  $tCO_{2e}$  by 2030. This is based on the calculated GHG emissions value for the base year of 2017. However, before the end of the mitigation goal period, Pasig City should meet an intermediate goal of 8% emissions reduction by 2025 relative to the base year, equivalent to 182,433.51  $tCO_{2e}$ .



Figure 6. GHG emissions reduction goal of Pasig City

## VI. STRATEGIC DIRECTIONS OF THE PROMISE OF PASIG

The Promise of Pasig and its relevant documents (i.e., Pasig City Community-level GHG Inventory Report 2017, among others) constitute the course to sustainably address climate change and outline the needed resources to support for the successful implementation of different programs, projects, and activities. The results are consistent with the Pasig City climate action programs, projects, and activities outlined in the Local Climate Change Action Plan (LCCAP) of 2016-2026 and Climate Change Expenditure Tagging Methodology. Furthermore, the Promise of Pasig was developed through comprehensive, methodological, and participatory processes following the ACP Framework.

### **A. GHG Emissions Reduction Target**

The Philippines first NDC commits to **"a projected GHG emissions reduction and avoidance of 75%**, **2.71% of which will be unconditional and 72.29% 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."** These sectors show parallelism in the climate goal areas and strategic climate priority areas of the Promise of Pasig—energy, transportation & air quality, waste, ecology & urban agriculture, health & DRRM. This determination was influenced by a comprehensive review of relevant policy issuances of the national and local governments and supplemented by the Promise of Seoul model. Consistent with the whole-of-government-and-society approach of the national government as well as the recognition of the value of collaborative participation of local governments in the implementation strategies identified by relevant national ministries, the city government shall play its part in delivering the NDC while also pursuing additional efforts and contributing to accelerated implementation of climate actions through the Promise of Pasig.

As Pasig City reorients towards its mitigation goals and commitments to limit GHG emissions, this section aims to discuss the following:

# **1.** Mitigation Goal Design for the Sectors of Energy, Transport, and Waste

Pasig City commits to a base year emission- average multi-year goal following the variability of emissions with respect to the target period. Wherein, base year emissions are removals in the base year for all gases and sectors included in the goal boundary and with an average multi-year goal that aims to reduce annual emissions by an average amount over a target period from 2018 to 2030 accommodating the variability in annual emissions.

### 1.1. ENERGY

As an overview for Pasig City's energy sector, the current GHG emissions is 1,275,277.99  $tCO_{2e}$  representing 86% of the city's total GHG Inventory. The goal for the sector is to reduce 20% below 2017 values by 2030, covering the sub-sectors of residential, commercial-industrial, and institutional. Table 4 enumerates the mitigation goal design for this sector.

Requirement	Information					
Goal type and goal level						
1. Mitigation goal type	Base year emissions goal					
(The way the goal is framed. This standard covers four goal types: base year emissions goals, fixed- level goals, base year intensity goals, and baseline scenario goals).	Multi-year goal					
2. The goal level (The quantity of emission reductions or emissions and removals within the goal boundary in the target year or period that the jurisdiction commits to achieving [%, tCO <sub>2e</sub> ]).	Reduction 20% below 2017 values by 2030					
3. If separate goals are chosen for in- jurisdiction emissions and out-of-jurisdiction emissions (or for different scopes), separate goal levels for in-jurisdiction and out-of- jurisdiction emissions (or for different scopes)	Sector-based goal: Energy					
Goal bou	ndary					
1. The percentage of total inventory emissions that is included in the goal boundary in the base year or start year of the baseline scenario, including the land sector, if relevant	86% (1,482,271.54 tCO <sub>2e</sub> )					
2. Sectors and subsectors included in the goal boundary, including definitions of covered sectors and subsectors	Electricity Consumption: • Residential • Commercial and Industrial (combined) • Institutional (separate)					

Table 4:	Energy	Sector	Mitigation	Goal	Design

### **1.2. WASTE**

This section provides an overview for Pasig City's solid and wastewater sector. The current GHG emissions is  $36,045.72 \text{ tCO}_{2e}$ , representing 2% of the total GHG Inventory of the city. The goal for the sector is to reduce 20% below 2017 values by 2030, covering the sub-sectors of residential, commercial, institutional and city-owned facilities (excluding industrial hazardous waste and infectious generator establishment). Table 5 enumerates the mitigation goal design for this sector.

Requirement	Information
Goal type and g	oal level
1. Mitigation goal type (The way the goal is framed. This standard covers four goal types: base year emissions goals, fixed-level goals, base year intensity goals, and baseline scenario goals).	Base year emissions goal Multi-year goal
2. The goal level (The quantity of emission reductions or emissions and removals within the goal boundary in the target year or period that the jurisdiction commits to achieving [%, tCO <sub>2e</sub> ]).	20%
Goal bound	ary
1. The percentage of total inventory emissions that is included in the goal boundary in the base year or start year of the baseline scenario, including the land sector, if relevant	2%
2. Sectors and subsectors included in the goal boundary, including definitions of covered sectors and subsectors	<ul> <li>Residential</li> <li>Commercial</li> <li>Institutional and city-owned facilities except for industrial hazardous waste and infectious generator establishment</li> </ul>

### Table 5: Waste Sector Mitigation Goal Design

### **1.3. TRANSPORT**

This section provides an overview for Pasig City's transport sector. The current GHG emissions is  $170,948.59 \text{ tCO}_{2e}$ , representing 12% of the total GHG Inventory of the city. The goal for the sector is to reduce 20% below 2017 values by 2030, covering the sub-sectors of on-road transportation. Table 6 enumerates the mitigation goal design for this sector.

Requirement	Information
Goal type and goal	level
1. Mitigation goal type (The way the goal is framed. This standard covers four goal types: base year emissions goals, fixed-level goals, base year intensity goals, and baseline scenario goals).	Base year emissions goal Multi-year goal
2. The goal level (The quantity of emission reductions or emissions and removals within the goal boundary in the target year or period that the jurisdiction commits to achieving [%, tCO <sub>2e</sub> ]).	20%
Goal boundary	
1. The percentage of total inventory emissions that is included in the goal boundary in the base year or start year of the baseline scenario, including the land sector, if relevant	13%
2. Sectors and subsectors included in the goal boundary, including definitions of covered sectors and subsectors	On-road transportation

### Table 6: Transport Sector Mitigation Goal Design

### 2. Allowable emissions

The second section would examine the maximum allowable level of GHG emissions at the city-level in the selected target period, to achieve the climate targets set in the previous section.

### 2.1. ENERGY

With Pasig City's energy sector emissions of 1,275,277.99 tCO2e in 2017, the mitigation goal of 20% reduction would possibly allow/permit the City to annually emit 25,505.56 tCO<sub>2e</sub> until 2030.

Requirement	Information
1. Allowable emissions in the target year (for single-year goals), in each year of the target period (for annual or average multi-year goals), or over the target period (for cumulative multi-year goals)	20% Reduction: 255,055.60 tCO <sub>2e</sub> 25,505.56 tCO <sub>2e</sub> /year
2. Allowable emissions for in-jurisdiction emissions and out-of-jurisdiction emissions (for users with separate goals for in-jurisdiction emissions and out-of-jurisdiction emissions)	Same with number 1, applying in- jurisdiction

### **2.2. WASTE**

With Pasig City's waste sector emissions of 36,045.72 tCO<sub>2e</sub> in 2017, the mitigation goal of 20% reduction would possibly allow/permit the City to annually emit 2,883.60 tCO<sub>2e</sub> until 2030.

#### Table 8: Waste Sector Allowable Emissions

Requirement	Information		
1. Allowable emissions in the target year (for single- year goals), in each year of the target period (for annual or average multi-year goals), or over the target period (for cumulative multi-year goals)	2,883.60 tCO <sub>2e</sub> /year		
2. Allowable emissions for in-jurisdiction emissions and out-of-jurisdiction emissions (for users with separate goals for in-jurisdiction emissions and out-of-jurisdiction emissions)	Same with number 1, applying in- jurisdiction		

### 2.3. TRANSPORT

With Pasig City's transport sector emissions of 170,948.59 tCO<sub>2e</sub> in 2017, the mitigation goal of 20% reduction would possibly allow/permit the City to annually emit 3,418.97 tCO<sub>2e</sub> until 2030.

Requirement	Information
Allowable emissions in the target year (for single-year goals), in each year of the target period (for annual or average multi-year goals), or over the target period (for cumulative multi- year goals)	3,418.97 tCO <sub>2e</sub> /year
Allowable emissions for in-jurisdiction emissions and out-of-jurisdiction emissions (for users with separate goals for in-jurisdiction emissions and out-of-jurisdiction emissions)	Same with number 1, applying in- jurisdiction

### Table 9: Transport Sector Allowable Emissions

### **B. Climate Change Support Landscape**

The methodology applied, as shown in Figure 7, comprehensively and analytically reviewed the relationships between the Promise of Pasig, its supporting data and documents, relevant local and national publications, and data on climate change mitigation. This resulted in the Promise of Pasig's Climate Change Support Landscape framework that synergizes and harmonizes climate strategies, timelines, cost, instruments, and supporting institutions, among others.

### Metholodogy: Climate Change Support Landscape City Promise of Pasig



Figure 7. Methodology for the Climate Change Support Landscape Framework

As presented in Figure 8, the total public funds being appropriated to combat climate change for Pasig City is approximately PHP 26 billion, though planning and budgeting annually fall on an expenditure of PHP 588.65 million, which only accounts for 2.27%, seen in Figure 9. It appears that it would most likely take 44 years to realize the full potential of Pasig City's climate goals if the funds are not efficiently mobilized and additional support from the national government and multilateral cooperation is established.

Climate Change Support Landscape							
Item No.	Strategic Climate Priority	<b>Public Funds</b> (Millions, PHP)	Annual Investments (Millions, PHP)	Pipeline/Tagged/Ear-marked			
				LCCAP ANNEX-A	LCCAP ANNEX-B	LCCAP ANNEX-C	
1	Energy (Egy)	1,053.50	8.00	-	63.50	982.00	
2	Transport and Air Quality (T&QA)	23,089.63	355.00	-	15,744.63	6,990.00	
3	Solid Waste (SW)	734.25	222.25	-	367.00	145.00	
4	Urban Agriculture (UA)	133.40	3.40	-	-	130.00	
5	Ecology (Eco)	600.00	-	-	600.00	-	
6	Water (W)	326.00	-	-	70.00	256.00	
7	Health and Safety (H&S)	428.10	-	-	423.10	5.00	
Total (Millions, PHP) 26,364.88 588.65			-	17,268.23	8,508.00		

Figure 8. Pasig City's Appropriation of Funds for Climate Change Action



Figure 9. Pasig City's Annual Investments for Climate Change Action

As seen in Figure 10, the ranking of financial support on climate change for Pasig City's strategic climate priorities are as follows: *transport & air quality (PHP 23 billion), energy (PHP 1 billion), solid waste (PHP 734 million), ecology (PHP 600 million), health & safety (PHP 428 million), water (PHP 326 million), and urban agriculture (PHP 133 million).* As can be seen in the graph below, most of the city's priority is on funding climate action plans related to transport and air quality.





Figure 10. Overview of Funding for the Climate Change Support Landscape

### **1. Climate Instrument and Institutional Support**

To achieve the vision for climate action, climate instruments for the Promise of Pasig were solicited from public consultations.

Climate instruments are mechanisms that will ensure effective implementation and more importantly, long-term sustainability of climate actions. Furthermore, by selecting the appropriate climate instruments, it will assist stakeholders and decision-makers/actors on how to properly safeguard and strengthen climate programs, activities, and projects. These instruments include infrastructure roll-out, research agenda, partnerships, capacity building for LGUs, advocacy, process streamlining, policy and ordinance compliance, knowledge sharing and dissemination; and lifestyle shift/change.

Moreover, Institutional Support is critical to this plan; for they formalize the implementation, process and support effective flow of available resources and management. Moreover, the institutional arrangements provide clarity on the specific tasks that need to be achieved to fulfill the targets of the plan, and establish a governance schema for external stakeholders to provide their areas of support and cooperation. Identified institutional support are from the city government, national government agencies, academia, private and business sectors, and non-government organizations.

These climate instruments and institutional support have been identified and included per priority climate action in Annex 1. The climate instruments and institutional support outlines what the City should considered when designing-implementing a climate action for a specific urban sector that the they can use as levers for plan implementation.

### C. Climate Change Development Framework Elements

The formulation of the elements illustrated in Figure 11 for the Promise of Pasig's climate change development framework was largely modeled on the 2011-2028 National Climate Change Action Plan (NCCAP). Similarly, it ensures alignment with existing policies and plans geared towards climate action, such as the 2017-2022 Philippine Development Plan (PDP), updated NDC, Pasig City's LCCAP, CCET for LGUs, and others.

Fundamental to the elements were the mitigation goal and support landscape that chartered a course of enhanced transparency for achieving the identified climate actions.

As illustrated in the figure, a methodological approach was designed to achieve the Promise of Pasig. The process stems from its vision (1), through the climate change goal (2) and the respective strategic climate priority, strategic climate sub-priority, and the climate instruments (3 – 5). Then, formulating the climate program, activity, and project (6), combined with the necessary institutional support (7) to ensure accountability of climate action plans, and lastly, a Measurable, Reportable, and Verifiable (MRV) mechanism that would effectively re-evaluate if the targeted deliverables are achieved within the prescribed timeline/timeframe, allows the Promise of Pasig to become reality.

Additionally, in preparation for the final submission of the Final Biennial Update Reports (BURs) for developing country parties by no later than December 31, 2024, activities can already start to assess data availability, capacity, gaps, and constraints in support of the first Biennial Transparency Report (BTR), among other necessary site in transition to the ETF.



Figure 11. Elements of the Climate Change Development Framework

### **D. Vision**

The Promise of Pasig is grounded by Pasig City's vision of a *"Model community of empowered citizens with high quality of life."* 

The City Government's mission is sought to empower its constituents and make Pasig a livable community through:

(1) People-centered development that nurtures caring, innovative, healthy and locally-rooted but globally-competitive Pasigueños;

(2) Business-friendly policies that foster competitiveness and inclusive economic growth;

(3) Resilient, safe and sustainable riverine place-making;

(4) Good governance marked by inclusivity, participation, transparency, competence and sound fiscal management; and

(5) Support via responsive and inter-connected digital and physical infrastructure.

Pasig City's vision statement served as a foundation in framing the strategic directions of the Promise of Pasig intended to also fulfill the following key characteristics: (1) **Ambitious GHG reduction targets**; (2) **Inclusive**; (3) **Integrated and Cross-sectoral**; (4) **Actionable for all partners**; and (5) **Measurable and Verifiable** (see the section on "Challenges and Opportunities").

### E. Climate Goals and Strategic Climate Priorities

To further dissect what will allow for easier operationalization of Pasig City's GHG reduction targets, the Promise of Pasig has adopted the urban sectors of the Promise of Seoul<sup>6</sup> model and has broken down its targets into five (5) climate goal areas and nine (9) strategic climate priority sectors.

Climate Goal Areas	Energy	Transport	Waste	Ecology	Health & DRRM
Strategic Climate Priority Sectors	Renewable energy, energy efficiency & conservation	Transport Air quality	Solid waste Wastewater	Urban agriculture Ecology	Health Disaster risk reduction & management

These identified areas entail strategic climate priority sectors applied to Pasig City's climate action setting. At present, the Promise of Pasig conditionally commits to reduce GHG ( $CO_{2e}$ ) emission by 20% by 2030 relative to its base year emissions of 2017. The reduction of  $CO_{2e}$  emissions will come from three (3) sectors: Energy, Transport, and Waste. However, the Promise of Pasig can progress towards conditional climate goal commitments upwards of 30% to 40%, given that the sectors for ecology and urban farming have yet to be quantified. Given current infrastructure plans in the pipeline for the transport sector, these would further strengthen the success factors of the Promise of Pasig.

<sup>6</sup> The Promise of Seoul model is characterized by climate actions implemented under the following urban sectors:

energy, air, transport, resource circulation, water, ecology, urban farming, health safety, and urban planning.
# F. Strategic Climate Sub-Priorities and Climate Programs, Activities & Projects

This section discusses the different strategic climate subpriorities and provides a sample of their corresponding objectives and identified programs, activities and projects (PAPs). A full list of the indicators and PAPs can be found in the Annex. These inputs were gathered from the review of existing LGU plans and series of consultations with the City Climate Core Team and the broader public.

# 1 – Energy

Pasig City is home to energy-intensive business hubs, including warehouses, hotels, malls, business process outsourcing companies, and multi-use commercial complexes, among others, that significantly contribute to the city's continuing economic growth and urbanization. Electricity consumption of commercial and institutional buildings commanded a remarkable share of overall electricity use in Pasig City, according to Meralco, the utility distributor in Metro Manila. Stationary fuel consumption, despite an evidently lower GHG emissions share, is considerable across all sectors (residential, commercial, industrial), as this encompasses cooking, lighting, heating, and cooling. Therefore, the energy sector had the lion's share of 86% of the total estimated GHG emissions of Pasig City.

The city began its initiatives in 2016 to reduce emissions in the energy sector by providing energy-efficient lighting. This started in all public buildings and utilization of LED lighting in proposed infrastructure projects, with complete roll-out lasting until 2026. Pasig has also made efforts to find renewable energy sources in the form of solar photovoltaic power installed on rooftops. The city's emphasis on renewables facilitates further expansion, since innovative, novel sources will likely become a substantial part of the city's future energy sector.



# Strategic Climate Priority: Renewable energy, energy efficiency, and conservation

Strategic Climate Sub-priority: Promote energy conservation and energy efficiency

• Objective: Pasig City shall reduce its electricity consumption by promoting energy efficiency and conservation practices and technologies.

# Climate Change Mitigation Action 1:

# City-wide Energy Efficiency and Conservation (EE&C) in the government, residential, and commercial sectors

### **Indicator and Sample of Pledged Actions**

100% of newly constructed public and private buildings and facilities adopted energy and resource efficient building designs, technologies, and practices according to the Local Green Building Code of Pasig City by 2030.

#### Local Government

• Define the scope and requirements of the Local Green Building Ordinance and ensure adequate information dissemination to all building owners and managers, providing them with benefits of renewable energy and greening implementation.

• Strict enforcement and monitoring of compliance to the Local Green Building Ordinance.

• Set institutional structure within the City Engineering Department that shall evaluate energy performance of buildings in Pasig, together with volunteer energy welfare workers.

• Introduce incentive mechanisms such as tax discounts, accelerated processing of business permits, and recognition awards for green building best practices among commercial buildings.

#### **Businesses and Institutions**

• Intensify existing efforts in reducing their overall electricity consumption through ambitious EE&C targets and measures, and reporting such to LGU.

• Distributors, manufacturers, hardware stores should make clean energy technologies available and accessible for consumers.

• Pioneer Float Glass: Recycle culets as fuel input instead of bunker fuel and use glass shards as an alternative fuel.

• Adhere to the regulations set forth in the Local Green Building Ordinance.

Citizens

• Purchase energy efficient appliances (should be closely linked with eco-labels).

• Use DOE's online-based platform www.wattmatters.org.ph to understand electricity consumption patterns and make informed decisions when purchasing and using energy- and cost-efficient appliances.

• Register at Meralco to get peak and off-peak hours in using electricity. Take advantage of off-peak electricity times when it is charged at a reduced price.

• Practice energy conservation in the households.

50% of households and 50% of SMEs supported in shifting to energy-efficient lighting and/ or energy-efficient AC systems.

Local Government

• Expand distribution of energy efficient lighting (e.g., LED bulbs) to households and SMEs.

• Information dissemination and awareness-raising on available energy-efficient lighting and AC systems and its co-benefits to users across different stakeholders or building owners.

**Businesses and Institutions** 

• SMEs shall voluntarily convert to more energy efficient lighting and AC systems.

Citizens

• Households have availed energy efficient lighting and/or AC systems offered by the LGU.

• Households shall voluntarily convert to more energy efficient lighting and/or AC systems.

**Indicator and Sample of Pledged Actions** 

180 energy efficiency advocates trained to do building energy audits by 2030.

19 energy welfare workers trained to conduct building energy audits by 2030.

Local Government

• Capacitate volunteer energy welfare workers who shall conduct free energy audit services in public and private buildings in Pasig City.

• Trained energy welfare workers maintain a database of energy performance of buildings in Pasig City including RE installations in the city in cooperation with Meralco's net-metering program.

#### **Businesses and Institutions**

• Meralco to establish a formalized partnership with the LGU to promote free energy buildings audit services by the former.

• Avail free energy audit services offered by Meralco for more informed adoption of appropriate and cost-effective EE&C measures.

• Avail free energy audit services offered by Meralco for more informed adoption of appropriate and cost-effective EE&C measures.

*3 high school students per school year in public and private schools trained as energy efficiency and conservation advocates.* 

#### **Local Government**

• CENRO and PIO in consultation with DOE, DepEd, Meralco and other stakeholders deemed relevant shall develop training modules and advocacy materials on energy efficiency and conservation advocacy for student-advocates.

• LGU's Environmental Department through Public Relations and Environmental Education Division will facilitate training for Youth Organization in different sectors (ToT) on Energy Efficiency and Conservation in partnership with the Department of Energy (DOE), Department of Education (DepEd), Meralco and other stakeholders available for the program.

#### **Businesses and Institutions**

• Meralco to provide technical inputs and review to knowledge products (training modules) and advocacy materials to be developed.

• Sponsor EE&C scholars/advocates in schools.

• DOE to provide technical inputs and review knowledge products (training modules) and advocacy materials to be developed.

• Local secondary public and private schools to coordinate with the LGU in the mobilization of youth advocates.

• Local secondary public and private schools to explore potential integration of energy efficiency and conservation concepts in curriculum.

• Support the LGU in the development of IEC materials as well as in the design and implementation of energy efficiency and conservation campaigns in barangays and schools to be led by trained student-advocates through various means such as expert inputs and financial assistance, where applicable.

#### Citizens

• Participate in training and campaigns by student-advocates and the LGU.

• Parents of student-advocates support in pooling funds to augment and sustain resource availability for campaigns developed and implemented by student-advocates.



30 barangays reached by the Energy Efficiency and Conservation campaigns.

Local Government

• Barangay officials develop awareness-raising campaign materials and plan in partnership with the city government, DOE, Meralco, academe and/or with other relevant stakeholder groups.

• Implement pilot demonstration projects on barangay facilities (e.g. energy audit, cost-benefit analysis, switch to more energy-efficient equipment such as lighting, AC, and refrigerators.

**Businesses and Institutions** 

• Support the barangay in the implementation of its energy efficiency and conservation plan through various mechanisms (e.g., funding support, technical assistance of demonstration projects) under its CSR programs.

Citizens

• Visit pilot demonstration projects of the barangay to learn and replicate solutions in own households (e.g., switching to energy-efficient lighting, AC, refrigerator).

• Participate in all awareness-raising campaigns by the barangay.

# **Indicator and Sample of Pledged Actions**

90 committed youth in various sectors trained as advocates of local climate action specifically energy efficiency and conservation, solid waste management, and air quality and transport that will be called as "Local Climate Change Advocates."

#### Local Government

• LGUs Environmental Department through Public Relations and Environmental Education Division will mobilize trained youth advocates (i.e., high school students) in the development and implementation of energy efficiency and conservation campaigns in all barangays.

• LGU's Environmental Dept. the Public Relations & Environmental Education Division will facilitate training for various Youth Organizations in different Sectors (ToT) on Energy Efficiency and Conservation in partnership with the Department of Energy (DOE), Department of Education (DepEd), Meralco and other Stakeholders available for the program.

### **Businesses and Institutions**

• Sponsor EE&C scholars/advocates in schools.

#### Citizens

• Youth groups external to the Sangguniang Kabataan (i.e., faith-based youth groups, hobby groups, issue-based youth groups, etc.) to explore how they can support the Local Climate Change Advocates and how they can integrate their goals and activities with one another.

# Strategic Climate Sub-priority: Expand the use of alternative/ renewables energy systems

• Objective: Pasig City shall enhance energy security and self-reliance by installing and operating renewable energy systems reducing electricity costs in public and private buildings by 2030.

# Climate Change Mitigation Action 2:

Renewable Energy Development and Implementation on city-owned buildings and facilities that meet technical design and requirements

### **Indicator and Sample of Pledged Actions**

50% of public buildings and facilities equipped with solar photovoltaic unitsfor own use by 2030.

#### Local Government

• Conduct inventory of public buildings that can feasibly install solar PV units.

• Install cost-efficient solar PV units in public buildings identified by the inventory.

• Perform regular M&E of solar PV installations to ensure optimum performance and record of performance in terms of electricity use reduction and cost savings.

#### **Businesses and Institutions**

• Public institutions to initiate a feasibility study with solar photovoltaic providers on efficient installation of solar PV units for their own use.

#### Citizens

• Consumer groups and citizens show recognition of the best practices of these buildings and facilities and further promote and advocate for widespread adoption of such practices by other building-owners (both public and private).



20% of private buildings and facilities install solar photovoltaic units by 2030.

**Local Government** 

• Provide incentives to building owners installing rooftop solar PV, such as priority lane in the processing of business permit as well as building and electrical wiring permit, real estate tax discounts or grace period, and/or waiving the processing fee of wiring permit for installing rooftop solar PV.

#### **Businesses and Institutions**

• Explore the feasibility of using alternative clean energy sources for own use (e.g., solar PV, solar street lighting in energy compounds) and explore options for financial assistance.

• Initiate the installation of cost-efficient solar photovoltaic units in private buildings identified by the inventory.

Citizens

• For building owners who intend to install and operate solar PV units, they enroll accounts to the net-metering program of Meralco.

• Initiate the Installation of cost-efficient solar photovoltaic units by homeowners & private individuals.

# Indicator and Sample of Pledged Actions

*All barangays (30) reached by IEC campaigns and training program on renewable energy and proper solar PV installation and management organized in all barangays by 2030.* 

Local Government

• Develop training and IEC materials on renewable energy and solar PV installation and management at the household level in coordination with DOE and Meralco.

• City Engineering Department to extend support to households interested in installing their own solar PV units.

**Businesses and Institutions** 

• DOE and Meralco to support the LGU in developing training modules and IEC materials on renewable energy and proper solar PV installation and management.

• Solar PV unit and service providers to coordinate with the LGU to inform of potential services to be offered to Pasigueños.

#### Citizens

• Participate in training on renewable energy and proper solar PV installation and management organized in their barangays.

• Advocate exploring renewable energy sources to community members.

# 2 – Transport and Air Quality



The transport sector composed 12% (170,948.59tCO<sub>2e</sub>) of the overall estimated GHG emissions of Pasig City in 2017. Pasig City has always been a favored location among various business developments and several institutions, due to its strategic and accessible location between the northern and southern ends of the National Capital Region (NCR). Consequently, the high volume of vehicular traffic has been a persistent challenge in mitigating detrimental effects of air pollution, particularly to the health of vulnerable groups of society.

The transport sector has been a constant priority of the city with its initiatives such as the Bike Lanes and Greenways Project, Carless Weekend Streets, and Bayanihan sa Daan that promote road sharing and greater preference to public transport and non-motorized transport options among Pasigueños. In addition, the deployment of e-tricycle units is becoming an instrumental strategy of the city to pursue low emission mobility options.

Strategic Climate Sub-priority: Increase efficiency of vehicles and improve access and pathways to different modes of transportation within the city

• Objective: Improved, as well as diversified, mobility options and public transportation services and facilities by 2030.

# Climate Change Mitigation Action 1:

Improved mobility and public transportation through continuing implementation of the Bayanihan sa Daan program

#### **Indicator and Sample of Pledged Actions**

20 km allocation of priority lanes for public transport (high occupancy vehicles, buses, jeepneys, etc.).

5 common public transport terminals or depots created.

25% decrease in total travel time by public transport along priority routes.

30 barangays are served by elderly and PWD-accessible public transport services.

# Local Government • Create and approve a city-wide transport master plan and local public transport route plan assuring the interconnectivity of different modes of transportation. • Ensuring coordination with transport sector groups to finalize the routes of public utility vehicles in Pasig City. • Provide spaces or common facility for PUVs for maintenance. • Creation of a transport desk that will hear and represent the transport sector's interests at the city level. **Businesses and Institutions** • Participate in public consultations to contribute to the formulation of the plans. • Support in the allocation of a terminal if the study supports that their area of business is strategic as a terminal to promote interconnectivity. Specifically, donate or lease at a lower price the identified land or site for the common terminal. • Encourage employees and members to use public transport. • Consider providing bus service for employees. • Transport sector groups support the PUV Modernization Program, provided with certain enabling mechanisms to ensure just transition. Citizens • Patronize and give priority to public transport options. • Advocate the use of mass transport within their own immediate networks. • Consider green procurement; preferring suppliers which advocate for sustainable delivery; transport and supply chain.



2,000 tricycle drivers re-fleeted to e-trikes by 2025.

500 registered business or logistics e-trikes by 2025.

5 common battery charging or swapping stations created.

Local Government

• Identification of tricycle drivers to be re-fleeted to e-trikes.

• Identification of businesses to receive e-trikes.

• Forge Memorandum of Agreement (MOA) to ensure the efficiency use and maintenance of e-trike units.

• Feasibility study on the identification of charging and swapping stations (e.g., location, capacity, maintenance requirements).

• Deployment of e-tricycle units and allocation to different sectors in the city.

• Subsidize the conversion or improvement of charging by having an alternator provision on e-tricycles using ordinary vehicle batteries.

• Ensure that tricycle drivers that are to be re-fleeted are provided with the available support from the LGU to uphold a just and fair transition.

**Businesses and Institutions** 

• Business establishments identified as recipients of e-trike units to forge Memorandum of Agreement (MOA) with the LGU to ensure the efficiency use and maintenance of e-trike units.

• Banks and other financial lending institutions to initiate partnership with the LGU to support and accelerate e-vehicle deployment through provision of financial resources.

• Banks and other financial lending institutions to support drivers interested in switching to e-tricycles.

• Meralco (e-sakay initiative) to provide technical and/or financial support in the conduct of feasibility study for the identification of charging and swapping stations.

• Support in the allocation of charging stations for e-tricycles if a study supports that their area of business fulfils the prerequisites of a charging station. Specifically, donate or lease at a lower price the identified land or site for the common terminal.

• Encourage employees and members to use e-tricycles as means of mobility within the city to sustain operation of e-tricycles.

Citizens

• Patronize and give priority to e-tricycles as means of mobility within the city.

50% of in-city commuters serviced by ferry boats.

Number of additional ferry boats procured.

*3 ferry stations upgraded.* 

**Local Government** 

• Procurement of additional ferry boats as alternative transport mode and route access through Pasig River.

• Memorandum of Agreement with MMDA for the operation and maintenance of M/B Mutya ng Pasig 1 and M/B Mutya ng Pasig 2.

**Businesses and Institutions** 

• Voluntary support for the maintenance and construction of green spaces and access paths on Pasig ferry stations by fostering partnerships with the LGU.

• Encourage employees and members to use the Pasig ferry boats as alternative public transport mode.

Citizens

• Patronize Pasig ferry boats as alternative transport mode and contribute to maintaining its cleanliness and efficiency.



Strategic Climate Sub-priority: Promote the use of non-motorized transportation

• Objective: Encourage people to shift to non-motorized transport through communityfriendly infrastructure.

# **Climate Change Mitigation Action 2:**

Construct an accessible bicycle network through the Pasig Basic Bicycle Network, and shift to improved pathways for non-motorized transport through continuing and expanding implementation of initiatives (such as Carless Weekends and Bike Sharing Program) through the installation of 50 bike sharing stations in the city

77.5 km additional allocation of bicycle lanes by 2020.

1,700 additional bicycle parking spaces allocated by 2020.

Local Government • City-wide inventory of bicycles used as an alternative transport mode in the city. • Barangays are encouraged to assist in allocating priority lanes such as walkways and bicycle lanes in inner roads within their villages. • Expand and improve bicycle lanes in the city through the "Bike Lanes and Greenways Project" by widening lanes and providing clear barriers and signages to protect riders, among others. • Provision of bicycle parking in public spaces throughout the city. • Provision of sustainable transport metric in the Local Green Building Ordinance of the city further stimulating LGU-business sector partnership to support the interconnectivity of public transport options (e.g., charging stations, bicycle stations). **Businesses and Institutions**  Provide bicycle parking in establishments. • Encourage employees to walk or cycle to work. • Encourage employees to reduce private car use for short-distance trips. • Metro Manila Development Authority (MMDA) to assist in coordination with neighboring and adjacent LGUs that may be affected by these initiatives. Citizens • Community to assist Pasig City in surveying bikers, organizing group rides and aiding in bicycle lane enforcement.

• Homeowners' Associations (HOAs) to explore allocating pedestrians- and cyclistsonly streets.

• Walk or cycle for short-distance trips.

• Advocate biking or walking as a primary mode of transportation (when applicable).



50 km audited sidewalks upgraded by 2021.

Local Government

• Conduct a city-wide audit of all sidewalks by first quarter of 2020.

• Sidewalks upgraded to include two-meter clear path walkways.

• Barangays are encouraged to assist in allocating priority lanes such as walkways and bicycle lanes in inner roads within their villages.

• Expand walkway networks to connect to second-level destinations as well as integration to existing and future green spaces in the city.

**Businesses and Institutions** 

- Follow guidelines in allocating appropriate dimensions for a sidewalk/walkway to allow pedestrians and cyclists to use the space.
- Business establishments to design and construct second-level connections to elevated walkways from their establishments.

Citizens

- Homeowners Associations (HOAs) to explore pedestrians- and cyclists-only streets.
- Walk or cycle for short-distance trips.
- Advocate biking or walking as a primary mode of transportation (when applicable).



Number of areas within ambient air quality guideline value (i.e., PM 10, PM 2.5, SOx, NOx).

Local Government

• Stringent enforcement of anti-smoke belching operations.

• Improve regular monitoring and information dissemination of air quality in the city with the aid of strategically installed air quality monitoring devices.

**Businesses and Institutions** 

• Perform regular company vehicle maintenance and smoke emission tests.

• Develop environment-friendly driving culture among company drivers (e.g., refrain from excessive use of cooling in the car, refrain from unnecessary idling).

• Transport groups support the Clean Air Act through the PUV Modernization Program with provision on certain enabling mechanisms to ensure just transition.

Citizens

• Perform regular vehicle maintenance and regularly undertake smoke emission tests.

• Refrain from excessive use of cooling in the car and unnecessary idling.

# **Indicator and Sample of Pledged Actions**

10 additional Carless Weekends Streets.

Percentage of local concessionaires participate in Carless Weekends annually.

Local Government

• The LGU shall conduct Bayanihan sa Daan eco-mobility competition (bikeable and walkable streets) among all 30 barangays.

• Identify and enforce 10 additional Carless Weekends streets to be initiated by barangays.

• Placemaking of iconic and historical streets and creeks.

**Businesses and Institutions** 

• Local businesses to voluntarily set up concessionaires during Carless Weekends.

Citizens

• Participate in various activities (e.g., buying from local concessionaires) during Carless Weekends.

• Local artists to participate in placemaking of iconic and historical streets and creeks.

# 3 – Solid Waste and Wastewater



GHG emissions generated from the waste sector are magnified by improper and unsustainable waste treatment and disposal. The total estimated GHG emissions of the waste sector of Pasig City is 36,045.72 tCO<sub>2e</sub>, only equivalent to 2% of the city's total estimated emissions. These emissions are associated with the solid waste disposal of the city beyond the LGU's boundary at the Rizal Provincial Sanitary Landfill, located in Rodriguez, Rizal. Domestic wastewater generated within the city, conversely, has three main treatment pathways: service connection for treatment by Manila Water Company, septage management, and river discharge. Overall, solid waste is the most visible sector. Municipalities have a strong mandate in collecting and managing the waste, and waste has been identified as a priority sector by the Pasigueños during the stakeholder engagement process series. The rapid urbanization of Pasig City has resulted in increased efficiency of production and services among businesses—and consumption among citizens—to keep up with fast-paced activities to sustain the economic growth of the city. Unfortunately, this has also cultivated a throw-away culture, leading Pasigueños to express urgent concern about increased solid waste generation among all sectors of society.

According to the 10-year Solid Waste Management Plan (2015-2024) of Pasig City, the city aims to reduce waste generation in the City by 20% by 2030 and by 80% by 2024. Notable initiatives of the city include the Greenheart Savers Program, Mobile Recycling Redemption Centre, Integrated Composting Facility, and Clean As You Go (CLAYGO). These aim to support and complement the objectives of the city to improve waste reduction, popularize waste segregation, promote recycling, and inculcate proper values in protecting the local environment, particularly among youth. In addition, there are organizations— such as the KILUS Foundation – that have the primary objective of turning collected plastic wastes into useful products by creatively recycling (upcycling) these into purses and bags. The City Government of Pasig also actively supports and promotes these organizations in marketing their products. These strategies of promoting the reduction of waste generation and waste diversion enable the city government to reduce its GHG emissions in the waste sector.

Wastewater generation contributes to GHG emissions of a city if not properly treated and disposed of. Pasig City's 2017 GHG inventory showed that domestic wastewater shared an estimated GHG emissions of 5,435.96 tCO2e. Despite a very low contribution, efforts to reduce wastewater generation and improve water management are also vital to ensuring water sufficiency – an increasingly urgent concern being faced by municipalities in Metro Manila, especially during El Niño season. Potential solutions include water conservation measures, improved efficiency of water distribution, treatment, and reuse, and pursuit of alternative sources of water (such as rainwater harvesting). The City Government of Pasig has initiated the implementation of these measures as well as strengthened its support to Manila Water Company that enables them to accelerate the construction and implementation of sewerage treatment facilities.

# Strategic Climate Sub-priority: Reduce in-city solid waste generation

• Objective: Reduce solid waste generation by 20% by 2030 through further strengthening waste reduction and recycling among barangays and establishments.

# Climate Change Mitigation Action 1:

Reduction in solid waste generation through continuing and expanding implementation of existing initiatives such as Greenheart Savers Program and Mobile Recycling Redemption Center

### **Indicator and Sample of Pledged Actions**

20% of food waste generation reduced by 2030. Local Government

• Enact a policy incentivizing (fiscal and non-fiscal) commercial and industrial establishments that practice food waste reduction and processing (e.g., composting, biogas digester feedstock).

- Collect kitchen waste from food establishments for composting.
- Intensify information drive on food waste reduction among households.
- Establish a food bank in partnership with CSOs/NGOs.

• Encourage LGU employees to minimize food waste generation through IEC campaigns that highlight the importance as well as economic and environmental co-benefits of this action.

**Businesses and Institutions** 

• Forge a partnership between hotels, restaurants and the LGU to sustainably manage food waste.

• Establish a partnership between CSOs, NGOs and the LGU to develop a food bank.

• Cook an adequate amount of food to be served by company cafeterias daily.

• Donate clean and untouched leftovers from supply stocks and ingredients of restaurants, hotels and food shops to a food bank.

• Properly store and give generated kitchen waste to LGU waste collectors.

#### Citizens

• Purchase, prepare, and properly store only the sufficient amount of food.

• Properly store and give generated food waste to LGU waste collectors.

• Compost food waste when doable and applicable.

10% of single-use plastic reduced consumption/generation by 2030.

Local Government

• Regulate the use of plastic products by adopting the "pay-as-you-throw" principle for households and commercial establishments.

• Conduct information drives and capacity building activities that shall enable citizens to transition to refusing single-use plastics.

• Encourage city government employees to refuse single-use plastics.

• Make all city meetings to be plastic-free to lead by example.

**Businesses and Institutions** 

• Analyze sales patterns to avoid excessive orders of plastics (e.g., for packaging).

• Separate packaging waste to help with recycling and installing recycling bins in own premises.

• Public schools to conduct regular drives on preparing eco-bricks.

• Start a recycling system in the classrooms.

• Encourage employees and members to avoid using single-use plastic.

• Provide reusable containers that can be used or borrowed from canteens or pantries.

• Provide incentives for employees, members, or students using reusable containers (e.g., discounts).

• Explore sustainable packaging options that can be used as replacement to plastic materials.

#### Citizens

• Refuse single-use plastics whenever feasible.

• Bring your own reusable bag when doing groceries or buying in the market.

• Make it a habit to bring your own reusable water bottles to avoid buying bottled water.



#### 30 barangays in full compliance to mandatory establishment of Materials Recovery Facility (MRF).

#### Local Government

• Materials recovery facility (MRF) or modified MRF will be established in every barangay vis-à-vis land area availability and social acceptability.

• Strengthen the implementation of the Waste Segregation and Recycling Program.

• Encourage participation to Super Lingap, E-FAST/E-PASS, and Lingap Bulilit Programs.

• Expand the Greenheart Savers Program to cover private schools and universities.

• Promote the practice of Clean As You Go (CLAYGO) in all public and private buildings and facilities as well as open spaces by putting appropriate signage.

• Establish partnership with schools and universities to integrate the principles and practice behind Greenheart Savers Program in the curriculum (e.g., Edukasyong Pantahanan at Pangkabuhayan, National Service Training Program).

• Create markets/bazaars that will promote products of local stores that use recyclables and environment-friendly materials in their production.

#### **Businesses and Institutions**

• Establish operational MRFs in 42 schools (primary and secondary levels).

• Foster partnership between recycling companies with the LGU to strengthen processing of collected recyclable wastes by the LGU.

• Foster partnership with the LGU to develop innovative programs that promote recycling among citizens through their Corporate Social Responsibility Programs.

• Establish partnership with accredited recycling companies to ensure proper recycling and disposal of wastes.

• Business establishments including but not limited to property developers, shopping malls, mixed-use buildings, commercial centers participate in markets/bazaars that promote products of local stores that use recyclables and environment-friendly materials in their production.

#### Citizens

• HOAs to designate their own MRFs barangay vis-à-vis land area availability and social acceptability.

• HOAs in cooperation with their barangay councils shall lead the maintenance and cleanliness of designated MRFs.

• Assist in maintaining order and cleanliness of barangay MRFs.

• Patronize waste-to-resource (creative recycling or upcycling) products produced by the women of KILUS Foundation, Brgy. San Antonio and Brgy. San Jose.

50% of households are practicing waste segregation at source and recycling.

1,000 community-based urban gardens which received compost from collected organic waste.

Local Government

• Establish partnership with accredited recycling companies to ensure proper recycling and disposal of wastes.

• CSWMO to collect kitchen waste from all public buildings in the city.

• Establish composting sites in suitable idle lands.

**Businesses and Institutions** 

• Designate organic waste collection bins.

• Use collected organic waste to generate compost and/or fuel through a biogas digester technology in public institutions like schools, hospitals, and markets.

• Donate generated compost to community gardens in barangays.

• Encourage the use of produce from community-based urban gardens for feeding and nutrition programs implemented by the City Health Office (CHO) and/or barangays.

#### Citizens

• Practice proper waste segregation at source and reuse.

• Properly dispose recyclable wastes to designated MRFs or recycling points of the LGU and business establishments (e.g., malls).

• HOAs to provide designated organic waste collection bins and transform these into compost products.

• Properly collect organic waste generated (kitchen and garden wastes).

• Use collected organic waste to generate compost.

• HOAs and barangays to coordinate with relevant local government units in putting together capacity building activities related to organic farming and composting.

• HOAs to donate compost products to community gardens.

• Citizens transform their organic waste into compost products that they can use for their own gardens or donate to their community gardens.

#### 1 waste-to-energy technology adopted

#### Local Government

• The Engineering Department will encourage contractors to donate their empty paint buckets to CENRO to be used for making compost (for Bokashi composting method) and/or as plant pots.

• Sustain operations and productivity of existing composting facilities such as proper maintenance, adequate and dedicated supply of organic wastes, among others.

• Explore the potential of using biogas digester technology to treat organic waste.

• Sustain the implementation of Garbage to Garden: It's Compost Time! Program and enhance organic gardening in schools by using composted food waste from canteens.

#### **Businesses and Institutions**

• Conduct a feasibility study of the potential adoption of in-city waste-to-energy facilities in partnership with a developer under a public-private partnership (PPP) mechanism.

• Explore the potential of implementing small-scale biogas digesters for kitchen wastes.

• Explore the potential for using public-private-partnerships (PPP) mechanisms for the establishment of feasible waste-to-energy facility.

• Use collected organic waste to use as fuel through a biogas digester technology in public institutions like schools, hospitals, and markets.

• Explore the potential of implementing small-scale biogas digesters for kitchen waste for schools and markets.

• Explore the potential of public-private partnership in the establishment of in-city waste-to-energy facilities should studies prove its feasibility.



# Strategic Climate Sub-priority: Improve and streamline the waste collection and clean-up processes.

• Objective: Ensure proper compliance with the city's solid waste management code particularly on the illegal garbage disposal.

# Climate Change Mitigation Action 2:

# 100% compliance with the city's solid waste management code

# **Indicator and Sample of Pledged Actions**

### 20 tonnes of garbage are properly disposed of daily.

### Local Government

- Deploy eco-lektors in 112 sites (streets and alleys) to collect and educate against indiscriminate garbage disposals.
- Conduct regular on-site monitoring of garbage collection.
- Establish proper feedback system for citizens to ensure compliance to segregated waste collection schedules.
- Acquire digitized fleet management and truck weighing scale to improve data collection and analysis of solid waste collected in the city.
- Improve maintenance of the Manggahan Floodway to prevent clogging of wastes.
- Conduct regular clean-ups of water bodies and inspection of drainage systems for potential clogging together with volunteers.

#### **Businesses and Institutions**

- Comply with the collection scheme employed by the local government.
- Bring out only the waste type scheduled for collection.

• Report inconsistencies and/or non-compliance in waste collection to the local government via the E-Complaints hotline of the LGU.

#### Citizens

- Comply with the collection scheme employed by the local government. Bring out only the waste scheduled for collection.
- Report inconsistencies and/or non-compliance in waste collection to the local government via C3.
- Encourage household members, colleagues, and networks to practice proper waste disposal and segregation.
- Practice waste segregation at source.
- Properly dispose segregated wastes in the barangay MRF.

Percentage of electronic waste upcycled/recycled.

**Local Government** 

• Designate disposal bins for electronic wastes in materials recovery facilities (MRFs).

• Foster partnership with accredited e-waste collectors to ensure proper upcycling, recycling or disposal of electronic wastes collected by the city.

• Develop innovative programs and market to encourage upcycling of electronic wastes.

**Businesses and Institutions** 

• Department of Environment and Natural Resources - Environmental Management Bureau (DENR-EMB) to provide available and accessible information on accredited e-waste collectors.

• Procure electronic products with longer life span.

• Provide designated and properly labelled separate bins for collecting e-wastes within their buildings or premises.

Citizens

• HOAs to create community drop-off sites for e-wastes.

• Purchase electronic products with longer life span and avoid buying unnecessary electronic products.

• Properly dispose electronic products to designated drop-off sites.

• Actively seek more information regarding the ways to dispose of electronic waste.

• Procure electronic products with longer life span.



100,000 individuals from various stakeholder groups took part in capacity building activities on upcycling, composting, and gardening.

100,000 composting and gardening starter kits distributed.

100,000 CLAYGO stations established in public and private buildings.

Local Government

• Barangays to co-organize capacity building activities with CENRO on upcycling, composting, and/or gardening for various audiences, like community groups, etc.

• Provide composting and gardening starter kits to training participants.

• Promote the practice of Clean As You Go (CLAYGO) in all government-owned facilities and open spaces by putting up appropriate signages.

**Businesses and Institutions** 

• Co-organize capacity building activities with CENRO on upcycling, composting, and/or gardening for employees.

• Create CLAYGO stations in canteens.

Citizens

• Participate in capacity building activities on upcycling, composting, and/or gardening offered by CENRO and barangays.

• Create composting and gardening spaces in your own household.

#### **Indicator and Sample of Pledged Actions**

100,000 advocacy campaigns on sustainable consumption and production launched with various stakeholder groups.

**Local Government** 

• Conduct Environmental Contests - Evaluate the applicability of "Biggest Garbage Loser" incentive scheme among schools, HOAs, and purok.

• Create market/bazaars that promote products of local stores that use recyclable and environment-friendly materials in their production.

**Businesses and Institutions** 

• Create a culture of sustainable consumption and production among employees and members.

Citizens

• Conscious effort to switch to more sustainable lifestyle choices in terms of consumption with the support of city-led advocacy campaigns.

# Strategic Climate Sub-priority: Improve quality and reduce the volume of wastewater discharge.

• Objective: Ensure proper observance and compliance with the Philippine Clean Water Act of 2004.

# Climate Change Mitigation Action 3:

100% compliance with national standards for domestic and industrial wastewater discharge

# **Indicator and Sample of Pledged Actions**

100% household service connection to sewerage treatment plant of Manila Water achieved by 2025.

Local Government

• Strict implementation and enforcing the City's Drainage and Flood Control System Master Plan.

• Enactment of a local ordinance on septic and sewerage management plan

• Through the enactment of an ordinance, appropriate and necessary right-of-way/ road access to the land for construction of sewage and/or septic treatment facilities shall be implemented.

• Enact ordinance adjusting local property taxes or imposing a service fee system to meet necessary expenses for the operation and maintenance of sewerage treatment or septic management facility servicing their area of jurisdiction.

• Ensure newly built house/subdivisions are connected to the utility provider's sewerage treatment plant.

**Businesses and Institutions** 

• Manila Water Company to complete construction and household service connection of sewerage treatment plant by 2025.

• Ensure newly built house/subdivisions are connected to the utility provider's sewerage treatment plant. Ensure newly built house/subdivisions are connected to the utility provider's sewerage treatment plant.

• Ensure regular maintenance of Septic and Sewerage System

Citizens

• Ensure newly built house/subdivisions are connected to the utility provider's sewerage treatment plant.

• Ensure regular maintenance of Septic and Sewerage System

100% of residential, commercial, industrial and institutional entities have installed appropriate septic management systems in their buildings and facilities by 2020.

#### **Local Government**

• The Association of Barangay Captains (ABCs) shall establish cooperation with Manila Water to encourage households within their jurisdictions to avail the freeof-charge de-clogging services of the company through the company's Toka-Toka Program.

• CENRO Environmental Inspectors to regularly monitor the operation of functional septic management systems of all institutional, commercial, and industrial establishments within the city.

• Conduct a comprehensive assessment of the public market's drainage system considerations on external factors (e.g. operations/practices of privately operated biyaheros), elevation and slope, etc.

• Identify eco-friendly and long-term solutions for concerns pertaining to the drainage system of the public market.

#### **Businesses and Institutions**

• Install appropriate scale and technology for septic and sewage management for business operations.

• Regularly monitor optimum treatment capacity and effluent quality of STP.

- Report findings of effluent discharge quality to DENR-EMB and CENRO every quarter.
- Ensure that industrial wastewater follows the EMB regulations through permitting systems and installation of wastewater treatment facilities.

• Provide financial and technical support for establishment of WTP for SMEs.

Citizens

• Households are encouraged to install at least two-chamber septic tanks.

• Refrain from directly discharging wastewater directly into rivers and creeks.



#### 100% quarterly compliance to national standards of wastewater discharge of commercial establishments and industries.

#### Local Government

• CENRO Environmental Inspectors, together with the Department of Environment and Natural Resources - Environmental Management Bureau (DENR-EMB) shall regularly monitor the compliance of wastewater effluent discharge of commercial establishments and industries operating within Pasig City and strictly enforce penalties to non-compliance entities as mandated by existing national and local policies.

• CENRO and BPLO to require submission of self-monitoring reports (SMRs) of commercial establishments and industries, where appropriate according to scale of operation, as part of business permit application.

• Provide financial and technical support for establishment of WTP for SMEs.

#### **Businesses and Institutions**

• Ensure industrial wastewater follows the EMB regulations through permitting systems and installation of wastewater treatment facilities.

• Regularly monitor optimum treatment capacity and effluent quality of STP.

• Report findings of effluent discharge quality to DENR-EMB and CENRO quarterly.

• Support the monitoring activities of DENR-EMB and CENRO by reporting noncompliant industries.

#### Citizens

• Households are encouraged to install at least two-chamber septic tanks.

• Refrain from directly discharging wastewater directly into rivers and creeks.

• Support the monitoring activities of DENR-EMB and CENRO by reporting noncompliant industries.



# Strategic Climate Sub-priority: Expand water conservation and reuse programs.

• Objective: Encourage positive behavioral change on water efficiency and conservation.

# **Climate Change Mitigation Action 4:**

Increase in compliance with national and local standards for water efficiency and conservation

# **Indicator and Sample of Pledged Actions**

467 of commercial, industrial, and institutional buildings and facilities have installed rainwater harvesting facilities.

**Local Government** 

• Provision of water conservation and reuse metric in the Local Green Building Ordinance and corresponding fiscal and non-fiscal incentives to encourage installation of rainwater harvesting facilities.

• Disseminate information on standard specifications (e.g., based on floor and roof area of building types, retention capacities of facilities) of rainwater harvesting facilities for each building and construction type.

• Offer capacity building activities on rainwater harvesting facility design, construction, and installation for commercial establishments, industries, and households.

#### **Businesses and Institutions**

• Install rainwater harvesting facility in all existing facilities and new building construction.

#### Citizens

• Install simple rainwater harvesting equipment in households when applicable.



# **Indicator and Sample of Pledged Actions** Intensify reduction of water consumption by 2020. **Local Government** • Intensify information dissemination on water conservation advocacy in partnership with Manila Water Company. • Ensure that water conservation is practiced in their facilities. • Ensure that there are no leakages in pipes. **Businesses and Institutions** · Conduct commercial water audit to assess how much water each business consumes each day and identify conservation opportunities. • Building management for each establishment to request to install low-flow restrictors. • Manila Water to provide water audit options. • Ensure that water conservation is practiced in their facilities. • Check that there are no leakages in pipes. • Share/spread the water conservation advocacy . Citizens • Ensure that water conservation is practiced at home. • Check that there are no leakages in household pipes.

• Share/spread the water conservation advocacy.



# Strategic Climate Sub-priority: Restore and rehabilitate the city's natural drainage ways.

• Objective: Sustainable an efficient drainage system compliant to Supreme Court's Writ of Continuing Mandamus Order on the Rehabilitation and Restoration of Manila Bay.

# Climate Change Mitigation Action 5:

Upgrade wastewater treatment system through efficient drainage systems

### **Indicator and Sample of Pledged Actions**

*Reduced incidences of flooding due to drainage clogging in 2020.* 

Local Government

- Identify strategic areas for waste disposal bins that are placed far away from drainage areas.
- Install appropriate signages and CCTV cameras to discourage waste disposal in drainages.
- Regularly inspect conditions of drainages especially during rainy seasons.

**Businesses and Institutions** 

• Ensure environmental installation and appropriate measures to avoid clogging of drainages among institution's canteen and kitchen. (i.e., grease trap and water & oil separator).

Citizens

• Avoid indiscriminate littering and disposal of garbage to drainages.



Number of people from different sectors including barangay officials and staff engaged in LGU-led clean-up and rehabilitation efforts on the city's natural drainage way.

#### Local Government

• Establish partnerships with local universities to integrate activities to rehabilitate the city's natural drainage ways (e.g., clean up drives) into their National Service Training Program (NSTP).

• Identify potential synergies with the new eco-lektors of the Solid Waste Management Office (SWMO) to maximize their services and operations.

• Intensify recruitment of volunteers but ensure stricter screening of volunteerapplicants.

• Develop natural and/or art parks near the natural drainage ways.

• Intensify information dissemination on prohibiting indiscriminate waste disposal in drainage ways further integrating values formation emphasizing the citizens' role in preserving the integrity of the environment.

#### **Businesses and Institutions**

• Establish lasting partnership with the LGU in organizing regular clean-up and rehabilitation drives of the city's natural drainage ways as part of their CSR activities.

• Support the LGU's efforts in maintaining the cleanliness of natural drainage ways by advocating against indiscriminate garbage disposal and reporting non-compliant entities.

• Organizations of landscape architects and artists are encouraged to establish partnerships with the LGU to design and develop natural and/or art parks near the natural drainage ways.

#### Citizens

• Volunteer as Tanod-Sapa in their respective barangays.

• Participate in clean-up and rehabilitation drives of the city's natural drainage ways.

• Support the LGU's efforts in maintaining the cleanliness of natural drainage ways by advocating against indiscriminate garbage disposal and reporting non-compliant entities.



# 4 – Urban Agriculture and Ecology



Striving to be ecological as well as inclusive to all its citizens, the City of Pasig promotes activities that are in harmony with nature. Natural functions and processes vital to sustainable urban development can develop a community that simultaneously promotes economic development and environmental protection. The city plans to achieve this goal via improving urban ecology, with enhanced green spaces within and beyond the city. This will be realized through upgrading existing parks, protecting and properly managing the rainforest park in the city, and identifying expansion areas for tree planting outreach of the LGU that may serve as carbon sinks.

Strengthening the urban agriculture initiatives of Pasig City will complement the aforementioned efforts. Urban agriculture delivers several co-benefits that support efforts to reduce GHG emissions, such as the shortened supply chain of agricultural products, conserved energy for cooling through rooftop and vertical gardens, and diverted kitchen wastes from landfills through composting. Pasig City has been actively promoting and enabling the practice of urban agriculture as a means to augment the daily subsistence of Pasigueños. One such initiative is "Garbage to Garden, It's Compost Time!", a program of the CENRO Greening Division that offers training to Pasigueños (individual citizens, public school students, and HOAs) on organic compost production using the Bokashi composting method. In addition, several barangays have also positively welcomed this concept and have been managing their community-based urban farms. In 2021, the Integrated Urban Agriculture Ordinance of Pasig City was enacted and established its Pasig City Urban Agriculture Oversight Committee (ARGICOM) and Pasig City Task Force on Food Production and Food Security to strengthen its urban agriculture initiatives. One of its flagship programs is the Sustainable Urban Agriculture Program, which is designed to support communities in enabling sustainable urban farming to provide food to households in every barangay.

# Strategic Climate Sub-priority: Utilization of idle public spaces (vacant lots, rooftops, balconies) for urban agriculture and landscape

• Objective: Expansion of green spaces by 2030 dedicated to increased food production and urban landscapes among communities in the city.

# **Climate Change Mitigation Action 1:**

Integration of the vertical and/or rooftop green spaces in public and private buildings

160,000 square meters of public and private idle land within the City have been transformed into urban gardens by 2030.

*5,000 publicly- and privately-owned buildings and residences transformed their rooftops, balconies, walls and vacant lots into green roof top and landscape by 2030.* 

*3 tonnes of vegetables have been harvested from community-based urban gardens annually.* 

#### **Local Government**

• Revisit the inventory of idle lands and map out total available public and private idle spaces as well as existing green spaces suitable for urban agriculture.

• Formulate and develop a City Urban Agriculture Plan, in consultation with stakeholders.

• Develop a legal document template expressing agreement on the voluntary use of private idle lands for urban agriculture uses.

• City Environment and Natural Resources Office (CENRO) to provide logistic support, technical assistance, and ensure proper and effective implementation, enforcement and monitoring of the provisions of the Integrated Urban Agriculture Ordinance.

• RAVE Park management to provide assistance in terms of technical guidance, capacity building and information dissemination on building eco-parks.

#### **Businesses and Institutions**

• Design CSR programs that support the city's programs related to urban gardening. (Transform rooftops; balconies for urban gardening).

• Purchase vegetables harvested from the community urban gardens.

• Revisit and volunteer their idle lands as spaces for community-based urban gardens.

• Encourage other community members and other institutions to use idle lands and available spaces for urban gardening.

#### Citizens

• Spread the word and encourage other community members to use idle lands and available spaces for urban gardening.

• Assist the city in identifying and mapping out idle lands that could potentially be converted into community-based urban gardens.

• Use vacant lots into urban gardens.

• Support and promote markets for organic produce from the established urban gardens in the community.

120 community groups/HOAs established urban gardens in available spaces by 2022.

#### **Local Government**

• Provide and communicate fiscal and non-fiscal incentives to public and private land owners as incorporated in existing ordinances such as the Local Green Building Ordinance.

• LGU commitment on support services to community gardens and stay at home food gardeners, for capacity building training, production, marketing, and provide livelihood opportunities.

• Barangay officials to draft resolutions to formally establish partnership among various stakeholder groups including HOAs to encourage them to allocate resources (budget, space, manpower) for urban gardening.

• Barangay Affairs Office to organize a community-based monitoring and enforcement team at the barangay-level.

• CENRO and the Pasig City Public Information Office (PIO) shall develop an online platform of reporting, collating, and documenting the participation of different departments and sectors in the urban gardening and agriculture programs of the City.

• Annual Celebration of the Urban Agriculture Festival.

• Establishment of mandatory food urban vegetable garden for residential, commercial, industrial, and land developments both new and existing, to promote local food production respond to food security and sustainable consumption, when applicable in compliance to the Integrated Urban Agriculture Ordinance.

**Businesses and Institutions** 

• Allocate space within their premises (balconies, parking lots, rooftops) for urban gardens.

• Explore realigning CSR programs to further promote urban gardening among their employees and staff and encourage them to cultivate urban gardens in available spaces; support promotion.

• Foster partnership/collaboration with LGU and other organized community groups.

• Actively participate in city-led initiatives that are related to urban gardening.

Citizens

• Establish/create urban gardens in available spaces in their community in collaboration with the LGU.

• Sectoral groups representing various sectors such as women and children, youth, senior citizens, PWD, and others to actively look for partnership opportunities related to establishing or maintaining urban gardens.

# Strategic Climate Sub-priority: Building capacity and advocacy towards urban agriculture.

• Objective: Entities and/or individuals (businesses and both public and private institutions) reached by capacity building and advocacy activities on urban agriculture by 2030.

# Climate Change Mitigation Action 2:

Enhance climate knowledge and capacity of individuals for urban agriculture

### Indicator and Sample of Pledged Actions

30,000 individuals have attended capacity building activities through the School of Urban Gardening Program by 2030.

12 capacity-building activities conducted in coordination with various sectoral groups in the city annually until 2030.

500 individuals trained to deliver training on urban agriculture.

Local Government

• Budget for capacity-building and training, continuous research and development.

• Adopt and integrate urban agriculture and vertical farming in the primary, secondary and tertiary school curriculum.

• Promotion of urban gardening through intense awareness-raising campaigns to promote the program and reach more sectors in the city starting from barangay through community urban gardens.

• Distribute starter kits to individuals/groups who attended the training.

**Businesses and Institutions** 

• Link CSR campaigns and programs to extend capacity building activities related to urban gardening to its employees and staff.

• Coordinate with the LGU in designing training modules which are popularized and could be easily understood by various audience segments across the city.

• Schools to explore the creation of an "Adopt-a-Plant Program" for students.

Citizens

• HOAs to design projects and programs that promote community-based urban gardening in coordination with other sectoral groups.

• Women's groups, PWDs, senior citizens to organize and mobilize their own members to explore urban gardening.

120 community-based urban gardens have regularly received compost from the Garbage to Garden, It's Compost Time! Program by 2030.

600 households, business, schools, and others have reported contributing their organic waste to the program by 2030.

#### Local Government

• The Engineering Department can require contractors to donate their empty paint buckets to CENRO. These buckets can be reused and distributed to barangays for use in the urban gardens.

• Mandate all City Hall units and offices to consolidate their organic waste and give these to CENRO for converting into compost.

• Encourage city hall employees and staff to minimize food waste and practice proper waste segregation at all times.

• Intensify awareness-raising activities to promote the program and reach more sectors in the city.

• Explore partnerships with private sector to encourage their participation.

**Businesses and Institutions** 

• Existing accredited private hauler of Pasig to set up agreed practices and timeline for organic waste collection.

• Link CSR activities to the program to encourage brands and businesses to donate gardening materials such as waste compost containers, compost activators, tools and equipment, seedlings, and others.

• Explore partnership with the LGU and set agreed practices and timeline for organic waste collection.

• Support the LGU in intensifying awareness-raising about the program.

• Set up their own organic waste collecting facility and coordinate with the LGU to have these picked up and converted into compost.

#### Citizens

• Specific urban agriculture programs to key stakeholders such as senior citizens as Stay at Home Food Garden Champions by providing space, skills and support to cultivate and start their own urban farm.

• Dispose organic waste in an appropriate manner and make sure that it is being collected by CSWMO to convert into compost.

• Explore how to make compost in own homes.

• Set up a composting program for each HOA. Create a compost pile per HOA/ household. Compost can be bagged and used for urban gardening activities in the HOAs.

# Strategic Climate Sub-priority: Improve urban ecology by increasing green spaces within the city.

• Objective: Improving eco-parks allocation by 2030.

# Climate Change Mitigation Action 3:

# Rehabilitate and maintain the city's eco-parks

### **Indicator and Sample of Pledged Actions**

Additional 17,100 sqm. eco-parks established in school grounds, housing sites and barangays.

50,000 Pasigueño will be aware of the urban biodiversity species in their own locality.

# Local Government

• Map out areas with adequate spaces suitable for eco-parks (set minimum area requirements) and link with existing green spaces.

• All existing parks and gardens developed by the City Government shall be subjected to redesign in consideration such as green and quality public spaces; promotion of urban biodiversity; and integration of edible landscaping.

• RAVE Park management to provide assistance in terms of technical guidance, capacity building and information dissemination on building eco-parks.

**Businesses and Institutions** 

• Assist the LGU in marking existing parks that need renovation and expansion.

• Support the expansion and establishment of eco-parks in school grounds and/or barangays as part of their CSR programs.

• Schools to encourage student participation in eco-park beautification activities such as gardening, landscaping, etc.

• Local universities to encourage student architects and designers to render and propose designs for upgrading and expanding existing eco-parks in the city.

#### Citizens

• Community groups to organize their members to form volunteer groups to aid barangays (e.g., labor, donation of supplies, etc.) in improving existing and developing new eco-parks and/or participate in "Adopt-an-Eco Park" Program.

• CSOs/NGOs to explore partnerships with barangays to support in activities (e.g., provision of volunteers and resources) in the improvement and expansion of ecoparks.

• Citizens as caretaker of bio diverse species.
#### **Indicator and Sample of Pledged Actions**

50 artificial pond or wetland will be established by 2022.

**Local Government** 

• City Government to establish mini wetlands in each barangay.

**Businesses and Institutions** 

• Business establishments will be required to established artificial wetlands for waste water treatment facility, rainwater and other similar sources.

Citizens

• Awareness on urban biodiversity and urban man-made wetland management.

Strategic Climate Sub-priority: Expansion of tree planting outreach of the LGU in Tanay and Montalban, Rizal, and other partner LGUs.

• Objective: Contribute to improving flora and fauna biodiversity as well as enhancing carbon sequestration capacity of forests in the Province of Rizal

#### Climate Change Mitigation Action 4:

Improvement of flora and fauna biodiversity and enhancement of carbon sequestration capacity of forests in the Province of Rizal

#### Indicator and Sample of Pledged Actions

220,000 square meters of land cover in Tanay and Montalban, Rizal are planted with native trees by 2030.

40,000 people from various stakeholder groups have joined tree-planting activities initiated by the LGU by 2030.

#### Local Government

• Identify and prioritize forest areas managed by indigenous peoples (IPs) communities for tree-planting activities.

• Ensure appropriate supply of endemic /native species of seedlings from the local and national government to support the tree planting activities.

#### **Businesses and Institutions**

• Strengthen partnerships with the LGU to share resources for greening programs through their CSR programs.

• Encourage employees to participate in city-led tree-planting activities.

Citizens

• NGOs, CSOs, POs, to actively participate in tree planting activities

• Community leaders to organize and mobilize its network to support the activity.

### 5 – Health & Disaster Risk Reduction and Management



In the past years, there has been an observed increase in the frequency and intensity of natural disasters including extreme weather events in the city. These natural disasters endanger the lives and properties of people, especially vulnerable groups. In Pasig City, flooding due to typhoons and heavy rainfalls is not uncommon. However, improved infrastructure and stronger disaster response had significantly reduced flooding incidents in all barangays. Another climate change impact is the accelerated increase in surface temperature, which intensifies urban heat island (UHI) effects in highly dense areas such as Pasig City. If temperature continues to accelerate, heat waves may be imminent, thereby endangering vulnerable groups such as the elderly, homeless, informal settlers, and outdoor workers. Climate change has detrimental effects on human health. Water-and vector-borne diseases may spread if adaptation measures are not implemented. Pasig City continues to intensify its efforts to enhance its DRRM Plans and Programs. These are complemented by improved capacities and human capital in disaster response and rehabilitation, even at the barangaylevel. Effective communications further Pasig's policies, with widespread information and dissemination campaigns to strengthen adaptive capacities of all sectors. In addition, the city government has initiated efforts to improve the delivery of primary health services by barangay and city health centers through enhancing its monitoring and evaluation through community health needs assessments to better respond to these challenges.

#### Strategic Climate Sub-priority: Improve delivery of primary health services by barangay health centers and city health centers with City Health Office

• Objective: Decrease in morbidity and mortality rate due to climate change-related diseases (i.e., leptospirosis, pneumonia, dengue, heat stroke) among children and adults over 65 years old.

#### **Climate Change Mitigation Action 1:**

Increase R&D and programs on climate change-related diseases, including appropriation for immediate availability of medicines and health infrastructure, and building capacities of health workers and the community

#### Indicator and Sample of Pledged Actions

100% of barangay health centers are adequately equipped and capacitated to treat climate change-related diseases by 2030.

67.8 % increase in budget allocation for the delivery of primary health services for the entire City including Brgy. Health Centers, Hospitals, City Health Office Treatment Hub.

#### Local Government

• Build capacities of barangay and city health workers to prepare and respond to increasing risk of climate change-related diseases (e.g., leptospirosis, dengue fever, pneumonia, heat stroke).

• Increase access to and allocation of funds that could augment improvement of delivery of basic health services (e.g., City Disaster Risk Reduction and Management Fund, Gender and Development Fund, People's Survival Fund).

• The City Health Office shall strengthen its R&D on climate-related health risks for Pasigueños including means of enhancing resilience against these risks.

• Devise a health information system within a two-year period which will record and enable analysis of climate-related health conditions.

• Institute environmental control activities in high-risk areas within one week of risk identification or 48 hours from event occurrence.

#### **Businesses and Institutions**

• Link CSR activities to the health programs of the City and barangays to encourage brands and businesses to donate medical equipment, supplies, and medicines.

• The Department of Health shall strengthen its information dissemination and capacity building support to city and barangay health workers in preventing exposure to climate change-related diseases.

• Academic and research institutions to support the LGU in strengthening its R&D on climate-related health risks for Pasigueños including means of enhancing resilience against these risks.

#### Citizens

• Maintain cleanliness of immediate surroundings.

• Participate in clean & green activities of the barangay.

• Closely monitor advisories of the Department of Health and City Health Office.

• Report cases and immediately seek doctor's attention in the barangay health center or city health office when experiencing symptoms of illnesses.

• Citizen groups including senior citizens, women and children, PWDs, youth, and other sectors are actively engaged and aware of anti-flood measures.

## **G. Promise of Pasig Climate Change Indicators**

Overall climate change indicators in matrices for the Promise of Pasig strategic climate actions have been prepared to provide an overview of the key considerations for the successful and inclusive delivery of all climate actions. The indicators support the different climate policies, programs, projects, and activities. They illustrate linkages between different climate instruments and institutional support required for the effective implementation of the Promise of Pasig. When navigating the implementation matrices, the reader should note the following:

- The key performance indicators are iterative and require future revisions, depending
  on the updates from the monitoring and evaluation component of the Promise of
  Pasig and overall implementation of Pasig City's LCCAP 2016-2026. Therefore, the
  overall climate change indicators, identified offices, organization, and/or institutions,
  source data, and goal period may change depending on future circumstances. It is
  critical for the respective departments to account for these revisions as they arise.
- The Goal Period column indicates the GHG emissions reduction contribution of the strategic climate priority vis-à-vis its indicators following the average multi-year emissions goal of the Promise of Pasig and overall goal to reduce 20% of sector emissions below 2017 values over the period from 2020 to 2030.

# VII. Measurement, Reporting and Verification

The COP 13 – 2007 Bali Action Plan established the MRV (Measurement, Reporting and Verification) process that introduced the framework of enhancing climate change mitigation actions for the international and national levels.

Adapting the MRV process at the local level is crucial. If done effectively, MRV could ensure a proper transitioning towards the ETF (Enhanced Transparency Framework); track impacts and benefits of local climate action; increase transparency of local climate action; increase the credibility of local climate action; identify good practice; and create an enabling environment.

As a guide, the MRV designed for the Promise of Pasig would address the following questions :

- **HOW** will measuring, reporting, and verification be performed? This question focuses on the methodological and technical guidelines and processes involved in performing MRV.
- **WHEN** will measuring, reporting, and verification be performed? This question helps define the appropriate timeframe for undertaking MRV.
- **WHO** will carry out measuring, reporting, and verification? It is essential to identify the entities and individuals responsible for undertaking MRV.

These questions are aimed at encouraging stakeholders and policy makers to recognize the importance of MRV for mitigation actions.

The MRV Cycle Framework (Figure 12) for the Promise of Pasig would apply a systematic process to ensure that:

- Proper stakeholders will be identified and engaged in the accountability cycle through institutional mapping process;
- Verifiable mechanism of accounting for mitigation programs, activities, and projects is institutionalized;
- A methodological procedure will be applied to assure the constituents of Pasig City that good governance and transparency tracking between stakeholders and climate expenditures is established; and
- Initiate preparedness towards the transition from MRV to ETF.

In the Accountability Cycle, institutional strengthening is key to effective climate action planning and wider citizen engagement; this explains why establishing a local climate core team is one of the key activities under the ACP project. In 2017, Pasig City established its local climate core team through "Executive Order No. 08: An Executive Order Creating the Climate Change and Greenhouse Gas Management Council in Pasig City." The ordinance supports the preparation and implementation of the LCCAP of Pasig City, including the development of a city-wide GHG inventory.

The existing multi-stakeholder composition of the Council provides a solid foundation to further enhance a proactive and functional Council, thereby ensuring a comprehensive, participatory, and inclusive platform toward low emission development and resilient community. With enhanced and expanded composition of roles and responsibilities of the Climate Core Team—in light of the new commitment to strengthen and implement low emission development strategies in the City through the "Proposed Enhanced Climate Change and GHG Management Council (Climate Core Team) of Pasig City, Addendum to E.O. No. 08, series of 2017"<sup>8</sup>—the existing arrangements are adequate to manage the GHG emissions reduction and mitigation goals of the Promise of Pasig. Therefore, it is recommended to adapt the institutional arrangement for the MRV's accountability cycle.

Regarding implementation of the MRV Cycle before the year 2029 / 2030 goal, there will be an interim activity for the Promise of Pasig in 2025 to assess progress on conditional commitments to the mitigation goal. Additionally, it was recommended that Pasig City's GHG Inventory be updated every 2 to 3 years, and a management review for climate action be scheduled biannually.

Moreover, the LGU is strongly encouraged to periodically and publicly disclose the implementation status of the Promise of Pasig. This would include an updated city-level GHG emissions inventory and target in climate action reporting platforms such as the National Integrated Climate Change Database and Information Exchange System (NICCDIES) by the Philippine Climate Change Commission and the CDP-ICLEI Unified Reporting System<sup>9</sup> (jointly managed by CDP and ICLEI). The latter is an online platform which offers to unify, streamline, and standardize climate and environmental data reporting among cities globally, to better understand, aggregate, and compare the climate commitments and actions of local and sub-national governments.

<sup>&</sup>lt;sup>8</sup>A full report of the proposed enhanced City Climate Core Team and a draft addendum to Executive Order No. 08, series of 2017 reflecting the proposed recommendations are accessible with the CENRO.



Figure 12. MRV Cycle Framework for the Promise of Pasig



# Annex A. Strategic Climate Subpriorities, Activities, Institutional Support, and Instruments.

Strategic Climate Sub-priority 1:	Promote energy conservation	on and	lener	gy ef	ficier	псу		<u>.</u>	<u>.</u>	·				<u>.</u>
Objective:	Pasig City shall reduce its e practices and technologies.	lectric	ity co	nsur	nptio	n by	pron	noting	ener	gy effi	cien	cy con	servatio	n
		Ins	titutio	on(s):		Cli	imate	e Instr	umen	its		1		1
Climate Program	Climate Activities/ Projects:	Public / Local	Private	csos	International	Infrastructure Roll-out	Research Agenda	Partnerships	Capacity Building for LGU	Advocacy	Process Streamlining	Policy and Ordinance Compliance	Knowledge Sharing and Dissemination	Lifestyle Shift / Change
City-wide Energy Efficiency and Conservation (EE&C) in the government, residential, and commercial sectors	<ol> <li>Define the scope and requirements of the Local Green Building Ordinance and ensure adequate information dissemination to all building owners and managers, providing them with benefits of renewable energy and greening implementation.</li> </ol>	x	x	x			x	x	x	x	x	x	X	x
	<ol> <li>Strict enforcement and monitoring of compliance to the Local Green Building Ordinance.</li> </ol>	x	x	x			x		x	x	×	x	х	
	3. Set institutional structure within the City Engineering Department that shall be tasked for evaluating energy performance of buildings in Pasig City, together with volunteer energy welfare workers.	х	x	x				x	x	x	x	x	x	
	4. Introduce incentive mechanisms such as tax discounts, accelerated processing of business permits, and recognition awards for green building best practices among commercial buildings.	x	×	x		x	x	x	×	x	x	x	x	x

5.	Require all public buildings to switch off at least one AC unit before the end of shift time.	x	x	x			x	x	x	x	х	x	x
6.	Switch to a more energy- efficient AC system in publicly owned and operated buildings and facilities.	x	x	х	х	х	x	x	x			x	x
7.	Sustain LED retrofitting project of public buildings and streetlights.	x			х		x	x					
8.	Establish the Energy Office and designate an Energy Officer pursuant to RA 11285.	х				х		x				х	
9.	Legislate an Ordinance on Energy Reduction and Efficiency by having a Monthly Earth Hour Practice.	x	x	x	х	x	x	x	x	x	х	x	х
10.	Awareness-raising activities on standards and labeling in line with energy efficiency and conservation as regulated by the Department of Energy (DOE).	x	х	x				х	x			x	x
11.	Expand distribution of energy efficient lighting (e.g., LED bulbs) to households and SMEs.	х	x	x	х			х	х			х	х
12.	Information dissemination and awareness-raising on available energy-efficient lighting and AC systems and its co-benefits to users across different stakeholders or building owners.	x	x	x	х			х	x			x	
13.	Capacitate volunteer energy welfare workers who shall conduct free energy audit services in public and private buildings in Pasig City.	x	x	х			x	x	x			x	x
14.	Trained energy welfare workers maintain a database of energy performance of buildings in Pasig City including RE installations in the city in cooperation with Meralco's net-metering program.	x	x	x			x	х	x			x	x

15.	CENRO and PIO in consultation with DOE, DepEd, Meralco and other stakeholders deemed relevant shall develop training modules and advocacy materials on energy efficiency and conservation advocacy for student-advocates.	x	x	x	x			х	x	x			x	x
16.	LGU's Environmental Department through Public Relations and Environmental Education Division will facilitate training for Youth Organization in different sectors (ToT) on Energy Efficiency and Conservation in partnership with the Department of Energy (DOE), Department of Education (DepEd), Meralco and other stakeholders available for the program.	×	x	x				x	x	x			x	×
17.	Barangay officials develop awareness- raising campaign materials and plans in partnership with the city government, DOE, Meralco, academe and/ or with other relevant stakeholder groups.	x	x	x				x	x	x			x	x
18.	Implement pilot demonstration projects on barangay facilities (e.g. energy audit, cost-benefit analysis, switch to more energy- efficient equipment such as lighting, AC, and refrigerators).	x				x	x	x	x	x	x	x	x	x
19.	LGUs Environmental Department through Public Relations and Environmental Education Division will mobilize trained youth advocates (i.e. high school students) in the development and implementation of energy efficiency and conservation campaigns in all barangays.	x	x	x				x	x	x			x	x
20.	"Climate Change Advocates" cascades Advocacy Training on Energy Efficiency and Conservation for other organized youth groups such as YES-O, Parish Youth Council of different Parishes, Youth Jam and Youth United for Pasig.	x	x	x				x	x	x			x	x
21.	Intensify existing efforts in reducing their overall electricity consumption through ambitious EE&C targets and measures, and reporting such to LGU.	x	x	x		x	x	x	x	x	x	x	x	x

22.	Distributors, manufacturers, hardware stores should make clean energy technologies available and accessible for consumers.		x		x	x			x			x	x
23.	Pioneer Float Glass: Recycle cutlets as fuel input instead of bunker fuel and use pellets (glass shards) as an alternative fuel. To be coordinated with CSWMO to facilitate an organized collection of discarded glass wastes in barangay MRFs and schools during Brigada Eskwela for replacement.		х		х	x	x	х	x			X	x
24.	Adhere to the regulations set forth in the Local Green Building Ordinance.		x	x			x	х	x	х	х	х	х
25.	Schools (public and private) and other government institutions voluntarily adopt energy efficient design and technologies (lighting and cooling) and conservation practices (e.g. improve insulation) in their own buildings and facilities.	x	x		x	x	x	x	x	x	x	x	x
26.	SMEs shall voluntarily convert to more energy efficient lighting and AC systems.		x		х		x		x			х	Х
27.	Meralco to establish a formalized partnership with the LGU to promote free energy buildings audit services by the former.		x			x	x	x	x			x	x
28.	Avail free energy audit services offered by Meralco for more informed adoption of appropriate and cost-effective EE&C measures.		x			x	x	x	x			x	x
29.	Meralco provides technical inputs and reviews to knowledge products (training modules) and advocacy materials to be developed.		x			x	x	x	x			X	х
30.	Sponsor EE&C scholars/ advocates in schools.	x	x			x	x	Х	x			х	x

_													
	31.	DOE to provide technical inputs and review knowledge products (training modules) and advocacy materials to be developed.		x			x	x	x	x		x	x
	32.	Local secondary public and private schools to coordinate with the LGU in the mobilization of youth advocates.		x			x	x	x	x		x	x
	33.	Local secondary public and private schools to explore potential integration of energy efficiency and conservation concepts in curriculum.		x			x	x	x	x	x	x	x
	34.	Support the LGU in the development of IEC materials as well as in the design and implementation of energy efficiency and conservation campaigns in barangays and schools to be led by trained student-advocates through various means such as expert inputs and financial assistance, where applicable.	x	x	x			x	x	x		x	
	35.	Support the barangay in the implementation of its energy efficiency and conservation plan through various mechanisms (e.g., funding support, technical assistance of demonstration projects) under its CSR programs.	x	x	x			x	x	x		x	
	36.	Purchase energy efficient appliances (should be closely linked with eco-labels)	x	x	x	x	x	x	x	x		x	
	37.	Use DOE's online- based platform www. wattmatters.org.ph to understand electricity consumption patterns and make informed decisions when purchasing and using energy- and cost-efficient appliances.	x	x	x		x	х	Х	X		x	
	38.	Register at Meralco to get peak and off-peak hours in using electricity. Take advantage of off-peak electricity times when electricity is charged at a reduced price.			x		x	x	x	x		х	x
	39.	Practice energy conservation in the households.			x		x	x	x	x		x	x

40.	Households have availed energy efficient lighting and/or AC systems offered by the LGU.		x		x	x	x	x		x	x
41.	Households shall voluntarily convert to more energy efficient lighting and/or AC systems.		x		x	x	x	x		x	x
42.	Participate in training and campaigns by student-advocates and the LGU.	х	x		x	x	x	x		x	x
43.	Parents of student- advocates support in pooling funds to augment and sustain resource availability for campaigns developed and implemented by student-advocates.	x	x		x	x	x	x		x	x
44.	Visit pilot demonstration projects of the barangay to learn and replicate solutions in own households (e.g., switching to energy- efficient lighting, AC, refrigerator).	x	x		x	x	x	x		x	x
45.	Participate in all awareness-raising campaigns by the barangay.	х	x		х	х	x	x		х	х
46.	Participate in training and campaigns by student-advocates and the LGU.	х	x		х	х	x	x		x	x



Strategic Climate Sub-priority 2:	Expand the use of alterna	tive/re	newabl	es ener	gy sy:	stems								
Objective:	Pasig City shall enhance en energy systems reducing e	nergy s lectric	ecurity	and se s in put	lf-relia olic ar	ance k nd priv	oy ins /ate b	talling uildin	g and gs by	opera 2030	ating ).	renew	able	
			Institut	ion(s):				С	limat	e Inst	rume	nts		
Climate Program	Climate Activities/ Projects:	Public / Local	Private	CSOs	International	Infrastructure Roll-out	Research Agenda	Partnerships	Capacity Building for LGU	Advocacy	Process Streamlining	Policy and Ordinance Compliance	Knowledge Sharing and Dissemination	Lifestyle Shift / Change
Renewable Energy Development and Implementation on city-owned buildings and facilities that meet technical design and requirements	<ol> <li>Conduct inventory of public buildings that can feasibly install solar photovoltaic units.</li> </ol>	x	x	x		x	×	×	×				×	
	<ol> <li>Install cost-efficient solar photovoltaic units in public buildings identified by the inventory.</li> </ol>	x	x			x	x		x				х	
	3. Perform regular M&E of solar PV installations to ensure optimum performance and to keep actual record of performance in terms of electricity use reduction and cost savings.	x	x	x		x	x	x	x	x	x	х	x	x
	<ol> <li>Provide incentives to building owners installing rooftop solar PV, such as priority lane in the processing of business permit as well as building and electrical wiring permit, real estate tax discounts or grace period, and/or waiving the processing fee of wiring permit for installing rooftop solar PV.</li> </ol>	x	x	X		x	x	x	x	×	x	x	x	x

5.	Develop training modules and IEC materials on renewable energy and proper solar PV installation and management at the household level in coordination with DOE and Meralco.	x	x	x			x	x	x	x			x	х
6.	Develop IEC campaigns and training on renewable energy and proper solar PV installation and management in all barangays in coordination with the Liga ng mga Barangay.	x	Х	x			x	x	x	x			x	х
7.	Maintain an accessible database of accredited solar PV providers.	х	x	x		x	x	x	x	x			x	х
8.	City Engineering Department to extend support to households interested in installing their own solar PV units.	x	x	x		x		x		x			x	х
9.	Public institutions to initiate feasibility study with solar photovoltaic providers on efficient installation of solar PV units for their own use.	x	x	x	x	x	x	x	x	x	x	x	x	х
10.	Explore the feasibility of using alternative clean energy sources for own use (e.g., solar PV, solar street lighting in energy compounds) and explore options for financial assistance.	x	x	x	x	x	x	x	x	x	x	х	x	x
11.	Meralco to ensure entities and households with solar PV installations to apply for a net-metering program through adequate information dissemination efforts. This mechanism will ensure that installations made are correct and will not compromise the distribution system of Meralco.	x	x	x		x	x	x	×	x		×	x	×
12.	Initiate the installation of cost-efficient solar photovoltaic units in private buildings identified by the inventory.	х	x	x		x	x	x	x	x	x	х	x	х

13.	Meralco to support the LGU in the development of training modules and IEC materials on renewable energy and proper solar PV installation and management.	x	х	х		х	х	x	x			x	x
14.	Meralco to establish a data sharing mechanism with the LGU on the net- metering enrollment in Pasig City.	x	х	x	x	х	х	x	x			x	х
15.	Solar PV unit and service providers to coordinate with the LGU to inform of potential services to be offered to Pasigueños.	х	х	х		x	х	x	x			x	х
16.	DOE to support the LGU in the development of training modules and IEC materials on renewable energy and proper solar PV installation and management.	х	х	х			х	х	х			x	х
17.	Consumer groups and citizens show recognition of the best practices of these buildings and facilities and further promote and advocate for widespread adoption of such practices by other building owners (both public and private).	х	х	×		x	х	x	x			x	х
18.	For building owners who intend to install and operate solar PV units, they enroll accounts to the net- metering program of Meralco.	x	х	x	x		х	x	x			x	x
19.	Initiate the installation of cost-efficient solar photovoltaic units by homeowners & private individuals.	x	x	x	x	х	х	x	x	x	x	x	x
20.	Actively explore information and knowledge sources to know more about installing solar facilities in the home.	х	х	x		x	х	x	x			x	x
21.	Advocate exploring renewable energy sources to community members.	x	x	х		x	х	x	x			x	x

22.	Participate in training on renewable energy and proper solar PV installation and management organized in their barangays.	х	х	х			x	x	x		x	x
23.	For building owners with installed and operational solar PV units, enroll accounts to the net-metering program of Meralco.	х	х	Х			х	x	x		x	x
24.	Actively explore information and knowledge sources to know more about installing solar facilities in the home.	х	х	х		x	х	х	х		х	x
25.	Advocate exploring renewable energy sources to community members.	×	х	x		x	х	x	x		x	x
26.	Building owners to engage in awareness programs including tenants	x	Х	x			х	x	х		x	x



Strategic Climate Sub-priority 1:	Increase efficiency of vehic	les and trans	l impr porta	ove a tion v	icces vithin	s and the	d patl city	nways	to di	fferen	it mo	des o	f	
Objective:	Improved, as well as diversifie	ed, mot	oility a	nd pi 2030	ublic ).	trans	porta	ation	servic	es an	d fac	ilities	s by	
		In	stituti	on(s)	:			Cli	mate	Instru	imen	ts		
Climate Program	Climate Activities/ Projects:	Public / Local	Private	CSOs	International	Infrastructure Roll-out	Research Agenda	Partnerships	Capacity Building for LGU	Advocacy	Process Streamlining	Policy and Ordinance Compliance	Knowledge Sharing and Dissemination	Lifestyle Shift / Change
Improved mobility and public transportation through continuing implementation of the Bayanihan sa Daan Program	<ol> <li>Create and approve a city- wide transport master plan and local public transport route plan assuring the interconnectivity of different modes of transportation.</li> </ol>	x	x	x		x	x	х	x	x	x	x	x	x
	2. Ensuring coordination with transport sector groups to finalize the routes of public utility vehicles in Pasig City.	x	x	x		x	x	х	х	x	x	х	х	x
	<ol> <li>Provide spaces or common facilities for PUVs for maintenance.</li> </ol>	x	x			x	x	х	х	x	x	х	х	x
	4. Creation of a transport desk that will hear and represent the transport sector's interests at the city level.	x	x			x	x	х	x	x	x	x	x	
	<ol> <li>Identification of tricycle drivers to be re-fleeted to e-trikes.</li> </ol>	x	x				x	х	x	x			x	
	6. Identification of businesses to receive e-trikes.	х	x				x	x					x	
	7. Forge Memorandum of Agreement (MOA) to ensure the efficient use and maintenance of e-trike units.	x	x								x	х		

8.	Feasibility study on the identification of charging and swapping stations (e.g. location, capacity, maintenance requirements).	х	x	x	x	x	x	х	x					
9.	Deployment of e-tricycle units and allocation to different sectors in the city.	x	x	x		x	x	x	x	х	x	х	x	x
10.	Subsidize the conversion or improvement of charging by having an alternator provision on e-tricycles using ordinary vehicle batteries.	x	x	x		x	x	x	x	x	x	x	x	x
11.	Ensure that tricycle drivers that are to be re-fleeted are provided with the available support from the LGU to uphold a just and fair transition.	х	x	x		x	x	х	x	х	x	x	x	x
12.	Procurement of additional ferry boats as alternative transport mode and route access through Pasig River	x	x	x		x	х	х	х	х	x	х	x	x
13.	Memorandum of Agreement with MMDA for the operation and maintenance of M/B Mutya ng Pasig 1 and M/B Mutya ng Pasig 2.	x	x	x		x					x	x		
14.	Participate in public consultations to contribute to the formulation of the plans.	x	x	x				x	x	x			x	x
15.	Support in the allocation of a terminal if the study supports that their area of business is strategic as a terminal to promote interconnectivity. Specifically, donate or lease at a lower price the identified land or site for the common terminal.	x	x	x			x			x			x	x
16.	Encourage employees and members to use public transport.	x	x				x			х			x	x
17.	Consider providing bus service for employees	x	x	х				x			x	х	x	x
18.	Transport sector groups supporting the PUV Modernization Program provided with certain enabling mechanisms to ensure just transition.	x	x	x		x	x	x	x	x	x	x	x	x

19.	Business establishments identified as recipients of e-trike units to forge Memorandum of Agreement (MOA) with the LGU to ensure the efficient use and maintenance of e-trike units.	x	x	x			x		x	x	x	x	x
20.	Banks and other financial lending institutions to initiate partnership with the LGU to support and accelerate e-vehicle deployment through provision of financial resources.	x	x	x			x		x			x	x
21.	Banks and other financial lending institutions to support drivers interested in switching to e-tricycles.	x	x	x	x		x		x	x	x	x	x
22.	Meralco (e-sakay initiative) to provide technical and/ or financial support in the conduct of feasibility study for the identification of charging and swapping stations.	x	x	x	x	x	x	x	x	x	x	x	x
23.	Support in the allocation of charging stations for e-tricycles if a study supports that their area of business fulfils the prerequisites of a charging station. Specifically, donate or lease at a lower price the identified land or site for the common terminal.	x	x	x	x	x	х	х	x	x	x	x	x
24.	Encourage employees and members to use e-tricycles as means of mobility within the city to sustain operation of e-tricycles.	x	x	x	x	x	x	x	x			x	x
25.	Voluntary support for the maintenance and construction of green spaces and access paths on Pasig ferry stations by fostering partnerships with the LGU	x	x	x	x	x	x	x	x			x	x
26.	Encourage employees and members to use the Pasig ferry boats as alternative public transport mode	x	x	x			x		x			x	x
27.	Patronize and give priority to public transport options.	x	x	x			x		x			x	x
28.	Advocate the use of mass transport within their own immediate networks.	x	x	x			x		x			x	x
29.	Consider green procurement; preferring suppliers which advocate for sustainable delivery; transport and supply chain.	x	x	x			х		x			x	x

30. Patronize and give priority to e-tricycles as means of mobility within the city.	x	x	х		x	х		x	x
31. Patronize Pasig ferry boats as alternative transport mode and contribute to maintaining its cleanliness and efficiency.	Х	х	х		х	х		x	x

Strategic Climate Sub-priority 2:	F	Promo	te the	use of	non-r	notoriz	zed tra	anspo	ortatio	on.				
Objective:	Encourage people	e to sh	ift to a	ı non-ı iı	notori: nfrastr	zed tra ucture	inspo	rt thr	ough	comr	nunit	y-frie	ndly	
		I	nstitut	tion(s)	:			CI	imate	Instr	umen	its		
Climate Program	Climate Activities/ Projects:	Public / Local	Private	CSOs	International	Infrastructure Roll-out	Research Agenda	Partnerships	Capacity Building for LGU	Advocacy	Process Streamlining	Policy and Ordinance Compliance	Knowledge Sharing and Dissemination	Lifestyle Shift / Change
Construct an accessible bicycle network through the Pasig Basic Bicycle Network, and shift to improved pathways for non- motorized transport through continuing and expanding implementation of initiatives (such as Carless Weekends and Bike Sharing Program) through the installation of 50 bike sharing stations in the city.	<ol> <li>City-wide inventory of bicycles used as an alternative transport mode in the city</li> </ol>	×					×	x	X	X	X	x	×	

2.	Barangays are encouraged to assist in allocating priority lanes such as walkways and bicycle lanes in inner roads within their villages	x			х		×	×	×			×	x
3.	Expand and improve bicycle lanes in the city through the "Bike Lanes and Greenways Project" by widening lanes and providing clear barriers and signages to protect riders, among others.	x	x	x		x	x	x	x			x	x
4.	Provision of bicycle parking in public spaces throughout the city	х			х		х	х	х			x	х
5.	Provision of sustainable transport metric in the Local Green Building Ordinance of the city further stimulating LGU-business sector partnership to support the interconnectivity of public transport options (e.g. charging stations, bicycle stations)	x	x	X	X		×	x	x	x	x	x	x
6.	Conduct a city- wide audit of all sidewalks by first quarter of 2020	х				х	х	х	х	x	х	х	х
7.	Sidewalks upgraded to include two- meter clear path walkways	х				x	x	х		x	x	x	
8.	Barangays are encouraged to assist in allocating priority lanes such as walkways and bicycle lanes in inner roads within their villages	x			х		x	x	x	x	x	x	x

9.	Expand walkway networks to connect to second- level destinations as well as integration to existing and future green spaces in the city	x			x	x	x	x	x	x	x	х
10.	Stringent enforcement of anti-smoke belching operations	x				х	x	х	x	х	х	х
11.	Improve regular monitoring and information dissemination of air quality in the city with the aid of strategically installed air quality monitoring devices	Х								x	x	
12.	Strengthen coordination with DENR-NCR and other Metro Manila LGUs to ensure alignment of plans and programs to improve air quality of the NCR airshed	х				x	x	x	x	x	x	
13.	The LGU shall conduct <i>Bayanihan sa</i> <i>Daan</i> eco-mobility competition (bikeable and walkable streets) among all 30 barangays	х	x	x		x	x	х			x	x
14.	Identify and enforce 10 additional Carless Weekends streets to be initiated by barangays	x	x	x		x	x		x	x	x	x
15.	Placemaking of iconic and historical streets and creeks	x			х							
16.	Provide bicycle parking in establishments		x		х			Х			Х	
17.	Encourage employees to walk or cycle to work	x	x			х		х			х	x
18.	Encourage employees to reduce private car use for short- distance trips		x			х		х				х

19.	Metro Manila Development Authority (MMDA) to assist in coordination with neighboring and adjacent LGUs that may be affected by these initiatives	x	×				x	x	x			x	
20.	Follow guidelines in allocating appropriate dimensions for a sidewalk/ walkway to allow pedestrians and cyclists to use the space	x	Х				x		x	x	x	x	x
21.	Business establishments to design and construct second-level connections to elevated walkways from their establishments		x		х		х			х	х		
22.	Perform regular company vehicle maintenance and regularly undertake smoke emission tests		x				x			x	x		
23.	Use high quality and clean fuel	х	x	x			х		х			х	х
24.	Develop environment- friendly driving culture among company drivers (e.g. refrain from excessive use of cooling in the car, refrain from unnecessary idling)	х	x	x			x		x			x	x
25.	Transport groups support the Clean Air Act through the PUV Modernization Program with provi- sion on certain en- abling mechanisms to ensure just tran- sition	×	х	х	x	x	x	x	x	x	x	x	×
26.	Local businesses to voluntarily set up concessionaires during Carless Weekends	Х	х		Х	х			х			Х	Х
27.	Community to as- sist Pasig City in surveying bikers, organizing group rides and aiding in bicycle lane en- forcement	х	x	х		х	x		x			x	x

28.	Homeowners' Associations (HOAs) to explore allocating pedestrians- and cyclists-only streets	x	x	x		x	x	x	x		x	x
29.	Walk or cycle for short-distance trips.			x		х	x	х	х		х	х
30.	Advocate biking or walking as a primary mode of transportation (when applicable).	х	х	x			x		х		x	х
31.	Perform regular vehicle maintenance and regularly undertake smoke emission tests	x	х	х			x		x		x	x
32.	Refrain from excessive use of cooling in the car	х	х	х			х		х		х	х
33.	Refrain from unnecessary idling	х	х	х			х		x		x	х
34.	Participate in various activities (e.g. buying from local concessionaires) during Carless Weekends	x	x	х			x		x		x	x
35.	Local artists to participate in placemaking of iconic and historical streets and creeks	х	Х	х			x		x		x	х



Strategic Climate Sub-priority 1:		R	educe	e in-cit	y soli	d was	te ger	erati	on					
Objective:	Reduce solid waste a	genera d recy	tion b cling a	y 20% among	by 20 bara	)30 by ngays	furth and e	er str stabl	ength lishm	nening ents.	g was	te reo	ductio	'n
		lı	nstitut	ion(s)	:			CI	imate	Instr	umen	its		
Climate Program	Climate Activities Projects:	Public / Local	Private	CSOs	International	Infrastructure Roll-out	Research Agenda	Partnerships	Capacity Building for LGU	Advocacy	Process Streamlining	Policy and Ordinance Compliance	Knowledge Sharing and Dissemination	Lifestyle Shift / Change
Reduction in solid waste generation through continuing and expanding imple- mentation of existing initiatives such as Greenheart Savers Program and Mobile Recycling Redemption Center	1. Enact a policy incentivizing (fiscal and non-fiscal) commercial and industrial establishments that practice food waste reduction and processing (e.g., composting, biogas digester feedstock).	х									x	x	х	
	2. Collect kitchen waste from food establishments for composting.	x	x	x			х	x	х	х	х	х	х	x
	3. Intensify information drive on food waste reduction among households.	х	х	x					x	x			х	
	4. Establish a food bank in partnership with CSOs/NGOs.	х				х		х	х	х			х	х
	5. Encourage LGU employees to minimize food waste generation through IEC campaigns that highlight the importance as well as economic and environmental co-benefits of this action.	х						x	х	х			х	x
	<ol> <li>Regulate the use of plastic products by adopting the "pay-as-you- throw" principle for households and commercial establishments.</li> </ol>	х						х	х	х	x	x	х	x

7.	Conduct information drives and capacity building activities that shall enable citizens to transition to refusing single-use plastics.	x				x	x	х			x	x
8.	Encourage city government employees to refuse single-use plastics.	x				x	x	х			х	x
9.	Make all city meetings to be plastic-free to lead by example	x				х	x	x	x	х	x	х
10.	Forge a partnership between hotels and restaurants and the LGU to sustainably manage food waste	x	x			x	x	х	x	x	х	x
11.	Establish a partnership between CSOs and NGOs with the LGU to develop a food bank.	x		х		x	x	х	x	x	х	x
12.	Cook an adequate amount of food to be served by company cafeterias daily.		х			х		х			х	x
13.	Donate clean and untouched leftovers from supply stocks and ingredients of restaurants, hotels and food shops to a food bank.		x			x	x	Х			x	x
14.	Properly store and give generated kitchen waste to LGU waste collectors.		х			x	x	х		x	x	х
15.	Analyze sales patterns to avoid excessive orders of plastics (e.g. for packaging)		х			x	x	х		x	x	x
16.	Separate packaging waste to help with recycling and installing recycling bins in own premises		x			x	x	x		x	x	x
17.	Public schools to conduct regular drives on preparing eco-bricks.		х			x	x	х			х	x

18.	Start a recycling system in the classrooms	x		х		x	x	x		x	х
19.	Encourage employees and members to avoid using single-use plastic.	x				x	x	x		x	x
20.	Provide reusable containers that can be used or borrowed from canteens or pantries.	x		х		x	x	x		x	х
21.	Provide incentives for employees, members, or students using reusable containers (e.g. discounts)	x				x	x	x		x	х
22.	Explore sustainable packaging options that can be used as replacement to plastic materials.	x			x	x	x	х		x	x
23.	Purchase and prepare only the sufficient amount of food.	x		х		х	x	x		x	х
24.	Store purchased food properly and consume these before its expiration date.	x				x	x	x		x	х
25.	Refrain from cooking or ordering excessive amounts of food.	x		х		х	x	х		x	х
26.	Avoid producing leftovers.	x				x	x	х		x	х
27.	Properly store and give generated food waste to LGU waste collectors.	x			x	x	x	х		x	х
28.	Compost food waste when doable and applicable.	x		х		x	x	х		x	х
29.	Refuse single-use plastics whenever feasible.	x				x	x	х		x	x
30.	Bring your own reusable bag when doing groceries or buying in the market.	x		х		x	x	x		x	x

31.	Make it a habit to bring your own reusable water bottles to avoid buying bottled water.		x				x	x	x			x	x
32.	Materials recovery facility (MRF) or modified MRF will be established in every barangay vis-à-vis land area availability and social acceptability.		x		x	x	x	x	x	x	x	x	x
33.	Strengthen the implementation of the Waste Segregation and Recycling Program.		х				x	x	x			x	x
34.	Encourage participation to <i>Super Lingap,</i> <i>E-FAST/E-PASS,</i> and <i>Lingap Bulilit</i> Programs.		х				х	х	х			х	х
35.	Expand the Greenhearts Savers Program to cover private schools and universities.		x				x	x	x			x	x
36.	Promote the practice of Clean As You Go (CLAYGO) in all public and private buildings and facilities as well as open spaces by putting appropriate signage.		x				x	x	x			x	x
37.	Establish partnership with schools and universities to integrate the principles and practices behind Greenheart Savers Program in the curriculum (e.g., <i>Edukasyong</i> <i>Pantahanan at</i> <i>Pangkabuhayan</i> , National Service Training Program)	x	x				x	x	x			x	x
38.	Create markets/ bazaars that will promote products of local stores that use recyclables and environment- friendly materials in their production.	х	х			x	Х	Х	Х			Х	х

39.	Establish partnership with accredited recycling companies to ensure proper recycling and disposal of wastes.	x	x				x	x	x		x	x
40.	CSWMO to collect kitchen waste from all public buildings in the city.	х	х		x		x	x	x		x	х
41.	Establish composting sites in suitable idle lands.	х	х		х		x	x	x		x	х
42.	The Engineering Department will encourage contractors to donate their empty paint buckets to CENRO to be used for making compost (for Bokashi composting method) and/or as plant pots.	х	х		х		x	x	х		x	×
43.	Sustain operations and productivity of existing composting facilities such as proper maintenance, adequate and dedicated supply of organic wastes, among others.	х	x				x	x	x		x	x
44.	Explore the potential of using biogas digester technology to treat organic waste.	x	х		x	х	x	x	x		x	x
45.	Sustain the implementation of Garbage to Garden: It's Compost Time! Program and enhance organic gardening in schools by using composted food waste from canteens.	x	x				x	x	x		x	x
46.	Encourage the use of produce from community-based urban gardens for feeding and nutrition programs implemented by the City Health Office (CHO) and/ or barangays.	х	x				x	x	x		x	x

		1	T.	1	1			T		r	1	r		
47.	Conduct a feasibility study of the potential adoption of in-city waste-to- energy facilities in partnership with a developer under a public-private partnership (PPP) mechanism.	x	x			х	x	x	x	x			x	x
48.	Explore the potential of implementing small-scale biogas digesters for kitchen wastes.	x				x	x	x	x	x			x	x
49.	Explore the potential for using public-private- partnerships (PPP) mechanisms for the establishment of feasible waste- to-energy facilities.	x					x	x	х	Х			x	x
50.	Establish operational MRFs in 42 schools (primary and secondary levels)		x			x		x	x	x			x	x
51.	Foster partnership between recycling companies with the LGU to strengthen processing of collected recyclable wastes by the LGU.		x					x	x	x			x	x
52.	Foster partnership with the LGU to develop innovative programs that promote recycling among citizens through their Corporate Social Responsibility (CSR) Programs.		x					x	x	x			x	x
53.	War on Waste - DepEd		x					x	x	х			x	х
54.	Establish partnership with accredited recycling companies to ensure proper recycling and disposal of wastes.		x					x	x	x			x	x
55.	Promote CLAYGO and educate customers on waste segregation within their premises.		х					x	x	х			x	x

56.	Business establishments including but not limited to property developers, shopping malls, mixed- use buildings, commercial centers participate in markets/bazaars that promote products of local stores that use recyclables and environment- friendly materials in their production.	x				X	×	×		×	x
57.	Designate organic waste collection bins.	x				x	x	x		х	х
58.	Use collected organic waste to generate compost and/or fuel through a biogas digester technology in public institutions like schools, hospitals, and markets.	х				x	x	x		x	х
59.	Donate generated compost to community gardens in barangays.	x				x	x	x		х	х
60.	Explore the potential of implementing small-scale biogas digesters for kitchen waste for schools and markets.	x			x	x	x	x		х	x
61.	Explore the potential of public-private partnership in the establishment of in-city waste-to- energy facilities should studies prove its feasibility.	x			x	x	x	x		x	x
62.	HOAs to designate their own MRFs vis-à-vis land area availability and social acceptability		x	х		x	х	x		х	х
63.	HOAs in cooperation with their barangay councils shall lead the maintenance and cleanliness of designated MRFs.		x			x	x	x		х	х

64.	Assist in maintaining order and cleanliness of barangay MRFs.		х			х	x	x			х	х
65.	Practice proper waste segregation at source and reuse.	x	x	x	x	x			х	x	х	x
66.	Properly dispose recyclable wastes to designated MRFs or recycling points of the LGU and business establishments (e.g. malls).	x	х	х	x	x			х	x	х	x
67.	Patronize waste-to- resource (creative recycling or upcycling) products produced by the women of KILUS Foundation, Brgy. San Antonio and Brgy San Jose	×	Х	x	х	x			x	x	x	×
68.	HOAs to provide designated organic waste collection bins and transform these into compost products.	x	х	х	x	x			x	x	х	x
69.	Properly collect organic waste generated (kitchen and garden wastes)	х	х	x	х	x			х	x	х	х
70.	Use collected organic waste to generate compost.	x	х	x	x	x			х	x	х	x
71.	HOAs and barangays to coordinate with relevant local government units in putting together capacity building activities related to organic farming and composting.	x	x	X	x	x			x	x	x	x
72.	HOAs to donate compost products to community gardens.	x	х	х	x	х			х	х	х	x
73.	Citizens transform their organic waste into compost products that they can use for their own gardens or donate to their community gardens.	×	х	x	x	x			х	x	x	×

Strategic Climate Sub-priority 2:	Improve and streamline waste collection and clean-up processes														
Objective:	Ensure proper compli	iance t	o the o	city's s ga	solid v rbage	vaste i dispo	mana sal	geme	ent co	de pa	rticul	arly o	on illeg	gal	
		I	nstitu	tion(s)	:		Climate Instruments								
Climate Program	Climate Activities/ Projects:	Public/Local	Private	CSOs	International	Infrastructure Roll-out	Research Agenda	Partnerships	Capacity Building for LGU	Advocacy	Process Streamlining	Policy and Ordinance Compliance	Knowledge Sharing and Dissemination	Lifestyle Shift / Change	
100% compliance to the city's solid waste management code	1. Deploy eco- lektors in 112 sites (streets and alleys) to collect and educate against indiscriminate garbage disposals.	x						x	x	x			x	x	
	2. Conduct regular on-site monitoring of garbage collection.	x									x	x			
	3. Establish a proper feedback system for citizens to ensure compliance to segregated waste collection schedules.	x				x		x	x	x	x	x	x	x	
	<ol> <li>Acquire digitized fleet management and truck weighing scale to improve data collection and analysis of solid waste collected in the city.</li> </ol>	x				x					x	x	x		
	5. Improve maintenance of the Manggahan Floodway to prevent clogging of wastes.	х				х					x	x	x		
	<ol> <li>Conduct regular clean-ups of water bodies and inspection of drainage systems for potential clogging together with volunteers.</li> </ol>	x				x					x	X	x		
	7. Designate disposal bins for electronic wastes in materials recovery facilities (MRFs).	х				x					х	х	x		

8.	Foster partnership with accredited e-waste collectors to ensure proper upcycling, recycling or disposal of electronic wastes collected by the city.	x				x	x				
9.	Develop innovative programs and markets to encourage upcycling of electronic wastes.		x				x	x	x	х	x
10.	Comply with the collection scheme employed by the local government.		х				x		х	х	Х
11.	Bring out only the waste type scheduled for collection.		х				x		х	х	
12.	Report inconsistencies and/or non- compliance in waste collection to the local government via the E-Complaints hotline of the LGU.		Х				х		х	Х	
13.	Department of Environment and Natural Resources - Environmental Management Bureau (DENR- EMB) to provide available and accessible information on accredited e-waste collectors.		х				x	x	x	х	x
14.	Procure electronic products with longer life span.		х				x	х	х	х	х
15.	Provide designated and properly labelled separate bins for collecting e-wastes within their buildings or premises.		х				x	х	x	х	x
16.	Comply with the collection scheme employed by the local government. Bring out only the waste scheduled for collection.			x			x	x	x	х	x
17.	Report inconsistencies and/or non- compliance in waste collection to the local government via C3.						x	x	х	х	x

18.	Encourage household members, colleagues, and networks to practice proper waste disposal and segregation.		x	x	х	x	x			x	x
19.	Practice waste segregation at source.		x	x		x	x	x	x	x	х
20.	Properly dispose of segregated wastes in the barangay MRF.		x	x	х	x	x	x	x	x	x
21.	HOAs to create community drop-off sites for e-wastes.		x	x	х	x	x	x	x	x	x
22.	Purchase electronic products with longer life span and avoid buying unnecessary electronic products.		x	x	x	x	x			x	x
23.	Properly dispose of electronic products to designated drop- off sites.		х		х	х	х		x		х
24.	Actively seek more information regarding the ways to dispose of electronic waste.		x		х	x	x				x
25.	Procure electronic products with longer life span.		x	x	х	x	x				х
26.	Barangays to co- organize capacity building activities with CENRO on upcycling, composting, and/ or gardening for various audiences— community groups, etc.	x			x	x	x				x
27.	Provide composting and gardening starter kits to training participants.	x		x	x	x	x				x
28.	Promote the practice of Clean As You Go (CLAYGO) in all government-owned facilities and open spaces by putting up appropriate signages.	x			x	x	x				x
29.	Conduct Environmental Contests - Evaluate the applicability of "Biggest Garbage Loser" incentive scheme among schools, HOAs, and <i>purok</i> .	х				x	x	х		×	
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30.	Create market/ bazaars that promote products of local stores that use recyclable and environment- friendly materials in their production.	x			x	x	х	х		x	
31.	Develop campaigns and associated IEC materials to disseminate information on solid waste management programs of the city (e.g., waste collection schedule, incentives and penalties, training opportunities) as well as to promote sustainable consumption and production.	x				Х	×	×		x	
32.	Establish lasting partnerships between CSWMO, barangays, businesses, institutions, CSOs, to ensure that timely information and advocacy efforts are cascaded to their members, networks, and the general public.	x				×	x	×		x	
33.	Co-organize capacity building activities with CENRO on upcycling, composting, and/ or gardening for employees.		x			x	x	x		x	
34.	Create urban gardening spaces in your own building/facility.		x		x	x	x	х		х	
35.	Create CLAYGO stations in canteens.		х		х	х	х	х		x	
36.	Create a culture of sustainable consumption and production among employees and members.		х			x	x	х		х	

37.	Promote resource circulation as well as sustainable consumption and production by co-organizing activities with the LGU in creating markets/bazaars that promote sustainable lifestyles.	x			x	x	x			x
38.	Ensure that timely information from the LGU on local policies and programs on solid waste management are received and adequately communicated to its employees and members.	х			x	x	х			x
39.	Participate in capacity building activities on upcycling, composting, and/or gardening offered by CENRO and barangays.		х		x	x	х			x
40.	Create composting and gardening spaces in your own household.		х	х	х	х	х		x	x
41.	Coordinate with relevant local government units in putting together capacity building activities related to organic farming and composting.		×		x	x	х		x	x
42.	Actively seek timely information from the barangay and/or HOA re: local policies and programs to ensure compliance and participation.		Х		х	х	Х		х	x
43.	Conscious effort to switch to more sustainable lifestyle choices in terms of consumption with the support of city-led advocacy campaigns		x		Х	Х	Х		x	x

Strategic Climate Sub-priority 3:	Improve	quality	y and	reduce	e the v	volume	e of wa	astew	ater (	disch	arge.			
Objective:	Ensure proper obs	ervan	ce and	l comp	olianc	e to th	e Phili	ippin	e Clea	an Wa	iter A	ct of	2004	
		Ir	nstitut	ion(s):	:			Cli	mate	Instru	umen	ts		
Climate Program	Climate Activities/ Projects:	Public / Local	Private	CSOs	International	Infrastructure Roll-out	Research Agenda	Partnerships	Capacity Building for LGU	Advocacy	Process Streamlining	Policy and Ordinance Compliance	Knowledge Sharing and Dissemination	Lifestyle Shift / Change
100% compliance to national standards for Domestic and industrial wastewater discharge	<ol> <li>Strict implementation and enforcing of the City's Drainage and Flood Control System Master Plan.</li> </ol>	x						х			x	x	x	
	2. Enactment of a local ordinance on septic and sewerage management	х				х		х			х	х	x	
	3. Through the enactment of an ordinance, appropriate and necessary right-of- way/road access to the land for construction of sewage and/or septic treatment facilities shall be implemented.	x						×			×	×	×	
	4. Enact ordinance adjusting local property taxes or imposing a service fee system to meet necessary expenses for the operation and maintenance of sewerage treatment or septic management facility servicing their area of jurisdiction.	×						×			×	×	×	

5.	The Association of Barangay Captains (ABCs) shall establish cooperation with Manila Water to encourage households within their jurisdictions to avail the free-of- charge declogging services of the company through the company's <i>Toka-Toka</i> <i>Program.</i>	x				×	×		×	×	x
6.	CENRO Environmental Inspectors to regularly monitor the operation of functional septic management systems of all institutional, commercial, and industrial establishments within the city.	x				x		x	x	x	x
7.	Conduct a comprehensive assessment of the public market's drainage system— considerations on external factors (e.g. operations/ practices of privately operated <i>biyaheros</i> ), elevation and slope, etc.	х				x		x	х	x	
8.	Identify eco- friendly and long-term solutions for concerns pertaining to the drainage system of the public market.	х			x	x		x	x	x	х
9.	CENRO Environmental Inspectors, together with the Department of Environment and Natural Resources - Environmental Management Bureau (DENR- EMB) shall regularly monitor the compliance of wastewater effluent discharge of commercial establishments and industries operating within Pasig City and strictly enforce penalties to non- compliant entities as mandated by existing national and local policies.	x				x		x	x	X	×

10. CENRC require of self-r reports of comr establis and ind where a accordin of opera part of t permit a	and BPLO submission nonitoring (SMRs) nercial hments ustries, appropriate ng to scale ation, as business application.	x					x		x	x		
11. Manila Compart to comp constru- and hou service of sewe treatme 2025.	Water hy lete ction isehold connection rage nt plant by		X		x		x		x	x		
12. Ensure built hou subdivis connect utility pr sewerag treatme	newly uses/ sions are red to the ovider's ge nt plant.	x	х		х		х		x	x	x	
13. Ensure mainter of Septi Sewera	regular iance c and ge System		x		x		х		x	x		
14. Install a scale a technol septic a manage for busi operatio	ppropriate nd ogy for nd sewage ement ness ons.		x			x	x		x	x		
15. Regular optimur capacity effluent STP.	ly monitor n treatment / and quality of		x				х		x	x		
16. Report effluent quality t EMB ar every q	findings of discharge o DENR- id CENRO uarter.		x				x		x	x		
17. Ensure industria wastew follows regulati permitti and inst of waste treatme	that al ater the EMB ons through ng systems callation ewater nt facilities.		x				x		x	x		
18. Provide and tec support establis WTP fo	financial hnical for hment of r SMEs.		x				x		x	x		

19.	Ensure industrial wastewater follows the EMB regulations through permitting systems and installation of wastewater treatment facilities.	x			x		x	x		
20.	Regularly monitor optimum treatment capacity and effluent quality of STP.	x			x		x	x		
21.	Report findings of effluent discharge quality to DENR- EMB and CENRO every quarter.	x			х		x	x		
22.	Support the monitoring activities of DENR- EMB and CENRO by reporting non-compliant industries.	x	x		x	x	x	x	x	
23.	Households are encouraged to install at least two- chamber septic tanks.		x	х	x	x	x	x	x	x
24.	Refrain from directly discharging wastewater directly into rivers and creeks.		х	х	х	х	х	x	х	х



Strategic Climate Sub-priority 4:	E	Expand	d wate	r cons	ervati	on an	d reu	se pr	ograr	ns.				
Objective:	Encourage pos	sitive I	oehavi	ioral c	hange	on w	ater e	efficie	ncy a	nd co	onser	vatior	ı	
		lı	nstitut	ion(s)	:			С	limate	e Inst	rumei	nts		
Climate Program	Climate Activities/ Projects:	Public / Local	Private	CSOs	International	Infrastructure Roll-out	Research Agenda	Partnerships	Capacity Building for LGU	Advocacy	Process Streamlining	Policy and Ordinance Compliance	Knowledge Sharing and Dissemination	Lifestyle Shift / Change
Increase in compli- ance with national and local standards for water efficiency and conservation	<ol> <li>Provision of water conservation and reuse metric in the Local Green Building Ordinance and corresponding fiscal and non- fiscal incentives to encourage installation of rainwater harvesting facilities.</li> </ol>	x						x	x	x			x	x
	2. Disseminate information on standard specifications (e.g., based on floor and roof area of building types, retention capacities of facilities) of rainwater harvesting facilities for each building and construction type.	x						×	x	x			x	x
	3. Offer capacity building activities on rainwater harvesting facility design, construction, and installation for commercial establishments, industries, and households.	x						x	x	x			x	x
	4. Intensify information dissemination on water conservation advocacy in partnership with Manila Water Company.	x						Х	x	x			х	x
	5. Ensure that water conservation is practiced in their facilities.	x						х			x	x		

6.	Ensure that there are no leakages in pipes	x			x		x			х	х		
7.	Install rainwater harvesting facilities in all existing facilities and new building construction.		x		x		x	x	x	x	x	x	
8.	Conduct commercial water audits to assess how much water each business consumes each day and identify conservation opportunities.		х			x							
9.	Building management for each establishment to request to install low-flow restrictors.		x		x								
10.	Manila Water to provide water audit options.		х				x						
11.	Ensure that water conservation is practiced in their facilities.		x		x					x	x	x	
12.	Check that there are no leakages in pipes		x		x					x	x	x	
13.	Share/spread the water conservation advocacy		x				х	х	x			x	x
14.	Install simple rainwater harvesting equipment in households when applicable			x	x	x	x	x	x	x	x	x	x
15.	Ensure that water conservation is practiced at home.			х	x	x	x	x	x			x	x
16.	Check that there are no leakages in household pipes			x	x	х	x	x	x			х	x
17.	Share/spread the water conservation advocacy			х	х	х	х	x	x			х	х

Strategic Climate Sub-priority 5:	Rest	ore an	d reha	abilitat	e the	city's ı	natura	l dra	inage	ways	6.			
Objective:	Sustainable and efficie	ent dra us Ord	inage ler on	systei the Re	n con habil	nplaint	to the and F	e Sup Resto	reme ratior	Cour of M	ťs W anila	rit of Bay	Conti	nu-
		Ir	nstitut	ion(s)	:		1	Cli	mate	Instru	umen	ts		
Climate Program	Climate Activities/ Projects:	Public / Local	Private	CSOs	International	Infrastructure Roll-out	Research Agenda	Partnerships	Capacity Building for LGU	Advocacy	Process Streamlining	Policy and Ordinance Compliance	Knowledge Sharing and Dissemination	Lifestyle Shift / Change
Upgrade wastewater treatment system through efficient drainage systems	<ol> <li>Identify strategic areas for waste disposal bins that are placed far away from drainage areas.</li> </ol>	х					x	x	х		x	х	х	
	2. Install appropriate signages and CCTV cameras to discourage waste disposal in drainages.	х				х		x	x		x	x	x	
	<ol> <li>Regularly inspect conditions of drainages especially during rainy seasons.</li> </ol>	х				х		x	х		x	х	х	
	4. Establish partnerships with local universities to integrate activities to rehabilitate the city's natural drainage ways (e.g., clean up drives) into their National Service Training Program (NSTP).	x						x	x	x			x	
	5. Identify potential synergies with the new <i>eco-lektors</i> of the Solid Waste Management Office (SWMO) to maximize their services and operations.	×					x		x	x			x	
	6. Intensify recruitment of volunteers but ensure stricter screening of volunteer- applicants.	х					x		x	x			x	

7.	Develop natural and/or art parks near the natural drainage ways.	x			х			х		х	х		
8.	Intensify information dissemination on prohibiting indiscriminate waste disposal in drainage ways further integrating values formation emphasizing the citizens' role in preserving the integrity of the environment.	x					x		x			x	x
9.	Ensure environmental installation and appropriate measures to avoid clogging of drainages among institution's canteen and kitchen. (i.e., grease trap and water & oil separator)	x	x		х		x	x		x	x		
10.	Establish lasting partnership with the LGU in organizing regular clean-up and rehabilitation drives of the city's natural drainage ways as part of their CSR activities.		x				x	x	x			x	х
11.	Support the LGU's efforts in maintaining the cleanliness of natural drainage ways by advocating against indiscriminate garbage disposal and reporting non- compliant entities.		x				x	x	x	x	x	x	x
12.	Organizations of landscape architects and artists are encouraged to establish partnerships with the LGU to design and develop natural and/or art parks near the natural drainage ways.		x		х	x	x	x	x	x	x	x	x

Strategic Climate Sub-priority 1:	Utilization of idle pub	lic spa	ices (v	acant	lots, i lands	rooftop cape.	os, ba	lconi	es) fo	r urba	an ag	ricult	ure ai	nd
Objective:	Expansion of green la	space ndsca	s that pes an	are de	edicat comm	ed for unities	increa in th	ased e city	food by 2	produ 030.	ction	and	urbar	1
		Ir	nstitut	ion(s)				Cli	mate	Instru	umen	ts		
Climate Program	Climate Activities/ Projects:	Public / Local	Private	CSOs	International	Infrastructure Roll-out	Research Agenda	Partnerships	Capacity Building for LGU	Advocacy	Process Streamlining	Policy and Ordinance Compliance	Knowledge Sharing and Dissemination	Lifestyle Shift / Change
Integration of the vertical and/or rooftop green spaces in public and private buildings	1. Revisit the inventory of idle lands and map out total available public and private idle spaces as well as existing green spaces suitable for urban agriculture	×	×	x			х	x	x		x	x	x	x
	2. Formulate and develop a City Urban Agriculture Plan, in consultation with stakeholders.	x	x	x			х	x	x	x	x	x		
	3. Develop a legal document template expressing agreement on the voluntary use of private idle lands for urban agriculture uses.	х	x	x			x	х	x		х	x	x	x
	4. City Environment and Natural Resources Office (CENRO) to provide logistic support, technical assistance, and ensure proper and effective implementation, enforcement and monitoring of the provisions of the Integrated Urban Agriculture Ordinance	x							×	×	×	×	×	
	5. RAVE Park management to provide assistance in terms of technical guidance, capacity building and information dissemination on building eco-parks.		X	X			Х	х	x				x	x

6.	Provide and communicate fiscal and non-fiscal incentives to public and private land owners (NGOs, people's organization, academe, etc.) as incorporated in existing ordinances such as the Integrated Urban Agriculture Ordinance and Local Green Building Ordinance		x	x		x	×	×				×	x
7.	LGU commitment on support services to community gardens and stay at home food gardeners, for capacity building training, production, marketing, and provide livelihood opportunities.	x	x	x	x	x	x	x			x	x	
8.	Barangay officials to draft resolutions to formally establish partnership among various stakeholder groups including HOAs and community associations, to encourage them to allocate resources (budget, space, manpower) for urban gardening		х	х		x	x	x			x	x	х
9.	Barangay Affairs Office to organize a community- based monitoring and enforcement team at the barangay-level	x								x	x		
10.	Design CSR programs that support the city's programs related to urban gardening. (Transform rooftops; balconies for urban gardening)		x	x		x	x	x				x	x
11.	CENRO and the Pasig City Public Information Office (PIO) shall develop an online platform of reporting, collating, and documenting the participation of different departments and sectors in the urban gardening and agriculture programs of the City	x							x			x	

12. Establishment of mandatory food urban vegetable garden for residential, commercial, industrial, and land developments both new and existing, to promote local food production, respond to food security and sustainable consumption, when applicable in compliance to the Integrated Urban Agriculture Ordinance	x	x	×	x		x	x	X	x	x	x	x
13. Purchase vegetables harvested from the community urban gardens.		x	x			x	x				x	x
14. Revisit and volunteer their idle lands as spaces for community-based urban gardens.		x	х		х	x	х			x	х	х
15. Encourage other community members and other institutions to use idle lands and available spaces for urban gardening.		x	x			x	x				х	x
16. Allocate space within their premises (balconies, parking lots, rooftops) for urban gardens.		x	x			x	x				x	x
17. Explore realigning CSR programs to further promote urban gardening among their employees and staff and encourage them to cultivate urban gardens in available spaces; support promotion		x	x		x	x	x			x	x	x
18. Foster partnership/ collaboration with LGU and other organized community groups		x	x			x	х			x	х	х
19. Actively participate in city-led initiatives that are related to urban gardening.		x	x			x	x			x	x	х

20.	Spread the word and encourage other community members to use idle lands and available spaces for urban gardening.		x			x	x		x	×	x
21.	Assist the city in identifying and mapping out idle lands that could potentially be converted into community-based urban gardens.	x	x		x	x	x		x	x	x
22.	Attend workshops regarding harvest management for the established urban garden in cooperation with CENRO.	х	х		х	x	x		x	х	х
23.	Use vacant lots into urban gardens.	х	х	х	х	х	х		x	х	х
24.	Support and promote markets for organic produce from the established urban gardens in the community.	x	x	x	x	x	x		x	x	x
25.	Establish/create urban gardens in available spaces in their community in collaboration with the LGU.		х			x	x	x		x	x
26.	Sectoral groups representing various sectors such as women and children, youth, senior citizens, PWD, and others to actively look for partnership opportunities related to establishing or maintaining urban gardens.		x			x	x	x		x	x

Strategic Climate Sub-priority 2:	Build	ng caj	oacity	and a	dvoca	icy tow	vards	urbar	n agri	cultu	re.			
Objective:	Entities and/or individ capacity bu	uals (I ilding	ousine and a	esses dvoca	and b cy act	oth pul tivities	blic ar on ur	nd pri ban a	ivate Igricu	institı Ilture	utions by 20	s) rea 30	ched	by
		h	nstitut	ion(s)	:			Cli	mate	Instru	umen	ts		
Climate Program	Climate Activities/ Projects:	Public / Local	Private	CSOs	International	Infrastructure Roll-out	Research Agenda	Partnerships	Capacity Building for LGU	Advocacy	Process Streamlining	Policy and Ordinance Compliance	Knowledge Sharing and Dissemination	Lifestyle Shift / Change
Enhance climate knowledge and capac- ity of individuals for urban agriculture	<ol> <li>Capacity building workshop on community garden establishment and maintenance: Training of trainers, PTA</li> </ol>	х						х	х	х			x	
	2. Budget allocation for capacity- building and training, including continuous research and development.	х				х	x		x	х	x	x		
	3. A designated City Agriculturist will lead in the proper practice for urban agriculture through capacity-building programs.	x					x		x			x	x	
	4. The government should also complement its urban agriculture program with proper consumer education on why they should produce certain types of foods and the benefits of various products.	x					x		x	x			x	x
	5. Promotion of urban gardening through intense awareness- raising campaigns to promote the program and reach more sectors in the city starting from barangay through community urban gardens.	Х	Х	Х				X	x	х		×	x	

6.	Provide venue for quarterly training offering on urban agriculture for business establishments	x			x	x	x			x	
7.	Distribute starter kits to individuals/ groups who attended the training	х		х	x	x				x	x
8.	Provide urban agriculture equipment/starter kit for citizens to encourage them to practice urban agriculture in their homes	x		х	x	x				x	x
9.	Encourage private schools, business sectors, and other private entities to partner with the city in delivering capacity building programs related to urban gardening.	х		х	х	х				x	x
10.	The Engineering Department can require contractors to donate their empty paint buckets to CENRO. These buckets can be reused and distributed to barangays for use in the urban gardens.	x		х	×	x				×	x
11.	Mandate all City Hall units and offices to consolidate their organic waste and give these to CENRO for converting into compost.	Х		x	x	х	х	x	x	x	x
12.	Encourage city hall employees and staff to minimize food waste and practice proper waste segregation at all times.	х		х	х	х	х	х	x	x	x
13.	Intensify awareness- raising activities to promote the program and reach more sectors in the city.	x		x	х	Х	Х			×	x

14.	Revisit and strengthen the program's integration with other city-led initiatives, i.e harvests from the urban gardens are used as fresh produce for feeding programs implemented by the CHO	x			x	x	x	x	x	x	x	x	
15.	Explore partnerships with the private sector to encourage their participation in the program.	х				х	x		х			x	x
16.	Link CSR campaigns and programs to extend capacity building activities related to urban gardening to its employees and staff.		x			x	x		х			х	x
17.	Coordinate with the LGU in designing training modules which are popularized and could be easily understood by various audience segments across the city.		x				x		х			х	x
18.	Actively participate in capacity buildings related to urban gardening.		х				x		х			х	x
19.	Magnify the message communicating the benefits of urban gardening by encouraging peers, friends, family members, and networks to practice it.		x				x		x			x	x
20.	Schools to explore the creation of an "Adopt-a-Plant Program" for students		х				x		х			х	х
21.	Academe: Support the LGU in leading the information drive on urban gardening including its benefits.		x				x		x			x	x
22.	Existing accredited private hauler of Pasig to set up agreed practices and timeline for organic waste collection.		x				x		x			x	x

23.	Link CSR activities to the program to encourage brands and businesses to donate gardening materials such as waste compost containers, compost activators, tools and equipment, seedlings, and others.	x				x	x		x	x
24.	Explore partnership with the LGU and set agreed practices and timeline for organic waste collection.	x			x	x	x		x	x
25.	Explore partnership with the LGU and define mechanisms on how they can encourage their members and network to generate resources (e.g., compost containers, compost activators, tools and equipment, seedlings, and others) to acquire tools for CENRO to use and distribute to communities to promote composting and urban gardening.	x			x	x	x		x	x
26.	Support the LGU in intensifying awareness-raising about the program.	x				x	х		х	х
27.	Set up their own organic waste collecting facility and coordinate with the LGU to have these picked up and converted into compost	x		x		x	x		x	x
28.	HOAs to design projects and programs that promote community-based urban gardening in coordination with other sectoral groups	x		x	x	x	x		x	x
29.	HOAs and sectoral community leaders to closely coordinate with the barangay and LGU in designing and delivering capacity building activities.	x				x	х		х	х

30.	Church and other religious institutions act as message carriers and teach their congregation the value of urban gardening and to a wider extent- the value of taking care of the environment.		х	x			x		x			x	x
31.	Women's groups, PWDs, senior citizens to organize and mobilize their own members to explore urban gardening.		х	x			x		x			x	x
32.	Ensure that proper waste segregation is practiced at home.	х	х		x		x	x	x	x	x	x	x
33.	Dispose organic waste in an appropriate manner and make sure that it is being collected by CSWMO to convert into compost.	x	x		x		x	x	х	x	x	х	x
34.	Explore how to make compost in own homes	х	х		х		x	х	х	x	x	х	х
35.	HOAs to craft policies mandating their members to donate their organic waste to the program.	х	х		x		x	x	х	x	x	x	x
36.	HOAs to coordinate with the LGU in receiving compost for their own community- based urban garden	x	х		х		x	x	x	x	x	x	x
37.	HOAs and community leaders to help spread awareness about the program and solicit participation and engagement from community members	х	х	x	x	x	x	x	x			x	x
38.	Set up a composting program for each HOA. Create a compost pile per HOA/household. Compost can be bagged and used for urban gardening activities in the HOAs.	х	х	x	x	x	x	x	x			x	x

Strategic Climate Sub-priority 3:	Improve	urban	ecolog	gy by i	ncrea	sing g	reen s	space	es wit	hin th	e city	<i>.</i>		
Objective:		Im	provi	ng eco	-park	s alloc	ation	by 20	030.					
		h	nstitut	ion(s)				CI	imate	Instr	umen	ts		
Climate Program	Climate Activities/ Projects:	Public / Local	Private	CSOs	International	Infrastructure Roll-out	Research Agenda	Partnerships	Capacity Building for LGU	Advocacy	Process Streamlining	Policy and Ordinance Compliance	Knowledge Sharing and Dissemination	Lifestyle Shift / Change
Rehabilitate and maintain the city's eco-parks	<ol> <li>Map out areas with adequate spaces suitable for eco-parks (set minimum area requirements) and link with existing green spaces.</li> </ol>	x					x	x	x	x	x	x	x	
	<ol> <li>Identifying potential connections that may be developed as green corridors.</li> </ol>	х				х	x	x	х	x	x	х	х	
	<ol> <li>RAVE Park management to provide assistance in terms of technical guidance, capacity building and information dissemination on building eco-parks.</li> </ol>	х				х	x	x	х	x	x	x	Х	
	<ol> <li>City/barangay councils to enact an ordinance classifying such available and suitable spaces for the creation of eco-parks</li> </ol>	x				x	x	x	х	x	x	x	x	
	<ol> <li>Develop a program such as "Adopt- an-Ecopark" in partnership with the private sector. Said program may also be linked to the existing 'Adopt- an-Estero' program and may be further expanded to potential blue solutions (ponds, fountains, lakes) enhancing green- blue network.</li> </ol>	x						×	x	x	×	×	x	

6.	Barangay councils to increase budget allocation on the improvement and maintenance of eco-parks existing within their jurisdiction.	x			x		x	x	х	x	x	x	
7.	Explore funding opportunities of the Green, Green, Green Program of the national government to support urban greening initiatives of the city.	x				х			x			x	
8.	Eco parks will increase biodiversity in the area	x			х		х	×	х			x	х
9.	City Government to establish mini wetlands in each barangay	x			х	х	х	×	х	х	х	х	х
10.	Assist the LGU in marking existing parks that need renovation and expansion.		x			x	x		x			x	x
11.	Support the expansion and establishment of eco-parks in school grounds and/ or barangays as part of their CSR programs.		x			x	x		x			×	x
12.	Partner with the LGU in developing an "Adopt-an-Eco park" program.		x			x	x		х			х	х
13.	Coordinate with barangay officials in finding existing parks that need an upgrade and expansion.		x			x	x		x			x	x
14.	Schools to encourage student participation in eco- park beautification activities such as gardening, landscaping, etc.		x	x		x	x		x			x	x
15.	Local universities to encourage student architects and designers to render and propose designs for upgrading and expanding existing eco-parks in the city.		x	x		x	x		x			x	x

16. Business establishments will be required to established artificial wetlands for wastewater treatment facility, rainwater and other similar sources	x	х		x	x	x		x	x
17. Assist the LGU in designing the improvement and expansion of eco- parks including the terms of its use and maintenance (e.g. free and open for all, safe for everyone, encourage activities that promote physical, social, and mental well-being).	×	x		x	x	x		×	x

Strategic Climate Sub-priority 4:	Expansion of tree pl	anting	outre	ach of p	the L artne	.GU in r LGUs	Tanay	and	Mont	alban	, Riza	al and	l othe	r
Objective:	Contribute to imp sequ	orovin iestrat	g flora ion ca	and facity	auna of fo	biodive rests ir	ersity 1 the I	as wo Provi	ell as nce o	enha f Riza	ncing	carb	on	
		Ir	nstitut	ion(s):				Cli	mate	Instru	umen	ts		
Climate Program	Climate Activities/ Projects:	Public / Local	Private	CSOs	International	Infrastructure Roll-out	Research Agenda	Partnerships	Capacity Building for LGU	Advocacy	Process Streamlining	Policy and Ordinance Compliance	Knowledge Sharing and Dissemination	Lifestyle Shift / Change
Improvement of flora and fauna biodiversity and enhancement of carbon sequestration capacity of forests in the Province of Rizal	<ol> <li>Identify and prioritize forest areas managed by indigenous peoples (IPs) communities for tree-planting activities.</li> </ol>	x	x	x			x	x	x	x	x	x	x	x
	2. Expand coverage in terms of hectares of tree planting activities that would be beneficial with the IP communities.	×	x	x		x	x	x	x	x	x	x	x	x

3.	Integrate capacity building activities for establishing community- based forest management to sustain the growth and productivity of the forests and to offer alternative livelihood opportunities for IP communities.	х	x	x	x	x	×	×	x		×	x
4.	Establish lasting partnerships with various stakeholders (e.g. academia, businesses, CSOs) to continuously expand and sustain tree- planting activities.	Х	х	х			x	х	x		x	×
5.	Intensify information dissemination to encourage volunteers to join tree-planting activities.	х	х	x			x	х		x	x	
6.	Explore funding opportunities or potential synergies of activities with the National Greening Program of DENR.	х	х	х		x	х				x	
7.	Ensure appropriate supply of endemic /native species of seedlings from the local and national government to support the tree planting activities.	х			х		х	х	x		x	x
8.	Strengthen partnerships with the LGU to share resources for greening programs through their CSR programs.		x				x	x	x			
9.	Encourage employees to participate in city- led tree-planting activities		х				х	х	х		х	x
10.	Build awareness on forest and biodiversity preservation among employees.		х				х	х	х		x	x
11.	NGOs, CSOs, POs, to actively participate in tree planting activities	х	x	x		x	х	х	x		х	x
12.	Community leaders to organize and mobilize its network to support the activity.	Х	х	х		х	х	х	х		х	x

Strategic Climate Sub-priority 1:	Improve delive	ery of city	prima y healt	ry hea th cen	lth se ters w	rvices vith City	by ba y Hea	ranga Ith Of	ay hea fice	alth c	enters	s and		
Objective:	Decrease in mo (e.g.leptospirosis, pneu	orbidity monia	/ and r , deng	nortali ue, hea	ty rate at stro	e due to ke) am	o clima ong c	ate ch hildre	ange n and	-relate I aduli	ed dise ts ove	eases r 65 y	s /ears	old.
		lı	nstitut	ion(s)	:			Cli	mate	Instru	umen	ts		
Climate Program	Climate Activities/ Projects:	Public / Local	Private	CSOs	International	Infrastructure Roll-out	Research Agenda	Partnerships	Capacity Building for LGU	Advocacy	Process Streamlining	Policy and Ordinance Compliance	Knowledge Sharing and Dissemination	Lifestyle Shift / Change
Increase R&D and programs on climate change-related diseases, including appropriation for immediate availability of medicines and health infrastructure, and building capacities of health workers and the community	1. Build capacities of barangay and city health workers to prepare and respond to increasing risk of climate change- related diseases (e.g. leptospirosis, dengue fever, pneumonia, heat stroke).	x	x	x				×	x	x			×	×
	<ol> <li>Increase access to and allocation of funds that could augment improvement of delivery of basic health services (e.g. City Disaster Risk Reduction and Management Fund, Gender and Development Fund, People's Survival Fund).</li> </ol>	x	x	x		x		×			×	×		
	3. Barangay councils shall strengthen enforcement of their Clean and Green Programs, information dissemination as well as other preventive measures against the spread of diseases brought about by extreme weather events.	x									x	X		

4.	The City Health Office shall strengthen its R&D on climate- related health risks for Pasigueños including means of enhancing resilience against these risks.	x			x				x	x		x
5.	Provide for 100% of maintenance medication needs for non- communicable diseases (NCD) of patients consulting at the city's health facilities.	x		x		x			x	x		
6.	Provide subsidy for NCD screening among indigent patients at the city's diagnostic laboratories.	x		x		x			x	x		
7.	Provide a full dose of antibiotic medicines to all patients with climate-related infectious diseases.	x		x		x			x	x		
8.	Devise a health information system within a two-year period which will record and enable analysis of climate- related health conditions.	x		x		x			x	x		
9.	Create service delivery networks among public health care facilities which will cater to climate- related conditions.	x		x		x			x	x		
10.	Identify logistical needs for surge capacities for outbreaks and pandemics within one year.	x		x	x		x	x	x	x	x	
11.	Institute environmental control activities in high-risk areas within one week of risk identification or 48 hours from event occurrence.	x		x			x	x	x	x	x	

	12.	Link CSR activities to the health programs of the City and barangays to encourage brands and businesses to donate medical equipment, medical supplies and medicines.	x				x	x	x	x	x	x	
-	13.	The Department of Health shall strengthen its information dissemination and capacity building support to city and barangay health workers in preventing exposure to climate change- related diseases.	x				×	×	x	×	×	x	
-	14.	Academic and research institutions to support the LGU in strengthening its R&D on climate- related health risks for Pasigueños including means of enhancing resilience against these risks.	x			x	×	×	x			×	x
_	15.	Maintain cleanliness of immediate surroundings		Х		х	х	х	х			х	x
	16.	Participate in clean & green activities of the barangay		х		х	х	х	х			х	x
-	17.	Closely monitor health advisories of the Department of Health and City Health Office		х		х	х	х	х			х	x
	18.	Report cases and immediately seek doctor's attention in the barangay health center or city health office when experiencing symptoms of illnesses.		x		x	x	x	x			x	x
-	19.	Citizen groups including senior citizens, women and children, PWDs, youth, and other sectors are actively engaged and aware of anti- flood measures.		Х		Х	X	X	X			X	x

## Annex B. Promise of Pasig's Climate Investment Program: Typology Harmonization of Climate Actions with the Local Climate Change Expenditure Tagging (CCET) System



Adopting the DILG-NEDA-DBM-DOF JMC 1 Series 2007, the Promise of Pasig harmonizes its climate actions with climate investment priorities of Pasig City, similar to climate investment programming, of which, systematically identifies and prioritizes of climate programs, projects and activities (PPAs), and aligning these with the appropriate financial resources, reflected in Pasig City's annual investment plan and local climate change action plan, among others.

Additionally, in the area of Climate Change Expenditure Tagging (CCET), referring to Joint Memorandum Circular No. 2015-01 25, the Promise of Pasig prioritized and assigned the prescribed typology codes based on its climate change programs, projects and activities.

As a summary, provided in the table below is the connection of the Climate Change Typologies for Local Government and the Promise of Pasig's climate actions.

## Energy

			CCE	T Typol	ogy					
Strategic Climate Priority	Strategic Climate Sub-Priority	Program, Projects, Activities	Description	CCET Typology (Alignment with NCCAP)	1 - Policy Development and Governance	2 - Research, Development and Extension	3 - Knowledge Sharing and Capacity Building	4 - Service Delivery	Cost	Source
Renewable energy, energy efficiency & conser- vation	(1) Promote energy conservation and energy efficiency		Strategic Priority 6 – Sustainable Energy 1 – Energy Efficiency	SP6-1					595,500,000.00	
		Green Building Ordinance / Green City Development Code / Green Building City Challenge	Develop/implement ordinances and policies to improve energy efficiency – in buildings, agriculture, industry and city/ municipal services (e.g. public building maintenance program to improve energy efficiency; use of more energy efficient street lighting such as LED).		M611-03				5,000,000.00	AIP
		Massive IEC forprivate establishments for Green Building Ordinances and Initiatives	Sector reform and capacity building related to energy efficiency in energy sector, promotion of renewable energy and efficient energy pricing.				M613-01			
		Initial 1 Star BERDE Certification for Three (3) LGU Buildings: 1. HRM Building 2. SPED 3. Palatiw Multi-purpose 4. Youth Hall	Develop a certification system/incentive for voluntary adoption of energy efficiency labelling, green building rating, and ISO 50001 certification.		M611-04					

	Implementation of Green City Development Code	Develop/implement ordinances and policies to improve energy efficiency – in buildings, agriculture, industry and city/ municipal services (e.g., public building maintenance program to improve energy efficiency; use of more energy efficient street lighting such as LED). Sector studies, surveys, assessments and information systems on energy efficiency, efficient energy pricing, and promotion of renewable energy	M611-03	M612-02			
	Green Environment Pro- gram (GHG Inventory and Accounting; Green Building Projects); Environmental Code of Pasig City	Development of curricula or programs focused on reducing GHG emissions, energy consumption or water consumption for elementary and high school			M714-01	13,500,000.00	LCCAP - ANNEX B
	PasiGreen: Greening of Pasig City					50,000,000.00	LCCAP - ANNEX B
	Street lighting Project with energy- efficient lamp bulbs or solar-powered streetlights.	Pilot programs on energy efficiency activities			M614-02		
	Information campaign on incentives for use of energy efficient lighting	Sector reform and capacity building related to energy efficiency in energy sector, promotion of renewable energy and efficient energy pricing			M613-01		
	LED Retro Fitting all government facility	Pilot programs on energy efficiency activities			M614-02	20,000,000.00	LCCAP - ANNEX C
	LED Streetlights Retro Fitting Project	Pilot programs on energy efficiency activities			M614-02	30,000,000.00	LCCAP - ANNEX C

	Pasig City Hall LED Lights/ Aircon Retro Fitting Project	Pilot programs on energy efficiency activities			M614-02	10,000,000.00	LCCAP - ANNEX C
	Pasig Elem Gym Hybrid Thermal Aircon	Pilot programs on energy efficiency activities			M614-02	16,000,000.00	LCCAP - ANNEX C
	Occupancy/Motion Sensor	Pilot programs on energy efficiency activities			M614-02	5,000,000.00	LCCAP - ANNEX C
	15 ways to Low Emission Development Strategies (LEDS)	Develop a local renewable energy program*			M611-05	2,000,000.00	LCCAP - ANNEX C
	GHG Emission Inventory and Accounting and Man- agement Plan	Develop/implement ordinances and policies to improve energy efficiency – in buildings, agriculture, industry and city/ municipal services (e.g. public building maintenance program to improve energy efficiency; use of more energy efficient street lighting such as LED).			M611-03	10,000,000.00	LCCAP - ANNEX C
	Green Building Program	Develop/implement ordinances and policies to improve energy efficiency – in buildings, agriculture, industry and city/ municipal services (e.g., public building maintenance program to improve energy efficiency; use of more energy efficient street lighting such as LED).			M611-03	32,000,000.00	LCCAP - ANNEX C

		Green City Development Code	Change operational procedures or techniques, or retrofit technologies to reduce GHG emissions in existing operations			M611-01	2,000,000.00	LCCAP - ANNEX C
		All New LGU government buildings Aligned to Green Building Standards	Develop/implement ordinances and policies to improve energy efficiency – in buildings, agriculture, industry and city/ municipal services (e.g., public building maintenance program to improve energy efficiency; use of more energy efficient street lighting such as LED).			M611-03	100,000,000.00	LCCAP - ANNEX C
		Green Roof Ordinance enforced in all new buildings and 20 % of old existing buildings	Develop/implement ordinances and policies to improve energy efficiency – in buildings, agriculture, industry and city/ municipal services (e.g. public building maintenance program to improve energy efficiency; use of more energy efficient street lighting such as LED).			M611-03	300,000,000.00	LCCAP - ANNEX C
Renewable energy, energy efficiency & conser- vation	(2) Expand the use of alternative/ renewables energy systems		Strategic Priority 6 – Sustainable Energy 1 – Energy Efficiency	SP6-1			458,000,000.00	
		Renewable Energy Program and Low Emission Alternative Development Strategies (REP and LEADS)					3,000,000.00	AIP
		LED Retrofitting Project: 1. RED Training Center 2. Hall of Justice 3. GAD Offices 4. Mutya ng Pasig Market	Pilot programs on energy efficiency activities			M614-02		

	Solar Photovoltaic Rooftop: 1. Pasig City Sports Center 2. Pasig Central Elementary School 3. Pinagbuhatan Multi-Purpose / Brgy. Hall 4. Manggahan Multi-Purpose / Brgy. Hall 5. Rizal Highschool Gym 6. Central Pasig Elementary School Gym	Development of renewable energy (i.e., Establishment of Solar Panels/Installation of Wind Mill/Bio-Gas)			M624-06		
	Solar Assisted Aircon Installation: 1. Central Elementary School Gym	Development of renewable energy (i.e., Establishment of Solar Panels/Installation of Wind Mill/Bio-Gas)			M624-06		
	Solar E-Trike Charging Station	Clean Cities Initiatives or those that promote/ increase utilization of alternative/clean fuels for the transport sector (tricycle, jeepney, bus, private and government vehicles)			M624-07		
	Common Waiting Shed on Various Locations	Develop ordinances/ policies to encourage shift from higher carbon to lower carbon transport modes (i.e., pedestrianization, bicycle lanes, public transport)	M631-04				
	10 Solar Light Overpass Project	Development of renewable energy (i.e., Establishment of Solar Panels/Installation of Wind Mill/Bio-Gas)			M624-06		
	Pasig Elem Gym Solar PV Installation	Development of renewable energy (i.e., Establishment of Solar Panels/Installation of Wind Mill/Bio-Gas)			M624-06	55,000,000.00	LCCAP - ANNEX C
	Solar Assisted Aircon Installation (Future)	Development of renewable energy (i.e., Establishment of Solar Panels/Installation of Wind Mill/Bio-Gas)			M624-06	150,000,000.00	LCCAP - ANNEX C
	Solar Photovoltaic rooftop (Future)	Development of renewable energy (i.e., Establishment of Solar Panels/Installation of Wind Mill/Bio-Gas)			M624-06	250,000,000.00	LCCAP - ANNEX C

## Transport and Air Quality

			CCE	T Typol	ogy					
Strategic Climate Priority	Strategic Climate Sub-Priority	Program, Projects, Activities	Description	CCET Typology (Alignment with NCCAP)	1 - Policy Development and Governance	2 - Research, Development and Extension	3 - Knowledge Sharing and Capacity Building	4 - Service Delivery	Cost	Source
Transport and Air Quality	(1) Increase efficiency of vehicles and improve access to economic opportunities within the city		SP6 – Sustainable Energy 3 – Transportation and Communication	SP6-3					461,000,000.00	
		Environment Sustainable Transportation Program / Clean Air Act							50,000,000.00	AIP
		Bantay Hangin Anti-Smoke Belching	Strengthen vehicle inspection systems on emissions and fuel efficiency		M631-03					AIP
		Air Quality Monitoring	Strengthen vehicle inspection systems on emissions and fuel efficiency		M631-03					AIP
		City Centralized Intelligent Traffic Management Program	Urban traffic management (e.g., improve traffic flow) to reduce GHG emissions per unit transported					M634-01	150,000,000.00	LCCAP - ANNEX B
		Installation of City-wide Intelli- gent Traffic System (ITS)	Urban traffic management (e.g., improve traffic flow) to reduce GHG emissions per unit transported					M634-01	210,000,000.00	LCCAP - ANNEX B

	Public Transport Management Study	Strengthen vehicle inspection systems on emissions and fuel efficiency		M631-04		4,000,000.00	LCCAP - ANNEX B
	FS for Pasig City Mass Transit System	Strengthen vehicle inspection systems on emissions and fuel efficiency		M631-04		4,000,000.00	LCCAP - ANNEX B
	City-wide Traffic Management Masterplan (Phase 2)	Strengthen vehicle inspection systems on emissions and fuel efficiency		M631-04		5,000,000.00	LCCAP - ANNEX B
	Pasig River Ferry Project (Preparation of Project Proposal/Pre-Feasibility Study)	Strengthen vehicle inspection systems on emissions and fuel efficiency		M631-04		3,000,000.00	LCCAP - ANNEX B
	Electric Bus Project in Ortigas	Clean Cities Initiatives or those that promote/ increase utilization of alternative/clean fuels for the transport sector (tricycle, jeepney, bus, private and government vehicles)		M624-07		5,000,000.00	LCCAP - ANNEX B
	Park and Ride/ Park and Bike Support Facilities	Strengthen vehicle inspection systems on emissions and fuel efficiency		M631-04		30,000,000.00	LCCAP - ANNEX B
(2) Promote the use of non-motorized transportation		SP6 – Sustainable Energy 3 – Transportation and Communication	SP6-3		 	15,281,634,500.00	
	10 Bike Sharing Program	Strengthen vehicle inspection systems on emissions and fuel efficiency		M631-04			AIP
	Bike Day, Health Day, Carless Day Program	Strengthen vehicle inspection systems on emissions and fuel efficiency		M631-03			AIP

			 	· · · ·			
	Francisco Legaspi to Julia Vargas Connection	Urban traffic management (e.g., improve traffic flow) to reduce GHG emissions per unit transported	M634-01			2,921,161,000.00	LCCAP - ANNEX B
	Road Link: Evangelista St. to Imelda Avenue (via Octagon, Aguho and Moscow)	Urban traffic management (e.g., improve traffic flow) to reduce GHG emissions per unit transported	M634-01			241,045,000.00	LCCAP - ANNEX B
	Road Link: Amang Rodriguez to Imelda Avenue (via Pipino St. and Pipino Extension)	Urban traffic management (e.g., improve traffic flow) to reduce GHG emissions per unit transported	M634-01			1,390,577,500.00	LCCAP - ANNEX B
	Elisco Road/M. Concepcion to Sandoval Avenue	Urban traffic management (e.g., improve traffic flow) to reduce GHG emissions per unit transported	M634-01			1,185,415,000.00	LCCAP - ANNEX B
	Widening of Amang Rodriguez Avenue	Urban traffic management (e.g., improve traffic flow) to reduce GHG emissions per unit transported	M634-01			5,279,126,000.00	LCCAP - ANNEX B
	Road Link: Jenny's Ave Sandoval Ave.	Urban traffic management (e.g., improve traffic flow) to reduce GHG emissions per unit transported	M634-01			684,070,000.00	LCCAP - ANNEX B
	C5 to Caruncho Avenue Connection	Urban traffic management (e.g., improve traffic flow) to reduce GHG emissions per unit transported	M634-01			939,395,000.00	LCCAP - ANNEX B
	Brixton Road Widening and Extension	Urban traffic management (e.g., improve traffic flow) to reduce GHG emissions per unit transported	M634-01			1,974,140,000.00	LCCAP - ANNEX B

	Levi Mariano - F. Manalo Connection	Urban traffic management (e.g., improve traffic flow) to reduce GHG emissions per unit transported	M634-01		305,970,000.00	LCCAP - ANNEX B
	Road Link: Pag-Asa Road to Eusebio Road	Urban traffic management (e.g., improve traffic flow) to reduce GHG emissions per unit transported	M634-01		360,735,000.00	LCCAP - ANNEX B

## Solid Waste and Wastewater

				CCET Typology						
Strategic Climate Priority	Strategic Climate Sub-Priority	Program, Projects, Activities	Description	CCET Typology (Alignment with NCCAP)	1 - Policy Development and Governance	2 - Research, Development and Extension	3 - Knowledge Sharing and Capacity Building	4 - Service Delivery	Cost	Source
Solid Waste and Wastewa- ter	(1) Reduce in-city solid waste generation		Strategic Priority 3 - Ecological and Environmental Stability, 2 - Solid Waste Strategic Priority 1 - Food Security, 1 - Agriculture and Livestock Strategic Priority 2 - Water Sufficiency, 1 - Water Supply	SP3-2			<u>.</u>	<u>.</u>	704,250,000.00	AIP
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	Recycling and Waste Reduction Program (CENRO)	Waste reduction and diversion program/ Intensify waste segregation at source, discard recovery, composting and recycling*			M324-01		AIP			
	Greenheart Saver's Program: Recycling Collection for Education	Waste reduction and diversion program/ Intensify waste segregation at source, discard recovery, composting and recycling*			M111-01,	00.00				
(2) Improve and streamline the waste collection and clean-up processes.	a. 28 Elementary Schools with Kinder / Grade 7 b. High School Greenheart Saver's Program	Enact/Implement ordinances and policies to reduce the emissions of greenhouse gases (GHGs), or absorption of GHGs in the agricultural sector			M324-01, N	3,000,0	AIF			
(3) Improve quality and reduce the volume of wastewater discharge.	Environment Pre-Schoolers Project: Sustaining Foreign Grants (4th year of implementation)	Waste reduction and diversion program/ Intensify waste segregation at source, discard recovery, composting and recycling*			M324-01	800,000.00	AIP			
		Waste reduction and diversion program/ Intensify waste segregation at source, discard recovery, composting and recycling*			1114-10					
	Integrated School of Organic Garden	Enact/Implement ordinances and policies to reduce the emissions of greenhouse gases (GHGs), or absorption of GHGs in the agricultural sector			I324-01, M111-01, N	400,000.00	AIP			
		Establish communal school gardens, and other community gardens for local consumption			2					
(4) Expand water conservation and reuse programs.	Meatless Monday Store beside Masagana Store	Waste reduction and diversion program/ Intensify waste segregation at source, discard recovery, composting and recycling*			M324-01	50,000.00	AIP			
	Mandatory Composting	Waste reduction and diversion program/ Intensify waste segregation at source, discard recovery, composting and recycling*			114-10					
	Covernment Buildings/ Facilities: From Garbage to Garden, It's Compost Time! Phase I - Pasig City Hall Compound Phase III - School-Based Phase III - All LGU	Enact/Implement ordinances and policies to reduce the emissions of greenhouse gases (GHGs), or absorption of GHGs in the agricultural sector			24-01, M111-01, M	3,000,000.00	AIP			
		Establish communal school gardens, and other community gardens for local consumption			M3;					

(5) Restore and rehabilitate the city's natural drainage ways.	Installation of Communal/ Centralized STPs in all Communities	Reduce GHG emission (methane and nitrous oxide) from wastewater Reduce energy consumption during wastewater treatment (e.g. from activated sludge to up flow anaerobic sludge)			M214-04, M214-05	300,000,000.00	LCCAP - ANNEX B
	Bazero Program: Recycling of Used Tarpaulins and Slippers	Develop and implement ordinances and policies that promote a system of incentives for the use of reusable bags and containers/ban or impose a fee on the use of plastic bags* Waste reduction and diversion program/ Intensify waste segregation at source, discard recovery, composting and recycling*			M321-01, M324-01	2,000,000.00	LCCAP - ANNEX B
	Establishment of Off-Site Composting Facility	Construction and operation of Materials Composting and Recovery Facility (MRCF) Building; Buyback Center; Purchase of MCRF equipment			M324-02	40,000,000.00	LCCAP - ANNEX B
	Installation of STP in Pasig City Megamarket	Reduce GHG emission (methane and nitrous oxide) from wastewater Reduce energy consumption during wastewater treatment (e.g., from activated sludge to up flow anaerobic sludge)			M214-04, M214-05	25,000,000.00	LCCAP - ANNEX B
	Garbage to Garden, It's Compost Time	Waste reduction and diversion program/ Intensify waste segregation at source, discard recovery, composting and recycling*			M324-01	10,000,000.00	LCCAP - ANNEX C
	Greenheart Savers Program	Waste reduction and diversion program/ Intensify waste segregation at source, discard recovery, composting and recycling*			M324-01	10,000,000.00	LCCAP - ANNEX C

	Greenheart Savers extended to 10 Home Owners Associations	Waste reduction and diversion program/ Intensify waste segregation at source, discard recovery, composting and recycling*			M324-01	5,000,000.00	LCCAP - ANNEX C
	Implemented Greenheart Composting Program in all public and private Elementary and Schools	Waste reduction and diversion program/ Intensify waste segregation at source, discard recovery, composting and recycling*			M324-01	50,000,000.00	LCCAP - ANNEX C
	Green Livelihood Programs	Waste reduction and diversion program/ Intensify waste segregation at source, discard recovery, composting and recycling*			M324-01	15,000,000.00	LCCAP - ANNEX C
	KILUS Recycling Foundation (PPP)	Construction and operation of Materials Composting and Recovery Facility (MRCF) Building; Buyback Center; Purchase of MCRF equipment			M324-02	5,000,000.00	LCCAP - ANNEX C
	Waste to Energy Project/ Waste Diversion Through Biogas Technology/ Pyrolysis and Other Technologies	Reduce GHG emission (methane and nitrous oxide) from wastewater Reduce energy consumption during wastewater treatment (e.g., from activated sludge to up flow anaerobic sludge)			M214-04, M214-05	200,000,000.00	AIP
	Resource Assessment and Inventory Study a. Waste to Energy (WtE to Fuel) b. Waste to Energy (WtE to Electricity)	Administration, sector studies, surveys, assessments, information systems and capacity building for energy and water use efficiency in water, sanitation and flood protection Reduce GHG emission (methane and nitrous oxide) from wastewater Reduce energy consumption during wastewater treatment (e.g., from activated sludge to up flow anaerobic sludge)			M212-01, M214-04, M214-05	5,000,000.00	AIP

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	Bio Gas Technology/ Bio Gas Digester for Nabubulok/ Kitchen Waste a. Bio Digester for City Jail b. Bio Gas Technology for Rizal High Canteen c. Bio Gas Technology Slaughterhouse d. Bio Gas Promotion to Kapitolyo Restaurants/ Quick Service Restaurants	Administration, sector studies, surveys, assessments, information systems and capacity building for energy and water use efficiency in water, sanitation and flood protection Reduce GHG emission (methane and nitrous oxide) from wastewater Reduce energy consumption during wastewater treatment (e.g., from activated sludge to up flow anaerobic sludge)			M212-01, M214-04, M214-05	2,000,000.00	AIP
	CLAYGO "Clean as You GO" Stations a. 42 schools b. City Hall c. Incentive for Private Schools	Waste reduction and diversion program/ Intensify waste segregation at source, discard recovery, composting and recycling*			M324-01	3,000,000.00	AIP
	Charcoal Briquetting/ Water Lily Processing Technologies	Waste reduction and diversion program/ Intensify waste segregation at source, discard recovery, composting and recycling*			M324-01	5,000,000.00	AIP
	Biogas Project	Administration, sector studies, surveys, assessments, information systems and capacity building for energy and water use efficiency in water, sanitation and flood protection Reduce GHG emission (methane and nitrous oxide) from wastewater Reduce energy consumption during wastewater treatment (e.g., from activated sludge to up flow anaerobic sludge)			M212-01, M214-04, M214-05	20,000,000.00	LCCAP - ANNEX C

### Urban Agriculture and Ecology

			CCE	T Typol	ogy					
Strategic Climate Priority	Strategic Climate Sub-Priority	Program, Projects, Activities	Description	CCET Typology (Alignment with NCCAP)	1 - Policy Development and Governance	2 - Research, Development and Extension	3 - Knowledge Sharing and Capacity Building	4 - Service Delivery	Cost	Source
Urban Agriculture and Ecology	(1) Utilization of Public Idle Spaces (vacant lots, rooftops, balconies)		Strategic Priority 1 – Food Security, 1 – Agriculture and Livestock Strategic Priority	SP1-1					0,000,000.00	
Loology	for urban agriculture and landscape		3 – Ecological and Environmental Stability, 1 – Forest and Biodiversity						65	
		Acquisition of Idle Land to be Developed as Recreational Parks and Playgrounds to Meet HLURB Standards for City Parks			M111-01			M314-04	150,000,000.00	LCCAP - ANNEX B
		Relocation and Resettlement of Informal Settlements along Manggahan, Barangays Santolan, San Miguel, Sta. Lucia							400,000,000.00	LCCAP - ANNEX B
		Adopt a Creek, Adopt a River Park						M314-04	20,000,000.00	LCCAP - ANNEX B
		Development of Cleared Areas into Linear Parks							30,000,000.00	LCCAP - ANNEX B

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(2) Building capacity and	Strategic Priority 1 – Food Security, 1 – Agriculture and Livestock								
towards urban agriculture.	Strategic Priority 3 – Ecological and Environmental Stability, 1 – Forest and Biodiversity								
	School of Urban Gardening						M314-05	10,000,000.00	LCCAP - ANNEX C
	PPP – Utilization of Private Vacant Lots for Urban Vegetable Gardening						M314-05	5,000,000.00	LCCAP - ANNEX C
	Urban Eco-Farm Waste Resource/Waste to Energy						M112-01	35,000,000.00	LCCAP - ANNEX C
(3) Improve urban ecology by increasing green spaces within the city.	Strategic Priority 3 – Ecological and Environmental Stability, 1 – Forest and Biodiversity								
	Charcoal Briquetting Facility						M314-08	30,000,000.00	LCCAP - ANNEX C

# Health and Disaster Risk Reduction and Management

					CCET	Туро				
Strategic Climate Priority	Strategic Climate Sub-Priority	Program, Projects, Activities	Description	CCET Typology (Alignment with NCCAP)	1 - Policy Development and Governance	2 - Research, Development and Extension	3 - Knowledge Sharing and Capacity Building	4 - Service Delivery	Cost	Source
Health and Disaster Risk Reduction and Manage- ment	Health and DRRM		Strategic Priority 4 – Human Security, 1 – Health	SP4 - 1					423,100,000.00	
		Health Facility Upgrading Program	Develop guidelines on treatment of health issues due to climate change and climate variability		A411-01			A414-02	100,000,000.00	LCCAP-ANNEXB
		Updated Disaster- Preparedness Program and Projects	Develop policy requiring integration of climate change and disaster risk reduction concepts and approaches in medical and allied health training courses*		A411-03			A414-01	300,000,000.00	LCCAP-ANNEXB
		Establishment of an Eye Clinic at the City Health Office						A414-02	5,000,000.00	LCCAP-ANNEXB
		Enhancement of Pasig City's Disaster Management and Rescue Program	Develop policy requiring integration of climate change and disaster risk reduction concepts and approaches in medical and allied health training courses* Develop and implement program for community-based adaptation measures and health emergency preparedness*		A411-03			A414-01	6,100,000.00	LCCAP-ANNEXB
		Comprehensive Program on Environmental Health, Safety and Well-Being	Develop guidelines on treatment of health issues due to climate change and climate variability		A411-01				12,000,000.00	LCCAP-ANNEXB

## Annex C. Compiled List of Initial Research Agenda Identified for Each Sector

#### **Energy sector:**

- Feasibility study on efficient installation of solar PV units for own use by public institutions
- Understanding electricity consumption pattern per household type
- M&E framework for solar photovoltaic installations in public buildings and facilities
- City-wide rooftop solar photovoltaic installation capacity
- City-Utility Partnership Agreements to Achieve Climate and Energy Goals

#### Transport and Air Quality sector:

- City-wide transport master plan
- Local public transport route plan
- · Guidelines in allocating appropriate dimensions for sidewalks and walkways
- Regular monitoring and analysis of air quality condition
- · City-wide audit of all sidewalks
- City-wide inventory of bicycles used as an alternative transport mode in the city
- Identification of appropriate e-vehicle charging and swapping stations

#### Solid Waste sector:

- Feasibility of biogas digester facility to process organic wastes of the city
- Feasibility of adopting a "pay-as-you-throw principle" for a city-wide policy regulation
- · Feasibility of adopting in-city waste-to-energy facility
- Innovative upcycling and recycling technologies and practices
- In-city electronic waste management

#### **Ecology sector:**

- · Map out areas with adequate spaces suitable for eco-parks
- Integration of vegetated buildings to alleviate urban heat island (UHI) effect and enhance urban ecosystem in Pasig City
- Identification of native tree species suitable for various tree planting activities
- Impact assessment (carbon sequestration, biodiversity enhancement, community empowerment) of tree-planting activities of Pasig City

#### **Urban Agriculture sector:**

- Understanding the potential of green roofs in enhancing the urban ecosystem of Pasig City
- Integration of vegetated buildings to alleviate urban heat island (UHI) effect and enhance urban ecosystem in Pasig City
- Low-cost designs for organic waste collection and composting facilities for households and business establishments
- Design training modules which are popularized and could easily be understood by various audience segments across the city

#### Water sector:

- Conduct a comprehensive assessment of the public market's drainage system considerations on external factors (e.g. operations/practices of privately operated biyaheros), elevation and slope, etc.
- Identify eco-friendly and long-term solutions for concerns pertaining to the drainage system of the public market
- Offer capacity building activities on rainwater harvesting facility design, construction, and installation for commercial establishments, industries, and households
- Strategic areas for waste disposal bins
- Design and develop natural and/or art parks near the natural drainage ways

#### Health and Safety sector:

- Strengthen R&D on climate-related health risks for Pasigueños including means of enhancing resilience against these risks
- Assess the likelihood of intensified UHI at the city level and its impacts to the health and safety of vulnerable populations (e.g. elderly, children, construction workers, traffic enforcers)





#### **Contact Information**

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