

From
the People of Japan



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HEALTHY OCEANS AND Clean Cities Initiative

Plastic waste data integration for **EPR-readiness of cities** and waste diverters in the Philippines

Ms. Charlyn Hibaya-Pendang

City Coordinator, Healthy Oceans and Clean Cities Initiative
United Nations Human Settlements Programme (UN-Habitat)



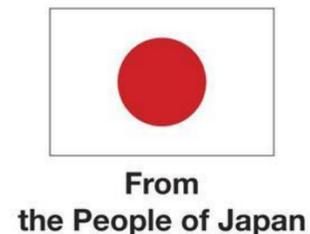
October 10, 2023 | 9AM

ADB Workshop, Bangkok, Thailand



Project Summary

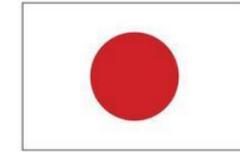
- **Funding:** USD 3Million from the Government of Japan
- **Implementing Agency:** UN-Habitat, particularly the Country Office in the Philippines
- **Goal:** Reduce marine plastic pollution
- **Strategy:** Strengthening institutional capacity to contribute to the operationalization and localization of the National Plan of Action on Marine Litter (NPOA-ML)



Partner Cities



UN-HABITAT



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HEALTHY OCEANS AND
CLEAN CITIES INITIATIVE



2020 population



Manila 1.85M



Legazpi 0.20M



Ormoc 0.23M



Calapan 0.15M



Cagayan de Oro 0.73M



Davao 1.78M



Strategy 10

Strengthen LGU capacities and local implementation of NPOA-ML

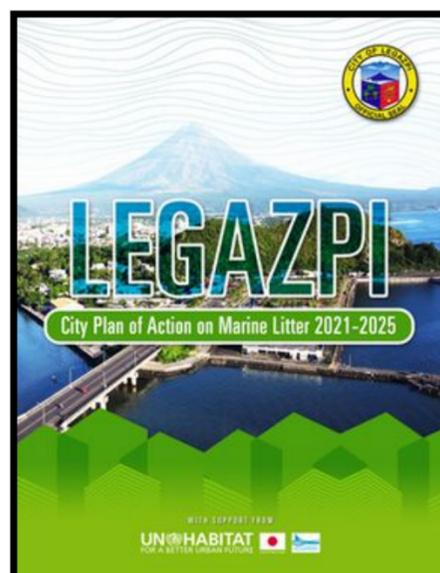
10.1 Develop a roadmap for the local-level implementation of the NPOA-ML*

10.2 Conduct capacity building and support best practice sharing/learning to enhance technical competencies of LGUs and cluster of LGUs, including barangays and local boards on SCP, proper waste management/diversion, and marine litter management

10.3 Ensure continuity of good local marine litter-relevant programs amidst local political transition/turnovers, including appropriate incentive and penalty mechanisms (carrot-and-stick approach) with LGUs



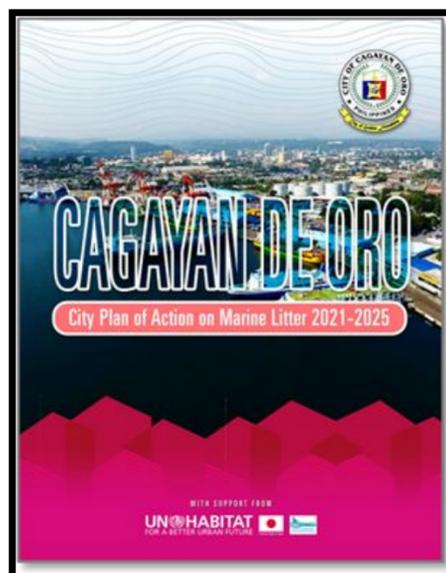
Legazpi



Adopted through:

LCPDC Resolution 02 s. 2022 (Feb 2022)
SP Resolution 15-0104-2022 (Apr 2022)

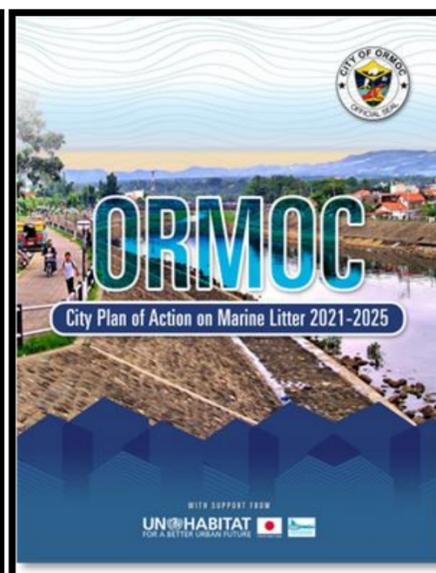
Cagayan De Oro



Adopted through:

CSWMB Resolution 01 (Feb 2022)

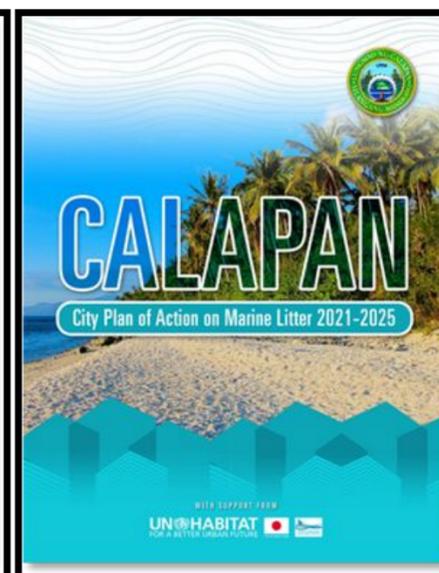
Ormoc



Adopted through:

CDC Resolution 03 s. 2022 (Jun 2022)
SP Resolution 22-067 (Sep 2022)

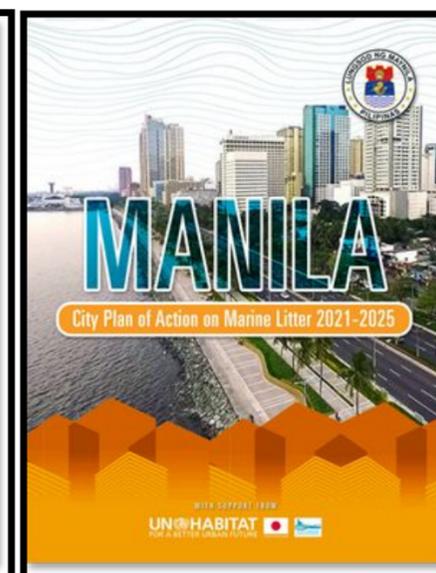
Calapan



Adopted through:

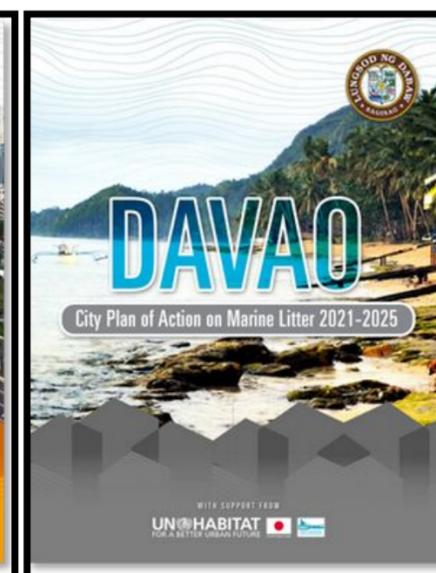
SP Resolution 42 (Aug 2022)

Manila



Approved by CSWMB (Sep 29, 2022);
Adopted City Council Reso 2023-21

Davao



Finalized (Sep 30, 2022); Endorsed to City
Council

Plastic 3Rs Livelihood: City/Community-led Pilot Projects/Initiatives

LEGAZPI CITY



Centralized MRF, Legazpi City



Barangay 33 Penaranda Eco-Negosyo Association's Eco-Pot Making Facility



Plastic Shredding Machine, Legazpi



Dap-Dap Ecopreneurs Association's Recycling Workstation, Legazpi



Smart Solid Waste Collection Vehicle Tracking System



Legazpi City Recyclers Association's Zero Waste Refilling Store, Legazpi

CITY OF MANILA



HOCCI Plastic 3Rs Pilot Projects in Barangays 412 (3Ws) Recycling Center and 830 (TEZWA) Community Junkshop, City of Manila

Plastic 3Rs Livelihood: City/Community-led Pilot Projects/Initiatives

DAVAO CITY



Bantay Dagat-Davao's recycling of retrieved waste from coastal cleanups led by city

ORMOC CITY



SWABBI's recyclables collection, plastic shredding and glass crushing, Brgy. Ipil



MEPA's bricks/pavers production facility at Ormoc Eco-Center, Brgy. Green Valley



NAFIAS's eco-bag and refilling store, Brgy. Naungan

<https://www.facebook.com/HOCCIPProject/posts/pfbid02sQsQgJcJBjuWDZznaw79mPixnvJTRHw9TVvohrzX9edAPjexDR2kMmrmr4ZAcxEyl>

<https://www.facebook.com/media/set/?vanity=ELITEPhotoVideo&set=a.824038005766277>

Plastic 3Rs Livelihood: City/Community-led Pilot Projects/Initiatives

CAGAYAN DE ORO



Improved materials recovery facility, plastic densification, and 3Rs training center with MRF Cooperative of Cagayan de Oro City

<https://www.facebook.com/HOCCIPProject/posts/pfbid02FA9kGwxj5C33qP3jhbWBH6pRAjBtCuyb66dTr9wFGCbuX7DvrZMwD8sjw8Z52if>

CALAPAN CITY



CCAPI's baling, recycling and buri bag making enterprises

<https://www.facebook.com/HOCCIPProject/posts/pfbid0irR231W6xkTPuBAiZH6AKRKVxptw1rJ83gduQ22Yq7XM4WGcoSa1J3WeLcgVvQyml>

Involvement of Youth and Young Innovators thru HACKATHON

UN HABITAT FOR A BETTER URBAN FUTURE | From the People of Japan | HEALTHY OCEANS AND CLEAN CITIES INITIATIVE | powered by: redwizdard EVENTS TECHNOLOGY

SPONSORED BY: **aboitiz Construction** | **UnionBank**

HEALTHY OCEANS AND CLEAN CITIES INITIATIVE brings you

PLASTIC (3R) HACKS PH

Hacking reuse, reduce, recycle (3Rs) solutions to marine plastic pollution

Solid Waste Management

Incentivizing 3Rs

Data Management

Informing Policy

Finance

Awareness Raising

REGISTER NOW
facebook.com/Plastic3RHacksph

PRIZE : P50,000 CASH PLUS other opportunities

DEMO DAY : JUNE 8, 2021

CITY PARTNERS :

UN HABITAT FOR A BETTER URBAN FUTURE | From the People of Japan | HEALTHY OCEANS AND CLEAN CITIES INITIATIVE | powered by: redwizdard EVENTS TECHNOLOGY

SPONSORED BY: **aboitiz Construction** | **UnionBank**

HEALTHY OCEANS AND CLEAN CITIES INITIATIVE

LIST OF TEAMS FOR PRELIMINARY ROUND (in alphabetical order)

AgSmarter	Pantry Partners
BioTics	Plastic Pollution Patrol (3P's)
BotCan	Plastics by Manila Automat
CircA	SL Devs
COCADUSIS	Team B.A. - Bachelors of Aquarius
El Academia	Team Maharlika
Journey Features	Team STP
JUAN BAG	Team Volde
Meraki	Tinkerhub

PLASTIC (3R) HACKS PH

Perfect pest vs no_pest classification

Team	Manual count of pests	description	percent no_pest	percent pests	Classification
team1	3	green apricot on leaf	0	0	1 pest
team2	7	black apricot on leaf	0	0	1 pest
team3	17	black apricot on leaf	0	0	0.97 pest
team4	0	no pest found (green cherry)	1	0	0 no_pest
team5	0	no pest found	1	0	0 no_pest
team6	0	black apricot on leaf	0	0	1 pest
team7	0	no pest found	1	0	0 no_pest
team8	0	no pest found	1	0	0 no_pest
team9	0	no pest found	1	0	0 no_pest
team10	0	no pest found	1	0	0 no_pest

Chat messages:

- From Meraki_Benjie to Everyone: PlasticSnap is a subsystem of TrashCash. Thank you.
- From Redwizdard Team Coordinat... to Everyone: Team El Academia please be ready. Thanks.
- From El Academia (Sharr) to Everyone: Noted, thankyou.
- From Redwizdard Team Coordinat... to Everyone: Team STP your next, please be ready. Thank you.
- From Redwizdard Team Coordinat... to Everyone: Team COCADUSIS, your team announced.

Members:

- Awin Galano
- Anthony Mays
- Arjay Alvarez
- Francis Rodrige
- Juan Dela Cruz
- RED Wizard

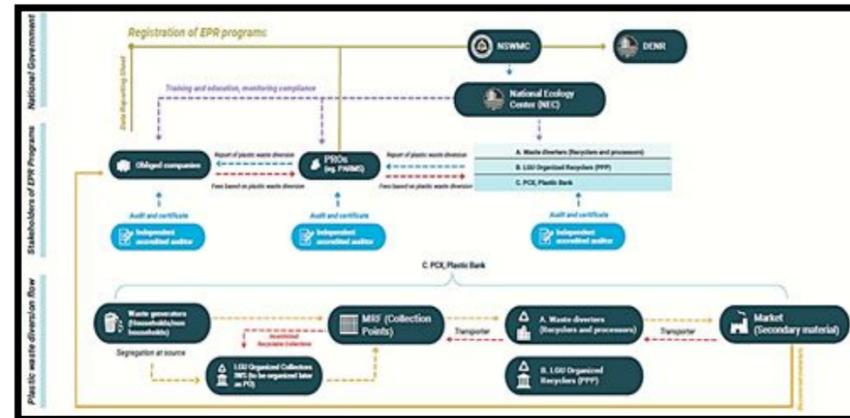
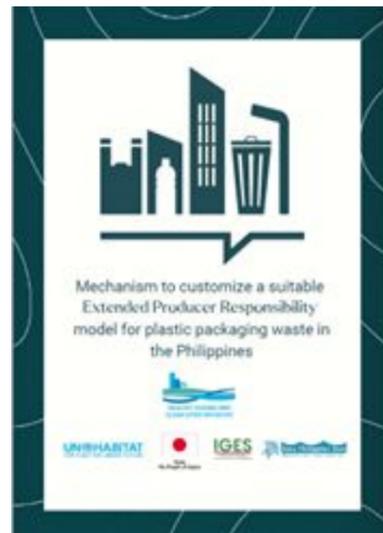
Video feeds: BotCan | Arjay Alvarez, aboitiz, Judge Antonio Penabaz

Plastic3RHacksPH

3 weeks of brainstorming and development, 230 registered participants, 20 cities and provinces, 18 group entries, 10 semi-finalists, 1st runner-up and grand champion

EPR customization to PH setting; Provision of Safeguards (Leaving no one and no place behind)

HOCCI Policy Paper: “Mechanism for a Suitable EPR Model for Plastic Packaging Waste in the Philippines”



CCC-DENR-Congress Knowledge Exchange on EPR, May 27, 2022



<https://www.facebook.com/HOCCIPProject/posts/pfbid02FA9kGwxj5C33qP3jhbWBH6pRAjBtCuyb66dTr9wFGCbUx7DvrZMWdD8sjw8Z52if>

<https://www.facebook.com/HOCCIPProject/posts/pfbid0irR231W6xkTPuBAiZH6AKRKVxptw1rJ83gduQ22Yq7XM4WgCoSa1J3WeLcgVvYqymI>

31 August 2022

Department of Environment and Natural Resources

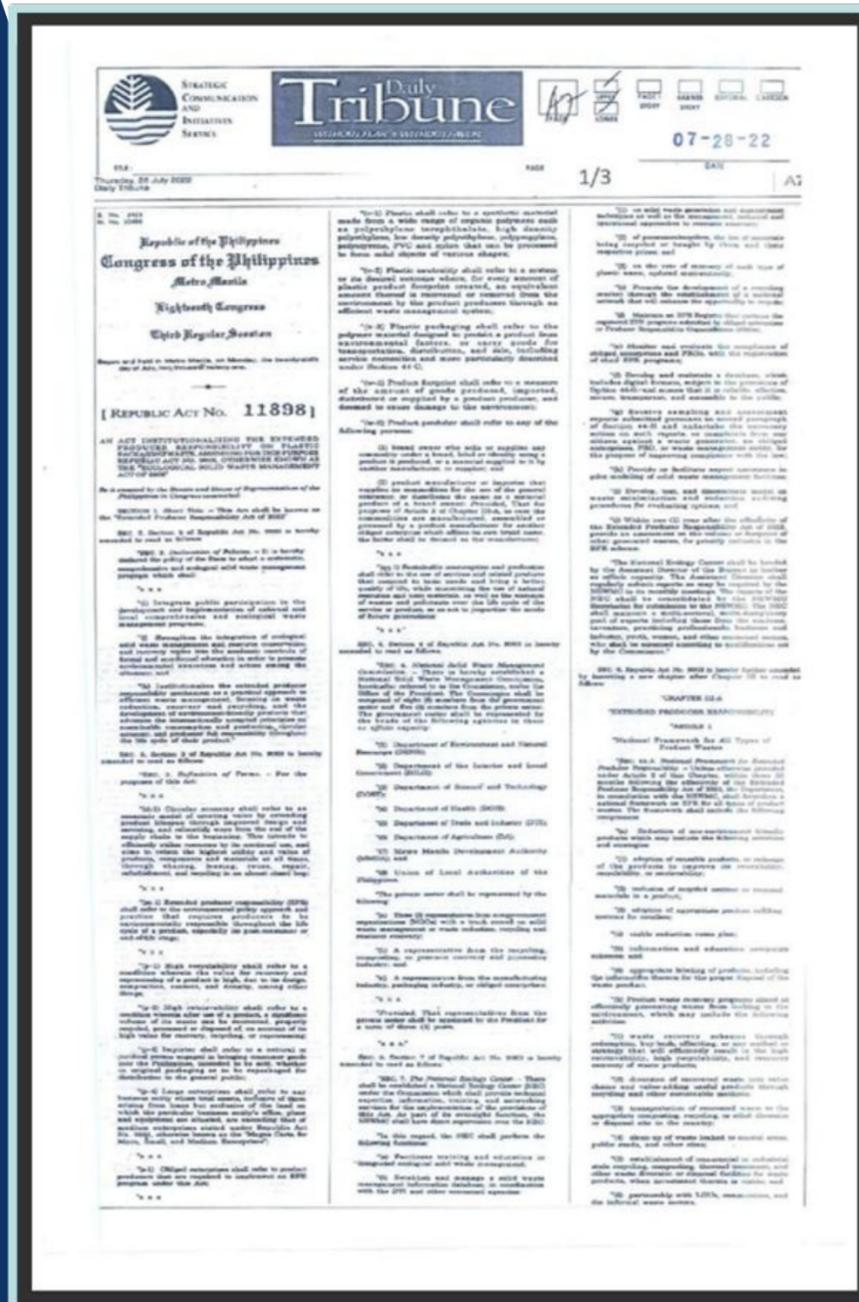
We are pleased to inform you that the Healthy Oceans and Clean Cities has finalized its policy/white paper entitled: **“Mechanism to customize a s Producer Responsibility model for plastic packaging waste in th** partnership with the Institute for Global Environmental Strategies.

This policy topic was one of the 4 priority areas endorsed by the HOCC Committee (PAC) during its meeting on March 2021. The other 3 are: “Co Change Strategies for Plastic Waste Reduction”, “Assessment of Plastic W Infrastructure Gap in the Philippines”, and the two-volume “Experience-ba Localization of the Philippines’ National Plan of Action on Marine Litter”

Takeaways and For Future Consideration

- Aligning with existing institutional structures and systems
 - DENR, DENR-chaired bodies on waste/SWM concerns
 - DTI, DTI-chaired bodies on trade, industry, product concerns ??
- Fiduciary and information safeguards
 - System should encourage competition and transparency (roles and powers should not be concentrated on one entity)
 - Clear lines on registration/reporting and monitoring/audits, as well as the waste/material and monetary/financial flows
- Equitable access and opportunities (akin to “priority dispatch” of RE)
 - **“Leaving no place behind”**: Incentivizing obliged companies that reach out to support LGUs/recyclers in far-flung areas that have no current access to recyclables collection and trade)
 - **“Leaving no one behind”**: Levelling the playing field for vulnerable groups to access/participate in the EPR scheme

RA 11898: Extended Producer Responsibility Act of 2022



Republic of the Philippines
 Department of Environment and Natural Resources
 Visayas Avenue, Diliman, Quezon City
 Tel Nos. 929-6626 to 29; 929-6633 to 35
 Website: <http://www.denr.gov.ph> / E-mail: web@denr.gov.ph
 OUPPIA Tel. No. 928-1186 and 928-1195 email address: ouppia.denr@gmail.com
 Voice-Over-Internet-Protocol (VOIP) Trunkline (632)7553330 local 1068

JAN 24 2023

DENR ADMINISTRATIVE ORDER
 NO. 2023 - 02

SUBJECT: IMPLEMENTING RULES AND REGULATIONS OF REPUBLIC ACT NO. 11898

Pursuant to Section 11 of Republic Act No. 11898, otherwise known as "An Act Institutionalizing The Extended Producer Responsibility On Plastic Packaging Waste", amending for this purpose Republic Act No. 9003, otherwise known as the "Ecological Solid Waste Management Act of 2000", also known by its short titles as the "Extended Producer Responsibility Act of 2022" or as "EPR Act of 2022", and by virtue of Executive Order No. 192, Series of 1987, the Department of Environment and Natural Resources hereby adopts and promulgates the following rules and regulations.

PART I: GENERAL PROVISIONS

SECTION 1. Title. These Rules shall be known and cited as the Implementing Rules and Regulations of the EPR Act of 2022 (hereto attached as "Annex A"), or hereinafter referred to as "EPR IRR", for brevity

SECTION 2. Purpose. These Rules are promulgated to revise, where applicable, DENR Administrative Order No. 2001-34, Series of 2001, otherwise known as the "Implementing Rules and Regulations of Republic Act No. 9003" or "RA 9003 IRR" and to incorporate and prescribe therein the procedures and guidelines for the implementation of the EPR Act of 2022 in order to facilitate compliance therewith and achieve the objectives thereof.

SECTION 3. Scope. The EPR IRR shall lay down the powers and functions of the Department of Environment and Natural Resources, the Department of Trade and Industry, all other concerned agencies and local government units, the rights and obligations of stakeholders and the rights and duties of the people with respect to the implementation of the EPR Act of 2022.

SECTION 4. Construction. The EPR IRR shall be liberally construed to carry out the national policy of adopting a systematic, comprehensive, and ecological solid waste management program, institutionalizing the extended producer responsibility mechanism as a practical approach to efficient waste management, in accordance with internationally accepted principles on sustainable consumption and production, circular economy, and producers' full responsibility throughout the life cycle of their product.

PART II. DECLARATION OF STATE POLICY

SECTION 5. Basic Policy. It is hereby declared the policy of the State to adopt a systematic, comprehensive, and ecological solid waste management program which shall:

- Amends RA 9003: spells out roles of obliged enterprises, alleviating burden for LGUs;
- Institutionalizes the EPR on plastic packaging waste;
- Focus on SCP/CE, recovery and recycling;
- Producers' full responsibility throughout the life cycle of their product, presenting partnership opportunities for LGUs/waste diverters.

What are the targets that OEs need to comply with?

Compliance Period for Plastic Packaging Recovery Programs

PERIOD ENDING

COMPLIANCE TARGET

December 31, **2023**

20%

December 31, **2024**

40%

December 31, **2025**

50%

December 31, **2026**

60%

December 31, **2027**

70%

December 31, **2028,**
and every year
thereafter

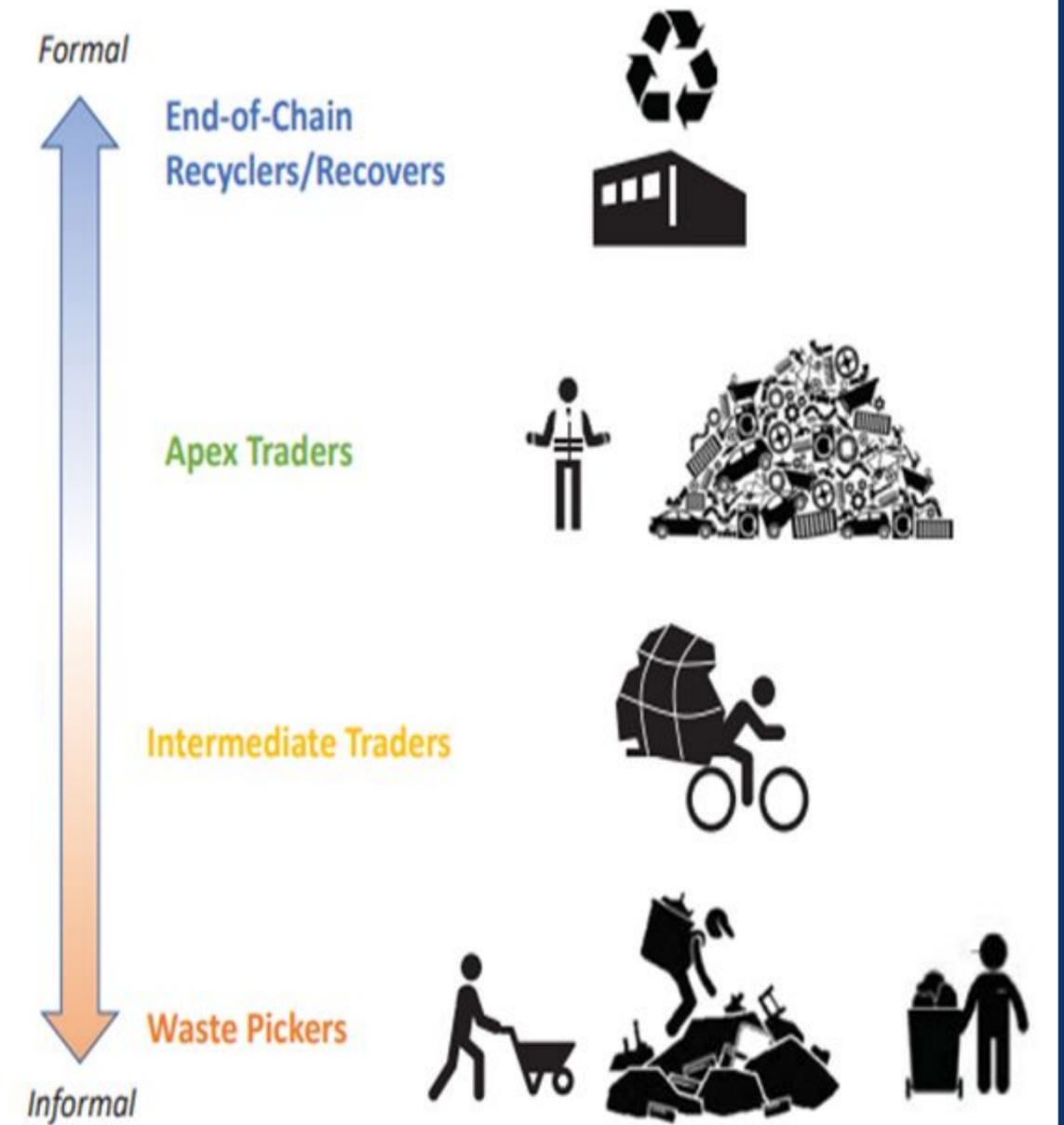
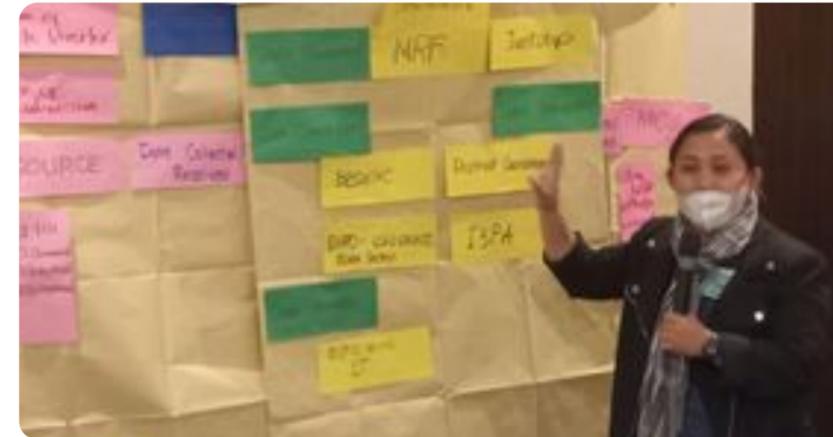
80%



Waste Diversion Data Management for Local EPR Readiness Workshop, Nov 16-17, 2022



Waste Diversion Data Management for Local EPR Readiness Workshop, Nov 16-17, 2022



Goals of EPR readiness of LGUs/waste diverters



- Make **plastic waste diversion data management system** robust and auditable.
 - Amount in weight (tons) and/or volume (cubic meters)
 - At minimum (Rigids vs Flexibles); Ideally but a long shot (by plastic polymer type)
 - Track/record waste diversion flow until end-destination
- Support/encourage more **activities** or **enterprises** that reduce, reuse and/or recycle plastic waste
- Cluster local waste diverters to enhance economies of scale
- Establish and **consolidate** materials/data **flows**; Explore **digitization**
- Issue the **Sworn** Plastic Waste Diversion Certificate **in the name of the** (partner)
OE, Collective, or PRO

Innovations in DIGITALIZATION as applied to WASTE DIVERSION and EPR Readiness

Internet of Things (IoT) Conference, June 26, 2023

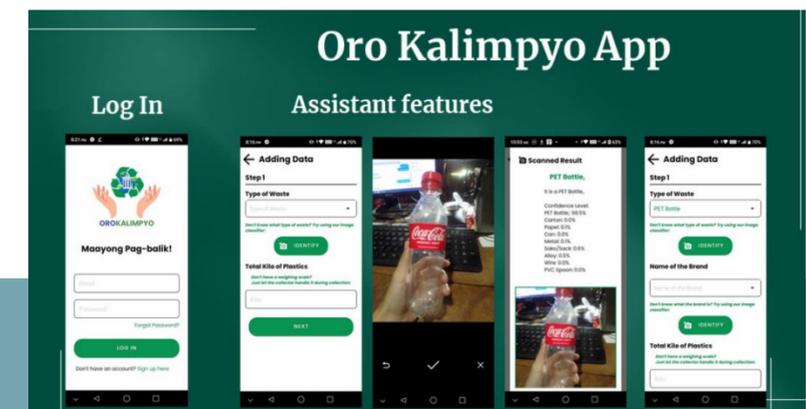
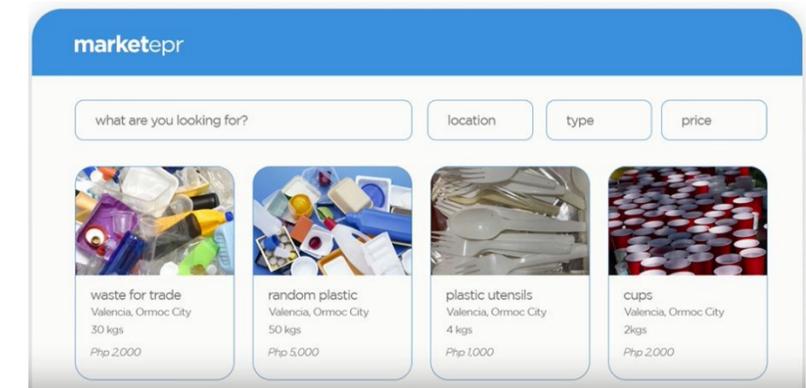
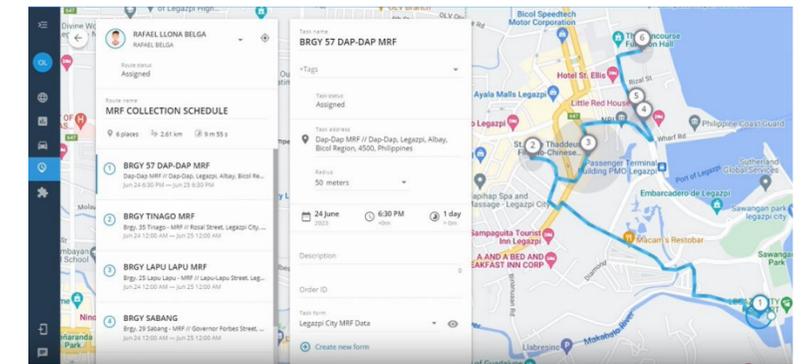


<https://unhabitat.org.ph/events/hocci-cities-iot-conference/?fbclid=IwAR2dqBJ7lXxJ1ZVmOI7tjSTRf6ffxcfDZv67hVZx-6bMZUftGBjYJtn9wyo>

EPR Readiness and Digitalization Thematic Session during HOCCI Culminating Event, Sep 15, 2023

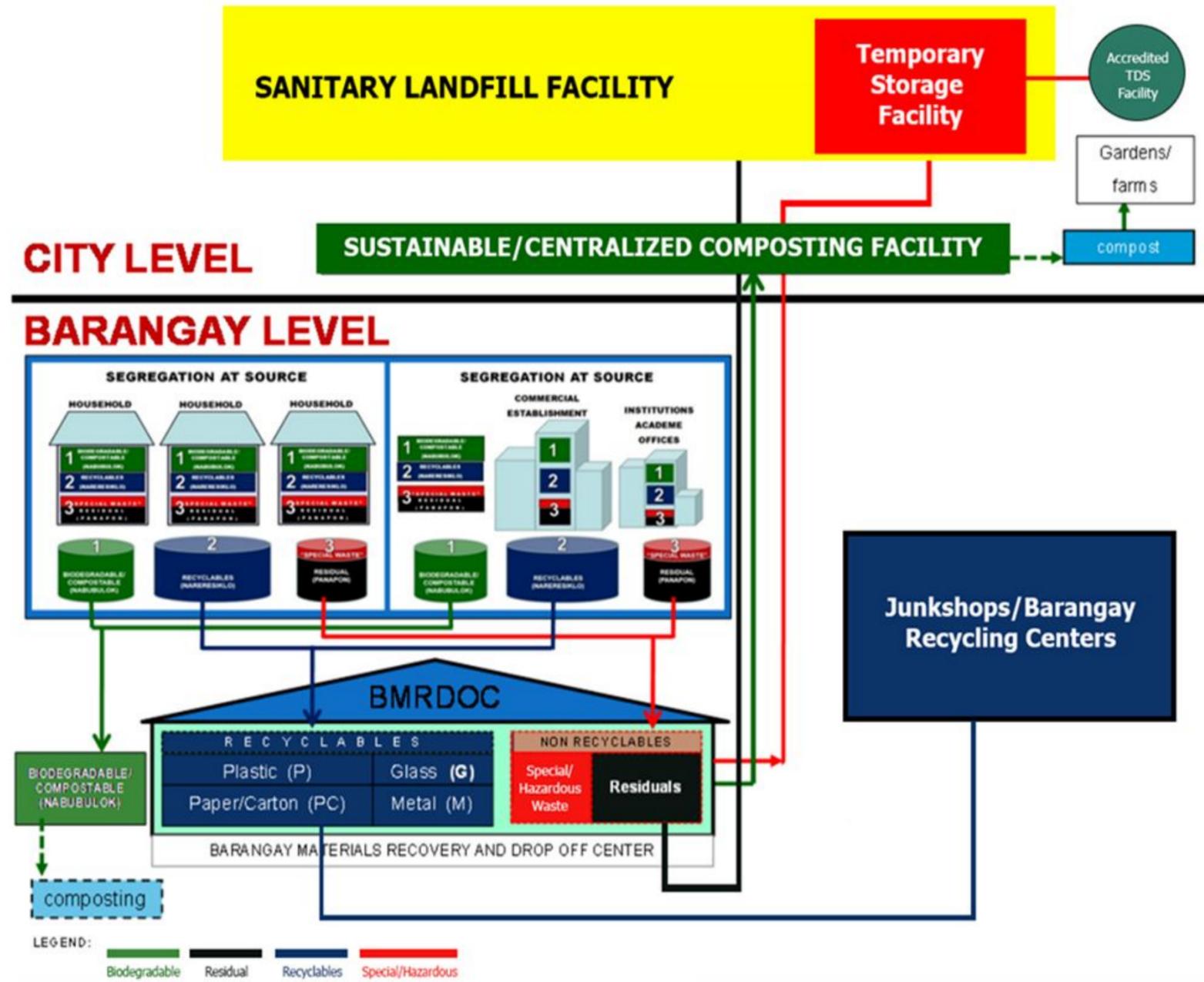


<https://www.facebook.com/HOCCIProject/posts/pfbid0uGgNKC8Ki4PbjGVNqbxL9VPU8qWa1mdvy5yjCuuXynrckuwtduJ5nxXLXD8ed9UyI>

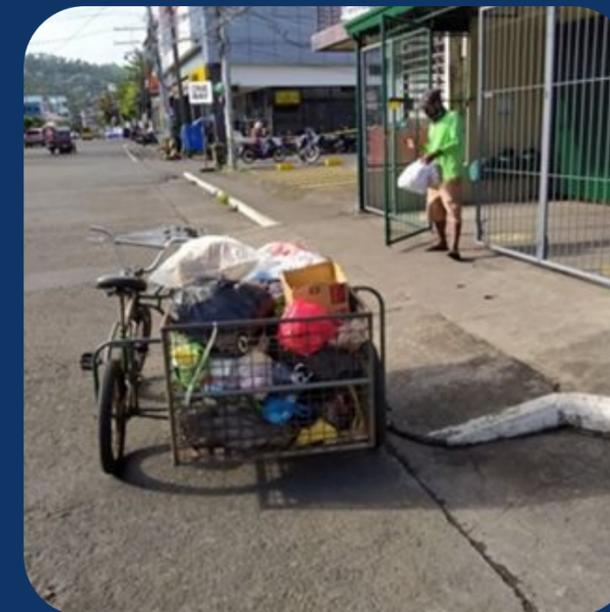


Case Study: Legazpi City's MSW Collection Optimization and EPR-ready diversion tracking

City Ecological Solid Waste Management Framework



Barangay and City Level Waste Collection



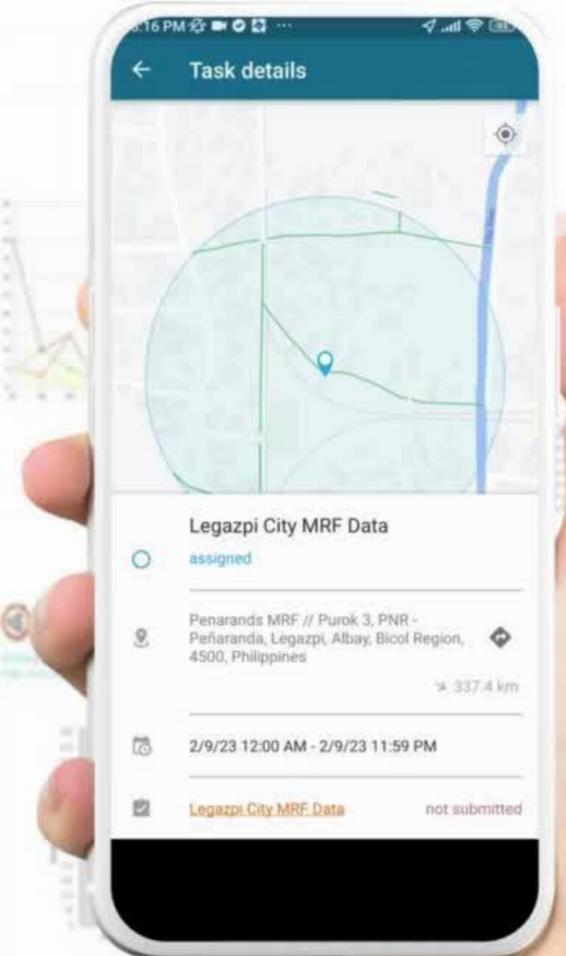
Case Study: Legazpi City's MSW Collection Optimization and EPR-ready diversion tracking

SWMS Web Dashboard Features



Mobile Application Features

-  MSW Data Management
-  MRF Monitoring
-  SOS Button
-  Staff Tracking

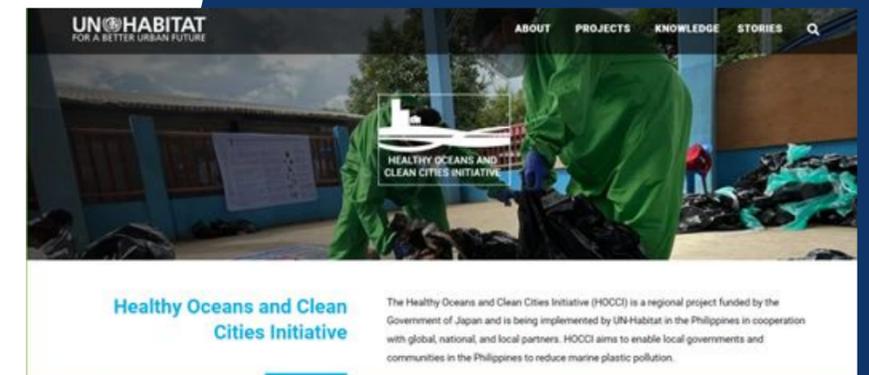


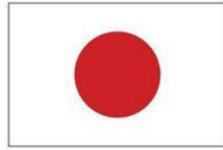
The mobile application interface displays 'Task details' for a specific MRF. The details include the status 'assigned', the location 'Penarands MRF // Purok 3, PNR - Peñaranda, Legazpi, Albay, Bicol Region, 4500, Philippines', a distance of 337.4 km, and a time range of 2/9/23 12:00 AM - 2/9/23 11:59 PM. The data is categorized as 'Legazpi City MRF Data' and is marked as 'not submitted'.

HOCCI Lessons Learned Conference, Sep 15, 2023



Sharing at various national and international conferences





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THANK YOU



Visit Our Website:

For more information, visit: www.unhabitat.org.ph

#HealthyOceansCleanCities #MarinePlasticLitter #EmbassyofJapan