

City's Efforts and Best Practices of City to City Collaboration (Kitakyushu City – Davao City)

DAVAO CITY, PHILIPPINES

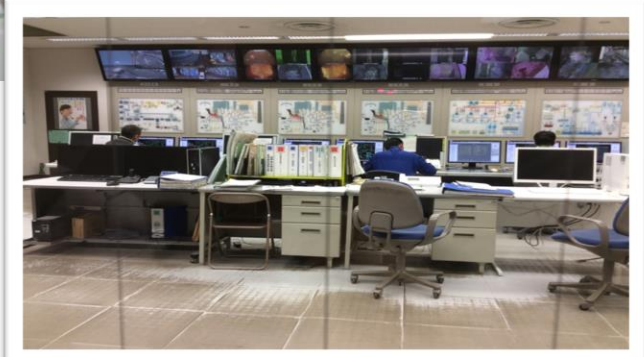
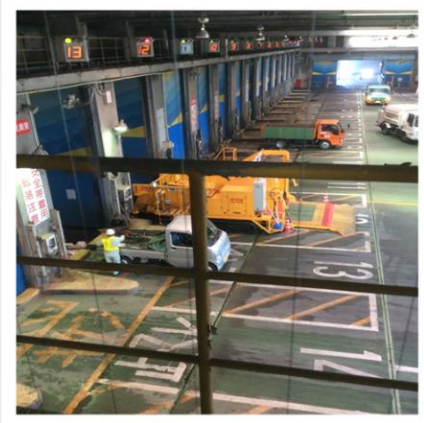


C2C COLLABORATION



Proposed Project for the Construction of Waste-to-Energy Facilities in Davao City

- **Capacity: 600 Tons of MSW daily**
- **Power Generation: 11.1 MW**
- **Cost: Php 5B**
(Japan ODA: JPY 5.13B ≈ Php 2.3B)



DAVAO CITY, PHILIPPINES



Project for the Construction of Waste-To-Energy Facilities in Davao City.

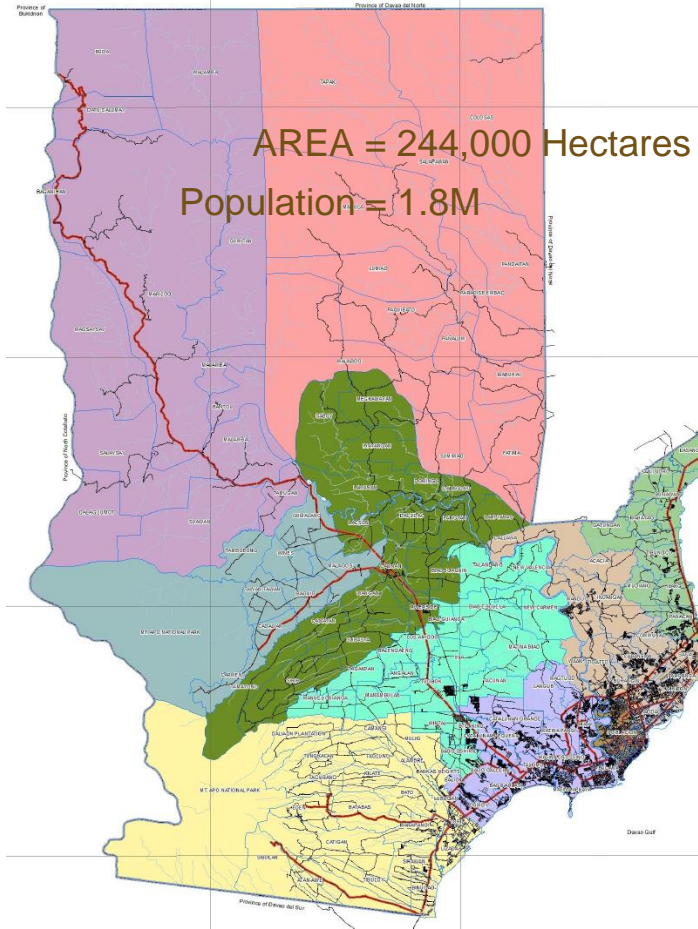
Goal of the Project

To establish sustainable solid waste management and to improve the environment and the quality of life by introducing advanced and innovative technologies in the region whilst promoting national progress and contributing to regional socio-economic development.

Expected Outcomes:

- ✓ Energy resource diversification by introducing WTE technologies.
- ✓ Extending the life of the City's Sanitary Landfill through volume reduction of generated solid waste through WtE processing;
- ✓ Improvement of environmental hygiene through pollution prevention/mitigation inherent in existing waste management system;
- ✓ Reduction of Greenhouse Gases (prevention of methane emission from the landfill and CO₂ reduction from power generation sourced from fossil fuels.)

KEY CHALLENGES



Spread of Developments



Scarcity of area for Landfilling

Increasing Population



Increase in SW generation

Rapid Urbanization



Need for more SWM Facilities

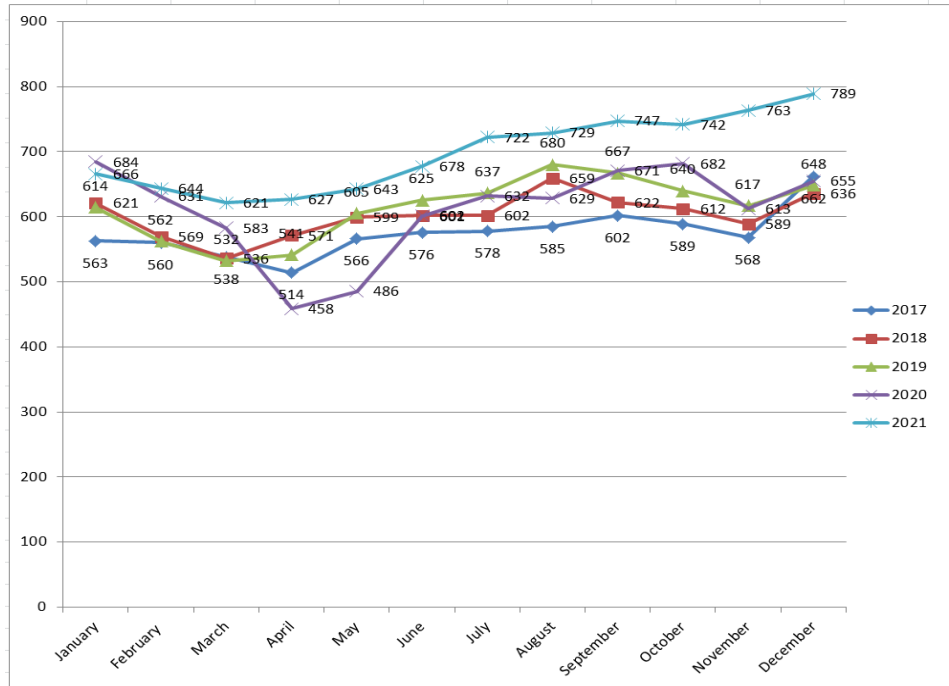
DAVAO CITY, PHILIPPINES



CURRENT STATUS

Projected increase in waste generation [Data from 10-Year SWM Plan (2018-2027)]

YEAR	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
DAVAO CITY, Population per 2015 Census	1,708,109	1,745,667	1,783,226	1,820,785	1,858,344	1,895,903	1,933,461	1,971,020	2,008,579	2,046,138	2,083,697
Solid Waste Generation, Tons per day	991	1,012	1,034	1,056	1,078	1,100	1,121	1,143	1,165	1,187	1,209



Actual Average Disposal in SLF, Tons per day

	2017	2018	2019	2020	2021
January	563	621	614	684	666
February	560	569	562	631	644
March	538	536	532	583	621
April	514	571	541	458	627
May	566	599	605	486	643
June	576	602	625	601	678
July	578	602	637	632	722
August	585	659	680	629	729
September	602	622	667	671	747
October	589	612	640	682	742
November	568	589	617	613	763
December	662	636	648	655	789
AVERAGE	575	602	614	610	698

2021

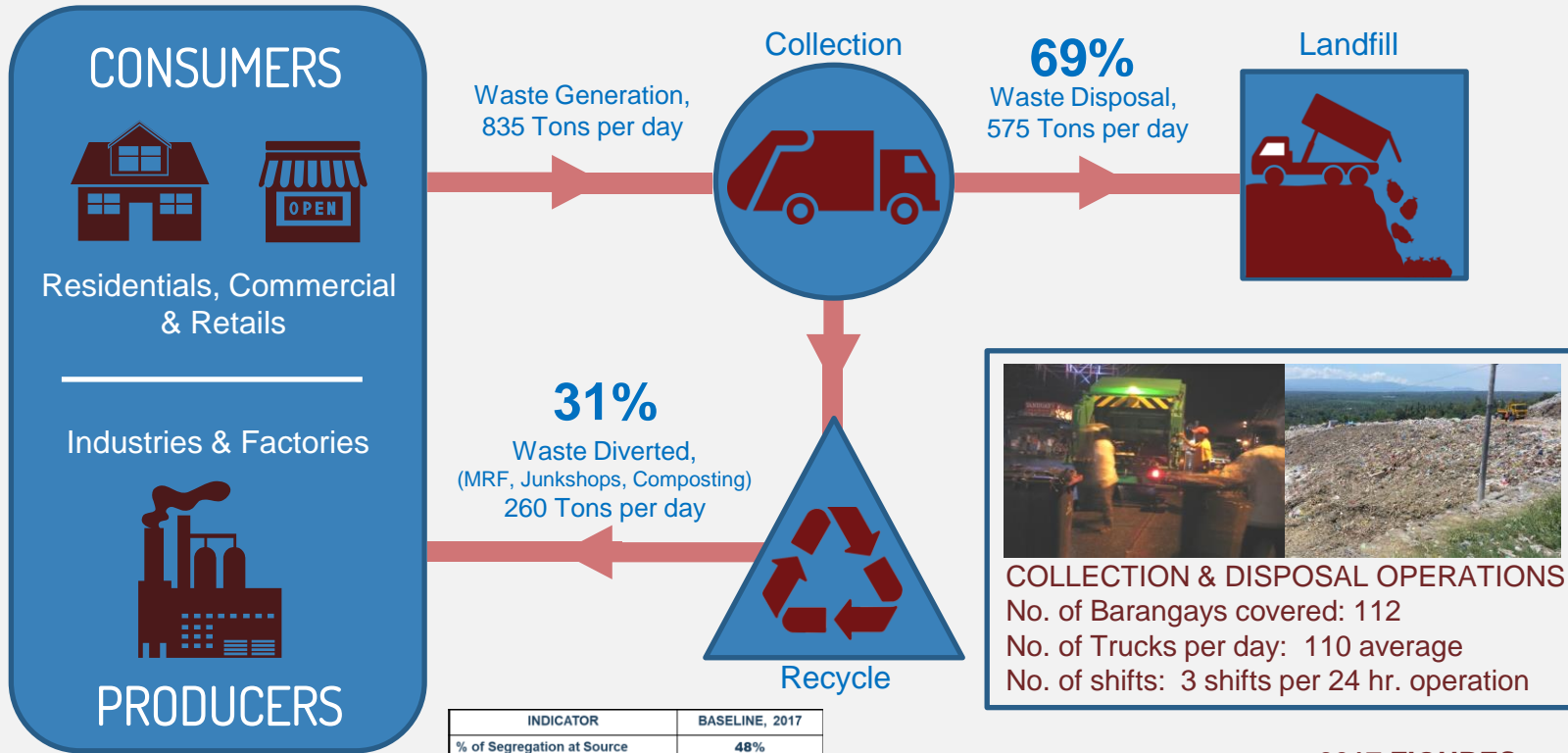
No. of Brgys covered : 120

No. of Trucks per day: 140 Ave.

DAVAO CITY, PHILIPPINES



10-YR SOLID WASTE MGT. PLAN (2018-2027)



COLLECTION & DISPOSAL OPERATIONS
 No. of Barangays covered: 112
 No. of Trucks per day: 110 average
 No. of shifts: 3 shifts per 24 hr. operation

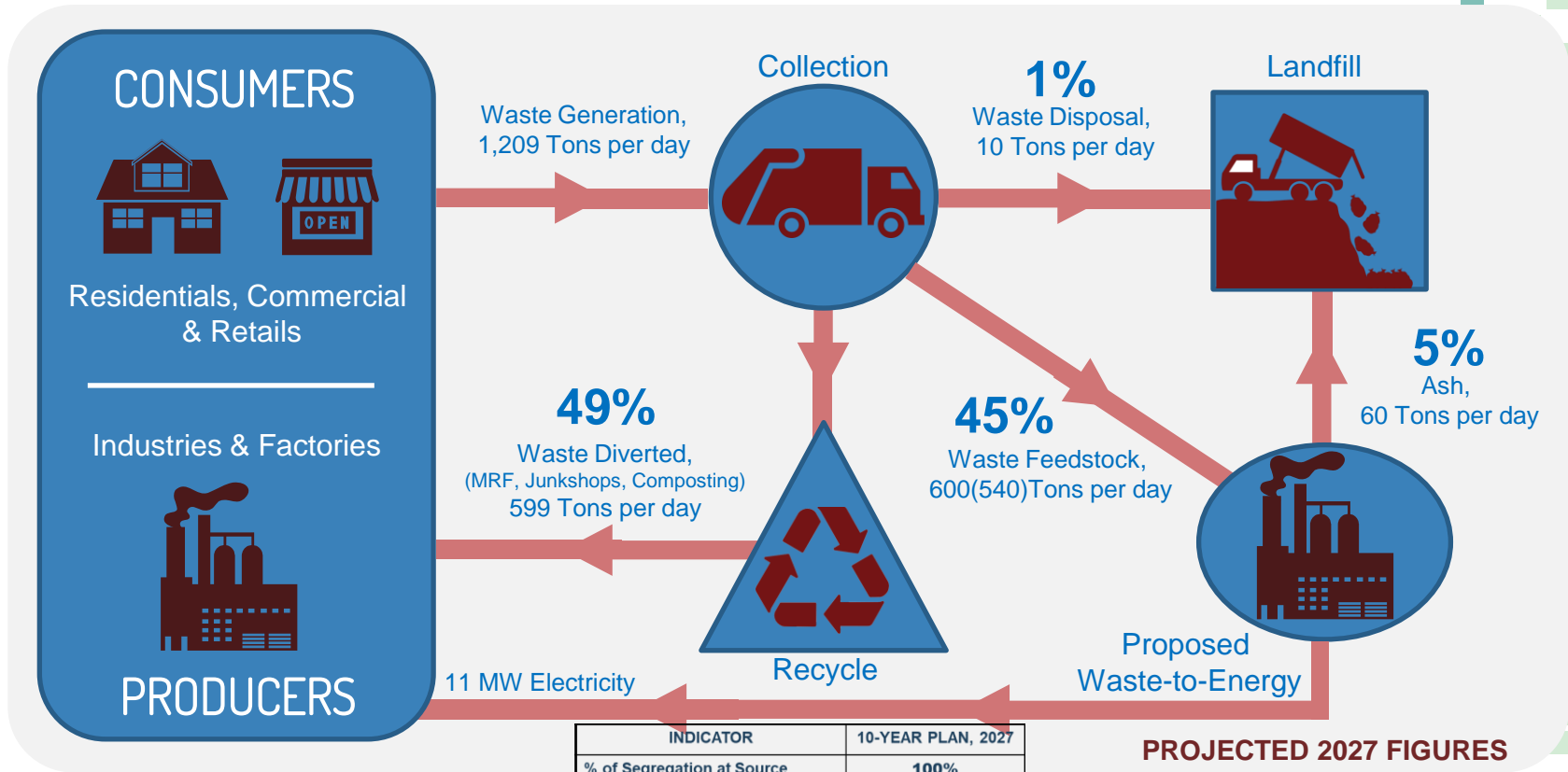
2017 FIGURES

INDICATOR	BASELINE, 2017
% of Segregation at Source	48%
% of Segregated Collection	12%
% of Collection Rate/Service Area	62%
% Waste Diversion Rate	31%
Disposal facility (tons per day)	SLF
	575 tons/day with an area of 38,000 sq.m.

DAVAO CITY, PHILIPPINES



10-YR SOLID WASTE MGT. PLAN (2018-2027)



PROJECTED 2027 FIGURES

INDICATOR	10-YEAR PLAN, 2027
% of Segregation at Source	100%
% of Segregated Collection	100%
% of Collection Rate/Service Area	100%
% Waste Diversion Rate	92%
Disposal facility (tons per day)	SLF w/ WTE

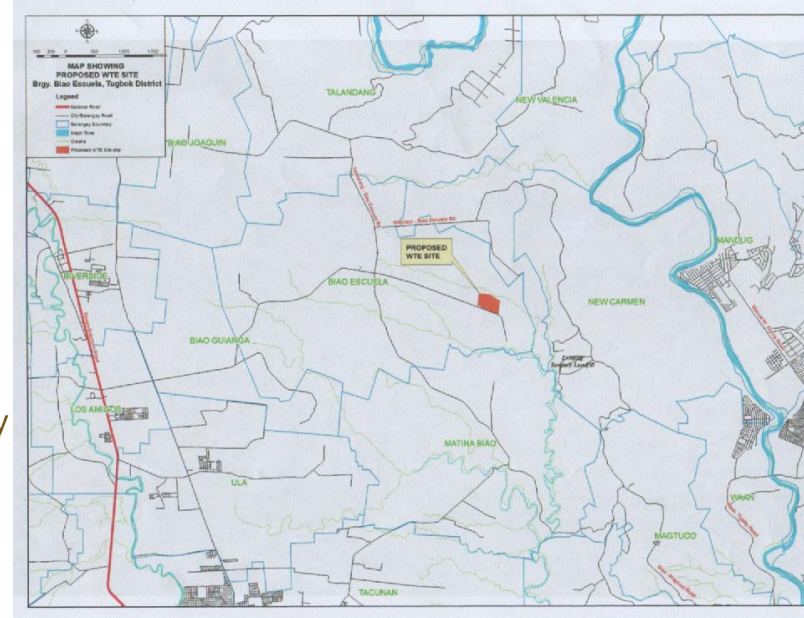
DAVAO CITY, PHILIPPINES



“Project for the Construction of Waste-to-Energy Facilities in Davao City”

MILESTONES IN THE IMPLEMENTATION OF THE PROJECT

- ✓ Exchange of Notes between Philippines and Japan was signed and executed in 2018, whereby a grant of Php 2.3 Billion was made for the Project,
- ✓ Adopting Waste-to-Energy (WTE) as part of City’s 10-yr. Solid Waste Management Plan (2018 – 2027).
- ✓ Creation of “Waste-to-Energy – Project Management Team” through Executive Order No. 18. (City Admin., CEO, City Legal Office, CPDO, City Budget Office, CENRO)
- ✓ Approval of Local Ordinance adopting the Japanese Waste-to-Energy Technology as part of the Solid Waste Management Initiatives of the City
- ✓ Provision of WtE Facility Site.
- ✓ Signing of MOA between the Dep’t of Finance and Crown Agents – a commissioned procurement agent by the Government of Japan/Ministry of Foreign Affairs, a Japanese company, to oversee the implementation of the project, in partnership with Phil. Govt. entities.
- ✓ Conduct of Two (2) Feasibility Studies: 1st by NSENGI
2nd Crown Agents
- ✓ The city has on-going request for the National Government (through DENR) to subsidize the remaining half of the cost of the facility (Php3B) as counterpart funding.



**PROJECT SITE:
BRGY. BIAO ESCUELA, TUGBOK DIST.,
DAVAO CITY**

DAVAO CITY, PHILIPPINES



“Project for the Construction of Waste-to-Energy Facilities in Davao City”

Signing of
STRATEGIC ENVIRONMENTAL
PARTNERSHIP AGREEMENT
Between
City of Davao, Philippines
and
City of Kitakyushu, Japan
(November 17, 2016)



“Grassroots Project”
Joint Model Project
between
Davao City
and Kitakyushu City



“Project for the
implementation of
Waste-to-Energy Facilities
in Davao City” with funding
Assistance from Japanese
Government



Milestones in the implementation of C2C collaboration between Kitakyushu City and Davao City. (2017-2020)

- Upgrading of city's solid waste management system through "JICA Grassroots Project".
 1. Establishing a system for waste analysis in CENRO
 2. Setting up preparatory body to develop an organization to promote waste reduction
 3. Pilot activities on waste reduction in business sector and barangay to be conducted



DAVAO CITY, PHILIPPINES



Milestones in the implementation of C2C collaboration between Kitakyushu City and Davao City. (2017-2020)

✓ Jointly worked with Japan Project Team:

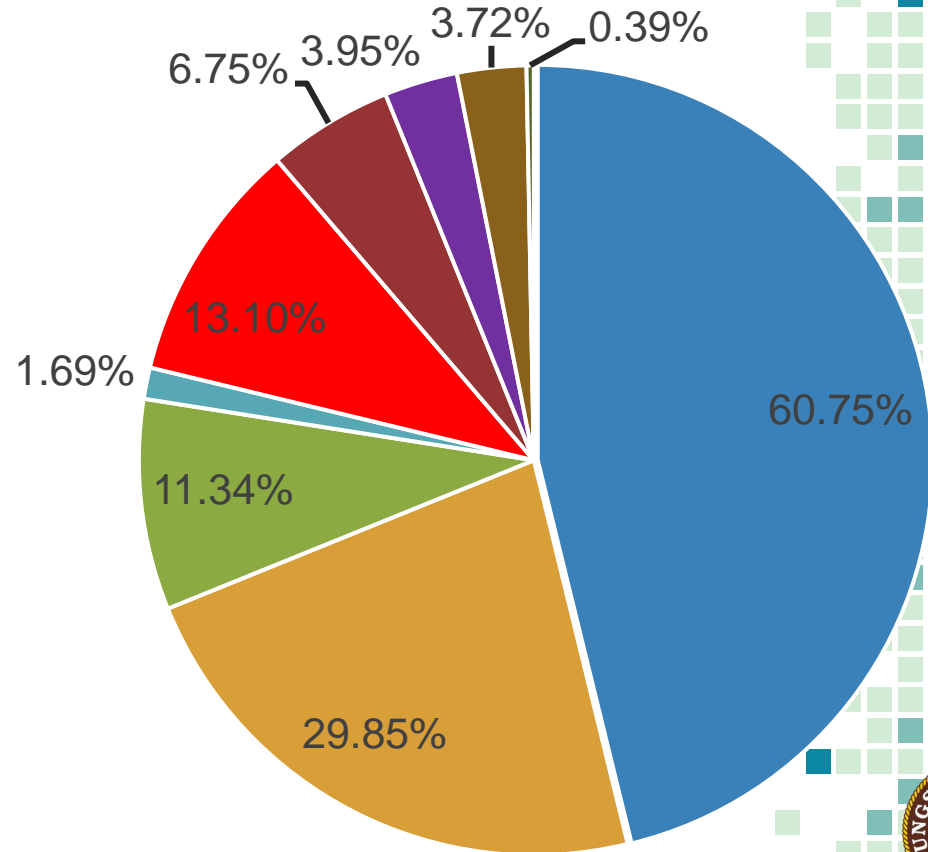
- Project to realize low carbon society in Davao City through a support for a development of Local Climate Change Action Plan (LCCAP).
 1. A development of GHG inventory (supported by IGES)
 2. A development of mitigation measures (supported by Kitakyushu City and IGES)
 3. A development of adaptation measures (supported by Ateneo De Davao University, GOs, NGOs)
- ✓ Creation of Inter-Agency Team for the development of LCCAP.
(City DRRMO, CPDO, CENRO, Ateneo de Davao University)



Davao City GHG Inventory

2017 GHG emission = 4,708,374 tonnes CO₂e

- Industrial Process and Product Use
- Mobile Combustion
- Stationary Combustion (Residential)
- Stationary Combustion (Industrial)
- Purchased Electricity
- Agriculture
- Wastewater
- Forestry
- Solid waste



DAVAO CITY, PHILIPPINES



Milestones in the implementation of C2C collaboration between Kitakyushu City and Davao City.



Executive Order No. 57
Series of 2021
AN ORDER CREATING THE DAVAO CITY CLIMATE CHANGE COMMITTEE

WHEREAS, the Philippines is experiencing worsening climate emergency by having more, extreme weather events, rising temperatures, sea-level rise, heavy rainfall, and drought;

WHEREAS, Davao City is no exception to the abovementioned occurrences, usually coming in as flashfloods, landslides, and drought;

WHEREAS, the City Government of Davao formulated the 2019-2023 Local Climate Change Action Plan in order to pursue and secure the city's development gains and sustainability efforts and initiatives by building disaster resilient and climate change adaptive communities;

WHEREAS, the 2019-2023 Local Climate Change Action Plan (LCCAP) of the City of Davao as endorsed by the City Planning and Development Office has been approved and adopted through the City Ordinance 0475-21 series of 2021;

WHEREAS, pursuant to Rule VIII Section 4, of the Revised Implementing Rules and Regulations (RIR) of R.A. No. 9729 or the Climate Change Act of 2009, as amended by R.A. No. 10174, mandating the Local Chief Executive to appoint the person responsible to formulate and implement the Local Climate Change Action Plan;

NOW, THEREFORE, I, SARA Z. DUTERTE, Mayor of the City of Davao, by virtue of the power vested in me by law, do hereby order the following:

SECTION 1. CREATION AND COMPOSITION. There is hereby created the **DAVAO CITY CLIMATE CHANGE COMMITTEE (DCCC)** to be responsible for the implementation of the Local Climate Change Action Plan.

The DCCC shall be composed of the following:

Chairperson: City Mayor
Co-Chairperson: City Administrator
Vice-Chairperson: Head of City Environment and Natural Resources Office

Members:

1. City Planning and Development Office
2. City Disaster Risk Management and Reduction Office
3. City Health Office
4. City Engineer's Office
5. City Agriculture's Office
6. City Veterinarian's Office
7. City Transport and Traffic Management Office
8. Department of Natural Resources- Environmental Management Bureau

Second Floor, City Hall Building, City Hall Drive, San Pedro St., Davao City
(082) 224-3004 • (082) 241-1000 loc. 265 • davoacitymayor@gmail.com

Thematic Areas	Change Objectives
Food Security	Ensured stable food supply and climate change-resilient facilities and protocols
Water Sufficiency	Promoted use of local resources and adopted modern and energy-efficient technology
Ecological and Environmental Stability	Increased carbon sequestration by strengthening protection policies for forest and aquatic ecosystems through appropriate land use measures and to promote low carbon initiatives in the over-all development strategy/plan of the city
Human Security	Built safe and resilient communities with high adaptive capacity to climate change and disasters
Sustainable Energy	Promoted sustainable use of energy, developed local energy sources, and adopted alternative energy-efficient and new technologies
Climate-friendly industries and services	Encouraged adoption of new low carbon technologies and adopt climate change-resilient design standards and management practices to enhance efficient utilization of resources and human power
Knowledge and capacity development	Empowered communities to deal with impact of climate change through a strong partnership among stakeholders (government, academe, corporations, civil society, NGOs)

is declared invalid or unconstitutional, the other provisions not affected thereby shall remain valid and subsisting.

SECTION 7. REPEALING CLAUSE. All orders or parts thereof which are inconsistent with the provisions of the Executive Order are hereby repealed or modified accordingly.

SECTION 8. EFFECTIVITY. This Executive Order shall take effect immediately upon approval hereof and shall remain in full force and effect unless rescinded.

Done on 21 SEP 2021 at Davao City, Philippines.

SARA Z. DUTERTE
SARA Z. DUTERTE
City Mayor

Attested by:

GINOY
ATTY. ZULEIKA T. LOPEZ
City Administrator



DAVAO CITY, PHILIPPINES



HEALTHY OCEANS AND CLEAN CITIES INITIATIVE



- **Goal:** Reduce marine plastic pollution
- **Strategy:** Strengthening institutional capacity to contribute to the operationalization and localization of the National Plan of Action on Marine Litter (NPOA-ML)
- **Project period:** April 2020 to March 2022*

Key attendees
 City Administrator's Office,
 City ENRO, Ancillary Services Unit



DAVAO CITY, PHILIPPINES



Daghang Salamat!

