



Low-Carbon Model Town in Mandaue City

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Local Government Unit
Mandaue City

APEC Low-Carbon Model Town Project Wrap-up Symposium

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Introduction of Mandaue City

- Highly Urbanized City,
- Located in the island province of Cebu, Central Visayas (Region 7),
- A coastal city situated on the central eastern region of Cebu Island, Cebu City (north-west& south-west), Consolacion (north-east), Mactan Island (south-east coast) where Airport and Lapu-lapu City is located,
- **32.85** square kilometers land area,
- **27** barangays (villages)
- **364,116** total population (2020 Census of Population and Housing)



Vision of Mandaue City

The City's vision is to be a green city with sustainable economic development focused on high value manufactured consumer products for better living standards of its populace through inclusive governance.



Low-Carbon Model Development in Mandaue City

PLANS	PROGRAMS / ACTIVITIES	STUDIES
Comprehensive Land Use Plan (CLUP 2019-2029)	Green Loop; Pedestrian Lane, Bike Lane, Eco-fence, Green Learning Park, Butuanon Viewing Deck, Mahiga Linear Park	Mangrove Community Structure In Cansaga Bay: Baseline Assessment
10-year Ecological Solid Waste Management Plan (2018-2028)	Green Building Program	Project GUHeat
Safe Closure & Rehabilitation Plan	Mangrove Eco Park (Bamboo Park)	APEC - LCMT Phase 6 Feasibility Study
Local Climate Change Action Plan (2020-2030)	Tree Growing Program and Urban Gardening with Provincial Government and Non Government Organization CAFÉ-I	Final Report: Preparatory Survey for the Septage Management Project for MCWDs Service Area by: JICA
Climate Change Adaptation Framework	Purok System (self govern community-Jichikai System)	Title of the Feasibility Study on Sterilization System - New Medical/Infectious Waste Management
Local Public Transportation Route Plan (LPTRP 2021-2025)	Barangay Monthly Organizational Review Meeting (BMORM)	
	Circular Economy Partnership with GUUN	
	4th International River Summit 2018	
	Butuanon River Watershed Management Board	
	Asia Smart City Conference in Yokohama	

Ordinances that supports LCMT

ZONING ORDINANCE

Stipulates for Green and Open Spaces and Regulates land's allowable uses

GREEN BUILDING ORDINANCE

Regulates any development in the five Planned Unit of Developments to be low carbon.

LOCAL PUBLIC TRANSPORTATION ROUTE ORDINANCE

Regulates the 4 intra city route structure.

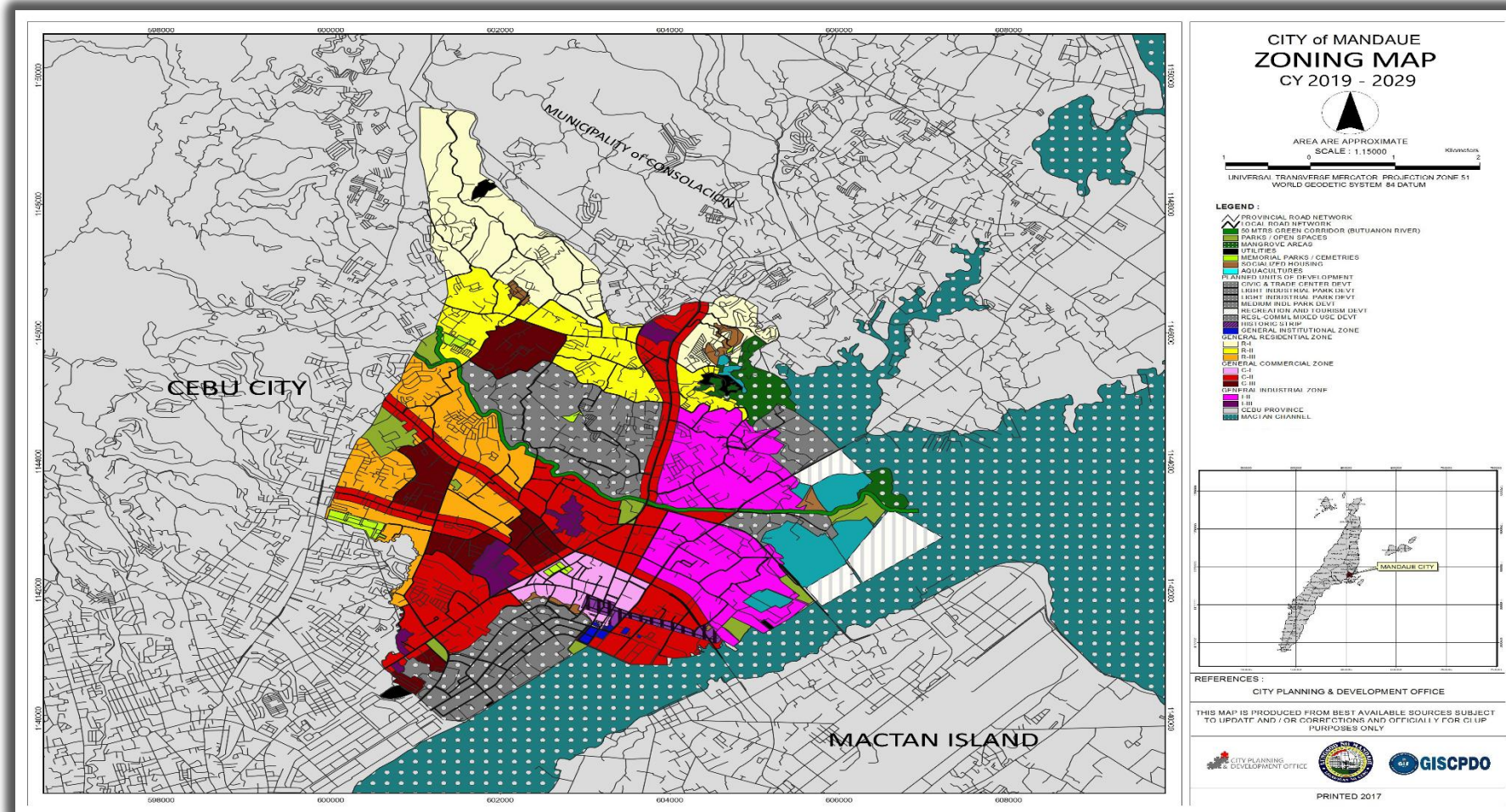
BIKE LANE ORDINANCE

Promotes safety environment for the bicyclist.

PUROK (COMMUNITY) SYSTEM ORDINANCE

Address the different issues on solid waste, security, flooding, health, and other concerns at the barangay level

Notable achievements



COMPREHENSIVE LAND USE PLAN (CLUP)- ZONING MAP

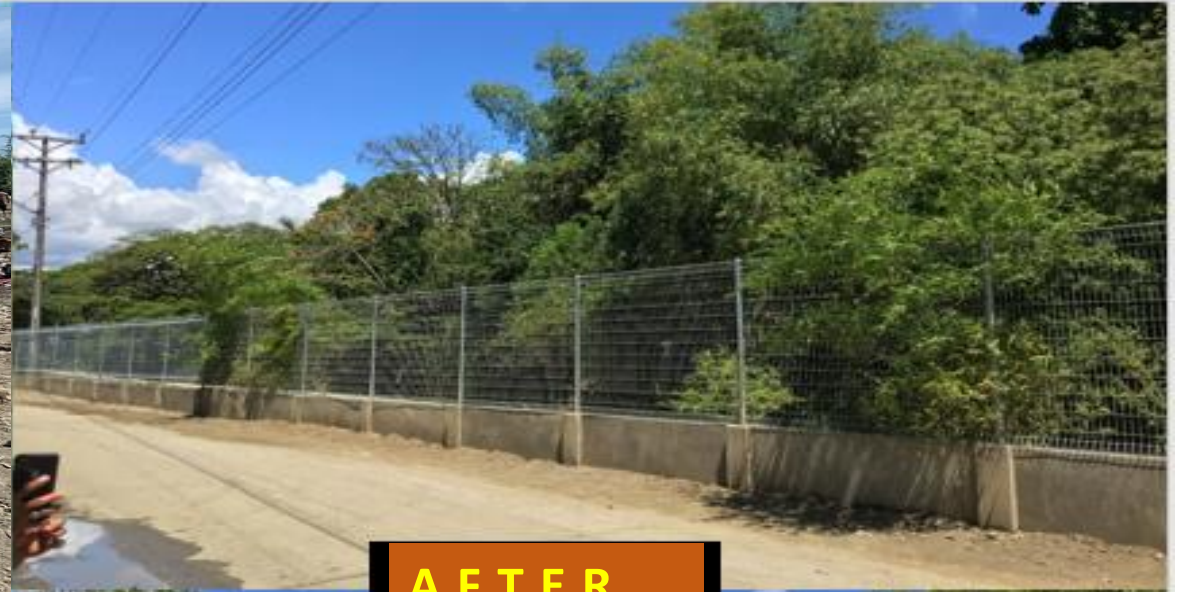
Notable achievements



Notable achievements



BEFORE



AFTER



BUTUANON RIVER ECO-FENCE



Activate Windows
Go to Settings to activate Windows.

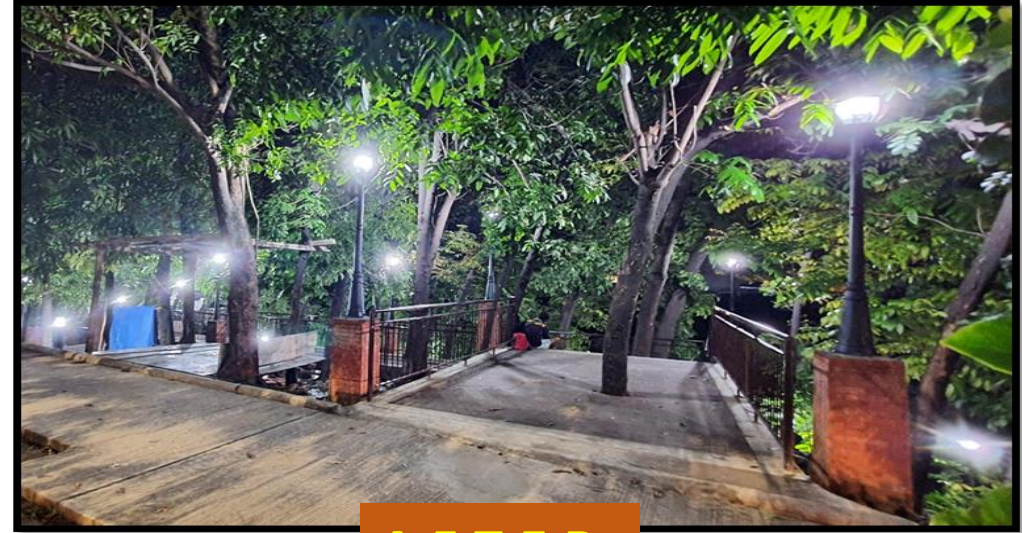
Notable achievements



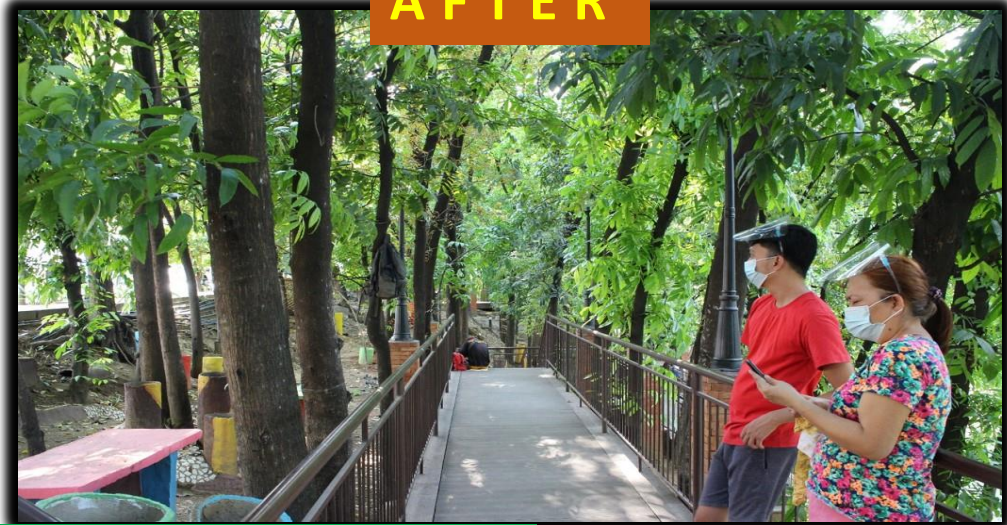
BEFORE



BUTUANON RIVER VIEWING DECK



AFTER



Notable achievements



MAHIGA RIVER LINEAR PARK

Notable achievements



GREEN BUILDING PROGRAM

Notable achievements

Mandaue City is first Region 7 LGU to receive Notice of Compliance

By: Mary Rose Sagarino - CDN Digital Correspondent | March 12, 2021 - 09:45 PM



APPROVED LOCAL PUBLIC TRANSPORT ROUTE PLAN

Notable achievements

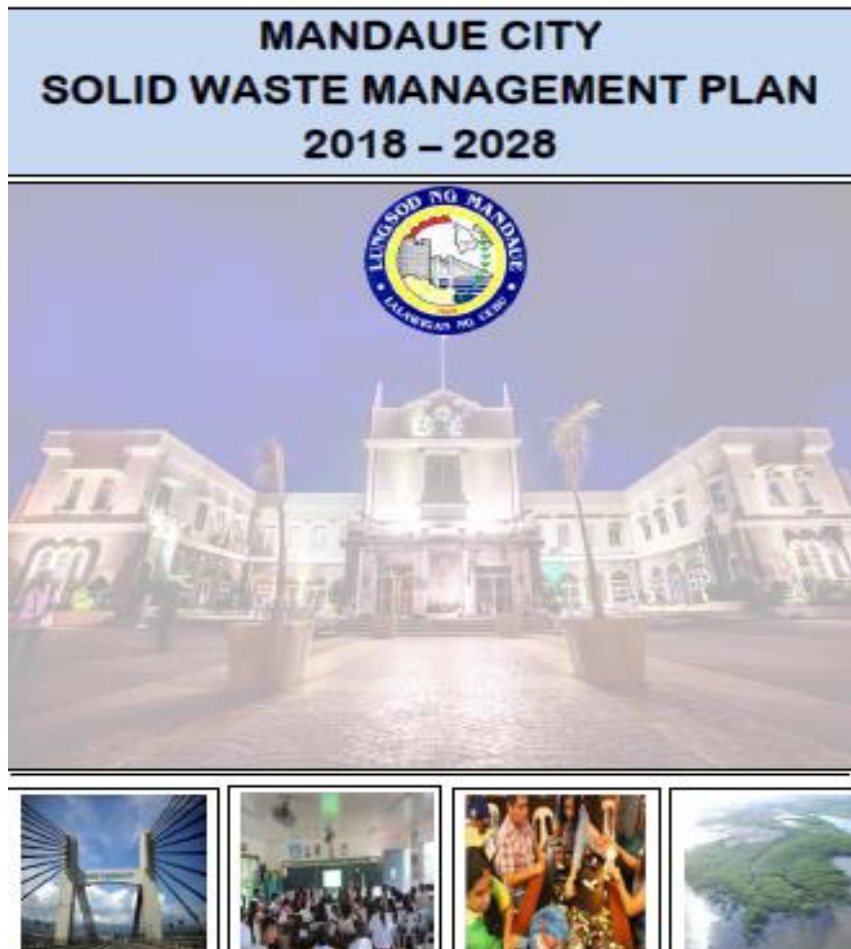


Japanese
Consul General
**Toshihide
Kawasaki**
visits
Mandaue City's
Green Learning
Park



GREEN LEARNING PARK

Notable achievements



PARTNERSHIP WITH GUUN, ON CO2 EMISSION REDUCTION BY UTILIZING THE CITY'S RESIDUAL WASTES, SUPPORTED BY THE CITY OF YOKOHAMA AND THE MINISTRY OF THE ENVIRONMENT IN JAPAN (MOEJ)

Notable achievements

Study area

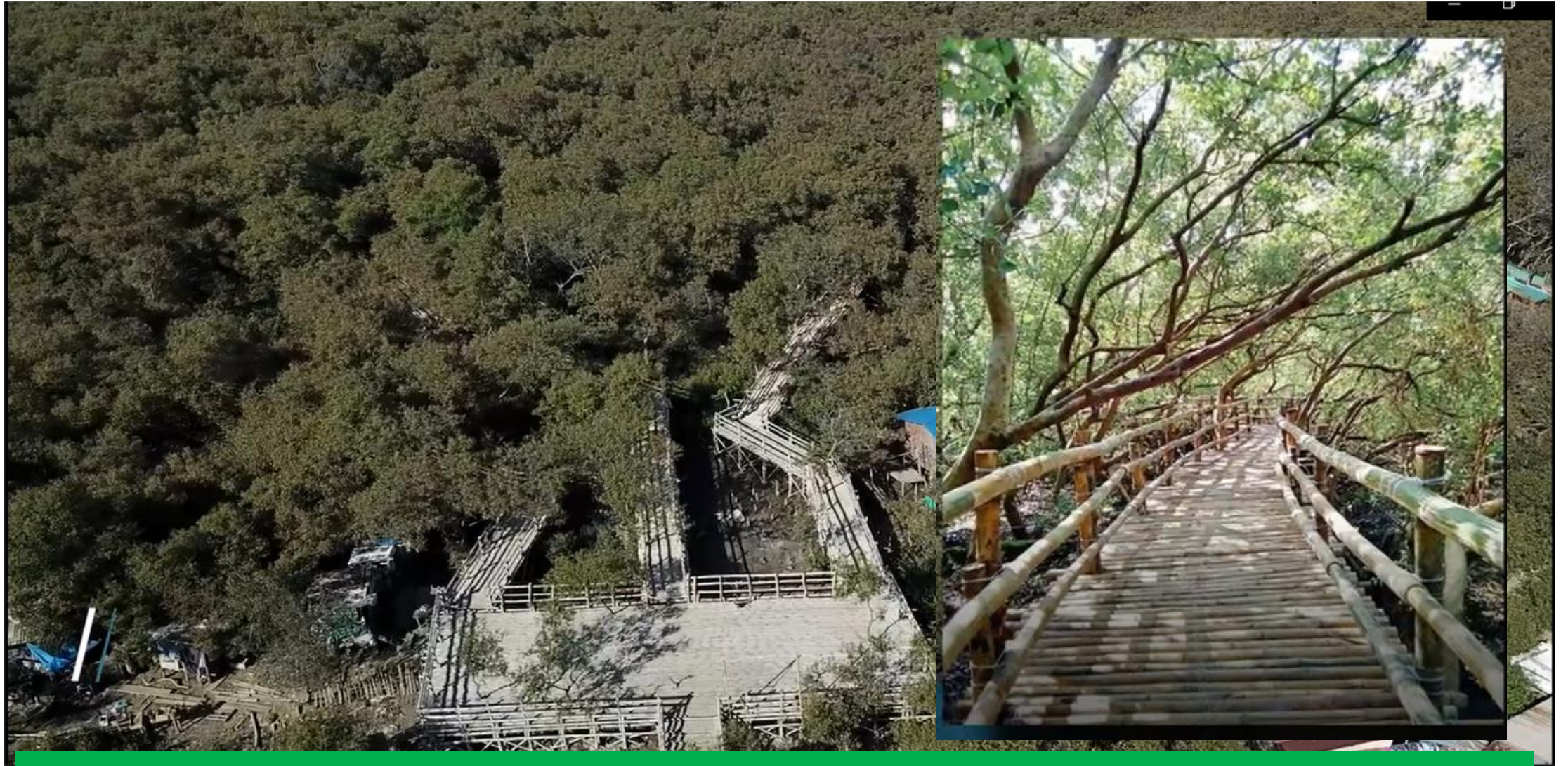
- **North Mangrove Patch**
(Brgy Labogon – Brgy Basak)
Area = 31 ha
- **South Mangrove Patch**
(Brgy Paknaan – Brgy Umapad)
Area = 42 ha

Total area: **73 hectares**



MANGROVE COMMUNITY STRUCTURE IN CANSAGA BAY: BASELINE ASSESSMENT

Notable achievements



MANGROVE ECO-PARK (BAMBOO PARK)

Notable achievements

TERMINAL TECHNICAL NARRATIVE REPORT



Geospatial Assessment and Modelling of
Urban Heat Islands in Philippine Cities
(Project GUHeat)



Training Center for Applied Geodesy and
Photogrammetry
University of the Philippines
Diliman, Quezon City
(Implementing Agency)
DOST – Philippine Council for Industry.

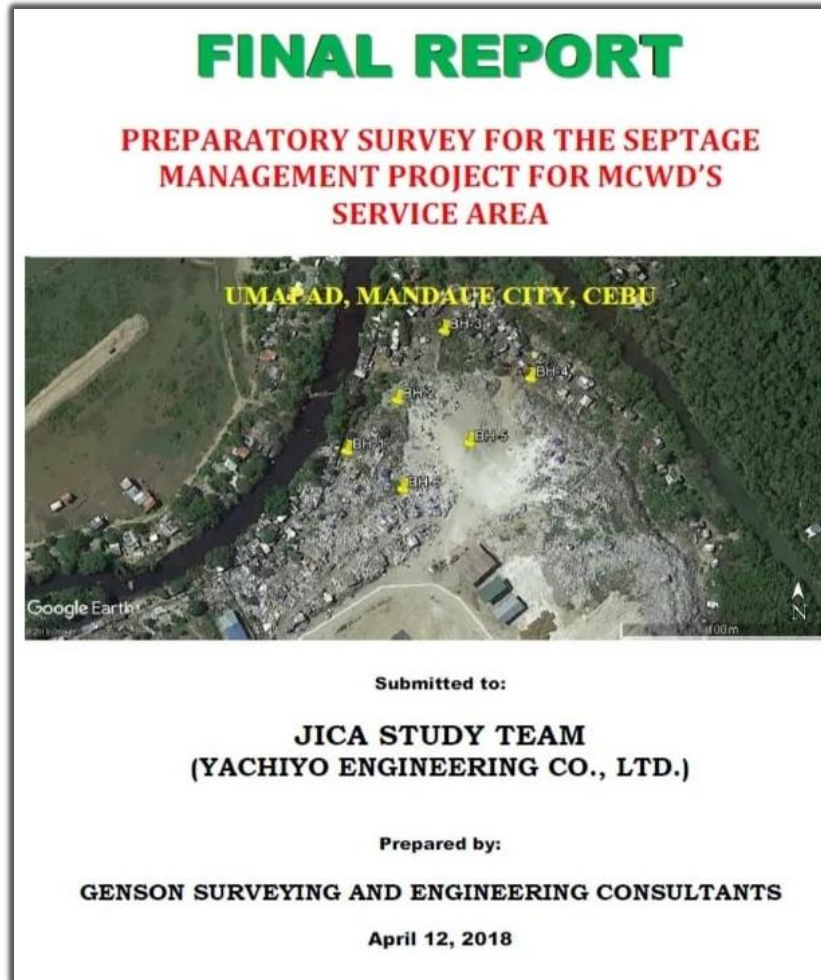
Energy and Emerging Technology
Research and Development
DOST Complex, Gen. Santos |
Avenue Bicutan, Taguig City, Metro
Manila
(Funding & Monitoring Agency)

Online Activity of the Project GUHeat

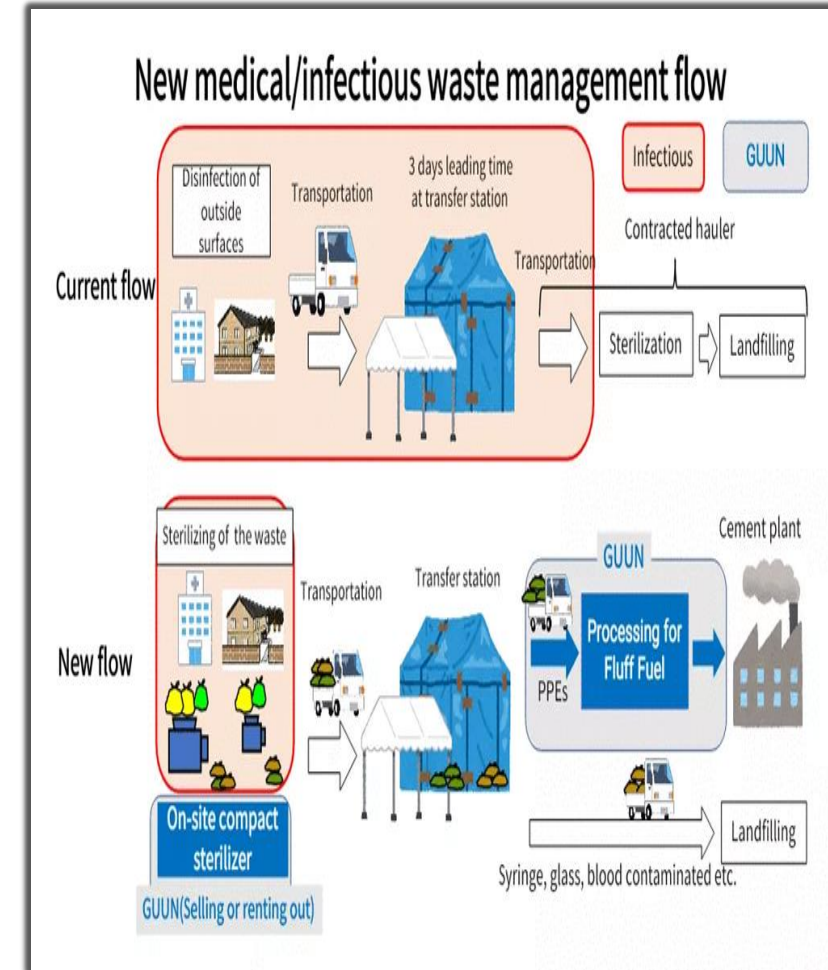


PROJECT GUHEAT COLLABORATION WITH THE UNIVERSITY OF THE PHILIPPINES (UP)

Notable achievements



JICA STUDY FOR SEPTAGE MANAGEMENT PROJECT



FEASIBILITY STUDY ON STERILIZATION SYSTEM

Notable achievements

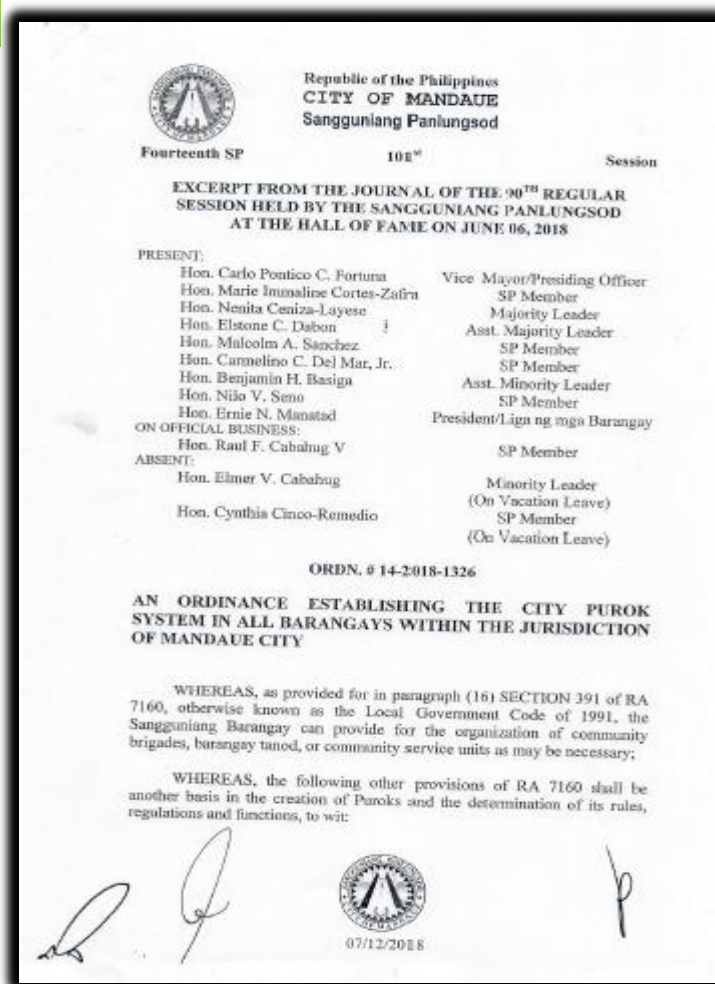


Notable achievements



T R E E G R O W I N G P R O G R A M

Notable achievements



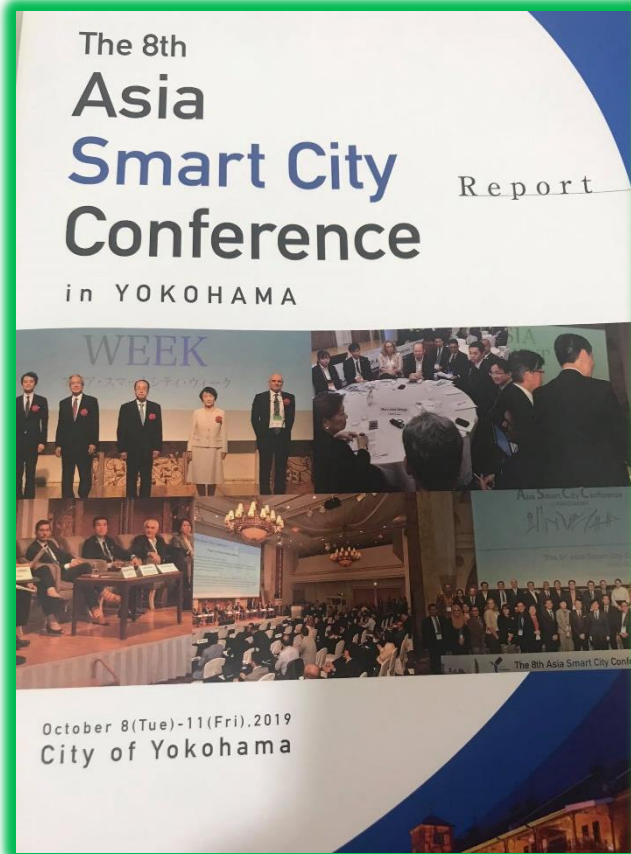
PUROK SYSTEM (SELF GOVERN COMMUNITY/ JICHIKAI SYSTEM)

Notable achievements



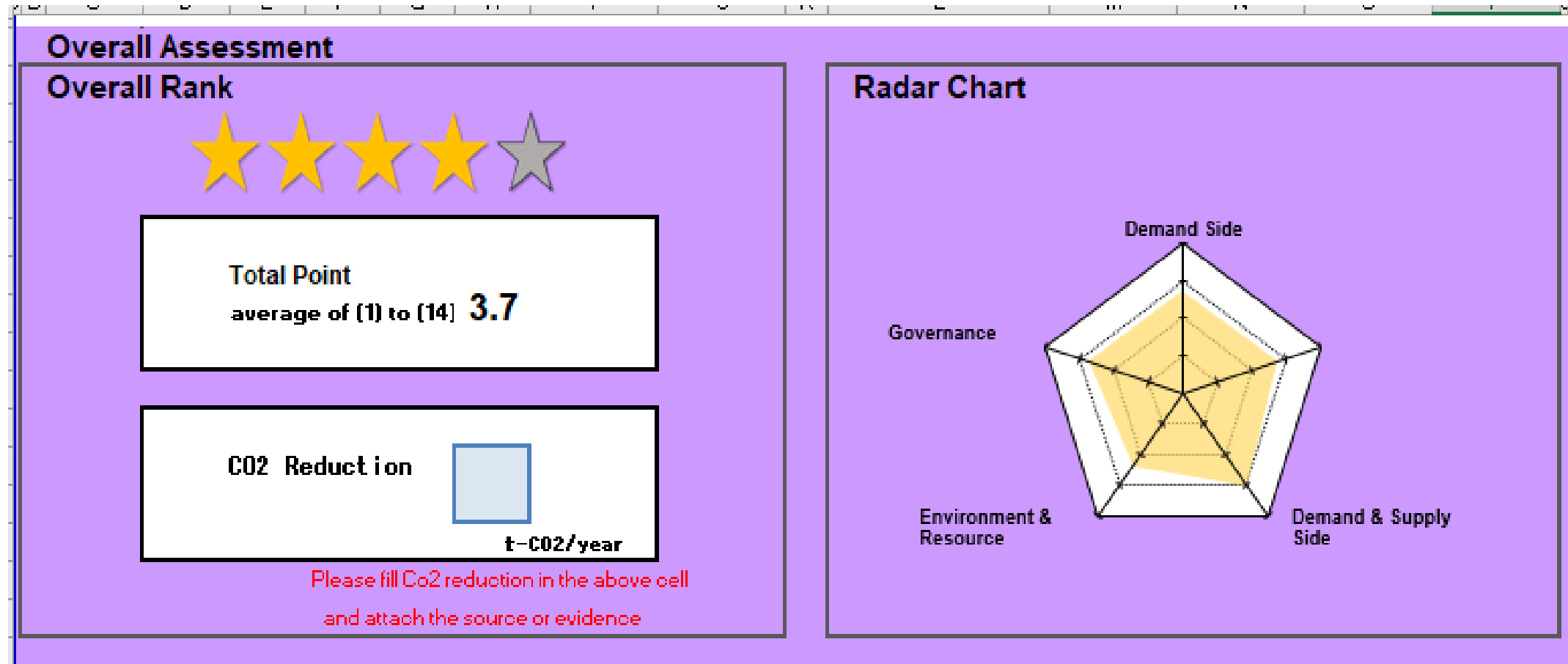
BARANGAY MONTHLY REVIEW ORGANIZATIONAL MEETING (BMORM)

Notable achievements



ATTENDED THE 8TH ASIA SMART CITY CONFERENCE IN YOKOHAMA JAPAN

Self-assessment results by LCT-I system



LCT-I OVER ALL ASSESSMENT

Challenges to low carbon town development;

- Limited and reliable quantification of distributed carbon sources/sectors and sinks for GHG emission inventory,
- Limited knowledge in the conduct of standardized methods for measurable, reportable and verifiable greenhouse gas emissions data,
- Lack of government personnel that are capable or familiar in its implementation (i.e. Green Building Certified practitioners and other expertise, and limited of expert/specialist to lead the conduct of GHG emission), and
- The Local Public Transport Route Plan's implementation is still limited due to the pandemic.

Future Plan

To realize the vision of the City the initiated policies, projects and programs that have been implemented in support of LCMT will be continued;

- Implementation and monitoring of the medium and long term policies, projects, and programs; Green Building Ordinance, Zoning Ordinance, LPTRP Ordinance, Bike Lane Ordinance and other policy that supports the Green Loop.
- Implement Adaptation of Climate Change Adaptation Framework and the Local Climate Change Adaptation Plan
- Prioritize projects for implementation
- Find funding sources/linkages for big-ticket projects/programs
- Strengthen Inter-City & Multi-stakeholder's cooperation
- Cost Effective Solid Waste Management Plan

Recommendations that are not yet implemented;

- Formalize data collection procedure for liquid fuels in the City in order to improve quality of carbon accounting.
- Investigate the use of municipal waste-derived and company-derived biogas.
- Deploy grid-supported solar charging stations, utilizing roofs of covered transit areas as a component of e-trike and e-jeepney program.
- Investigate the feasibility of developing multi-utility energy centres.
- Maintain a watching brief on the opportunity for solar water heating and provide awareness through support of uptake if demand unfolds.
- Introduce higher fuel efficiency vehicle standards and high quality standards for gasoline and diesel (as part of national program).

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Thank you for your attention !