

CIRCULAR ECONOMY & WASTE MANAGEMENT



Presented by: **Comm. Crispian N. Lao**

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Founding President, PARMS (Philippine Alliance for Recycling and Materials Sustainability)



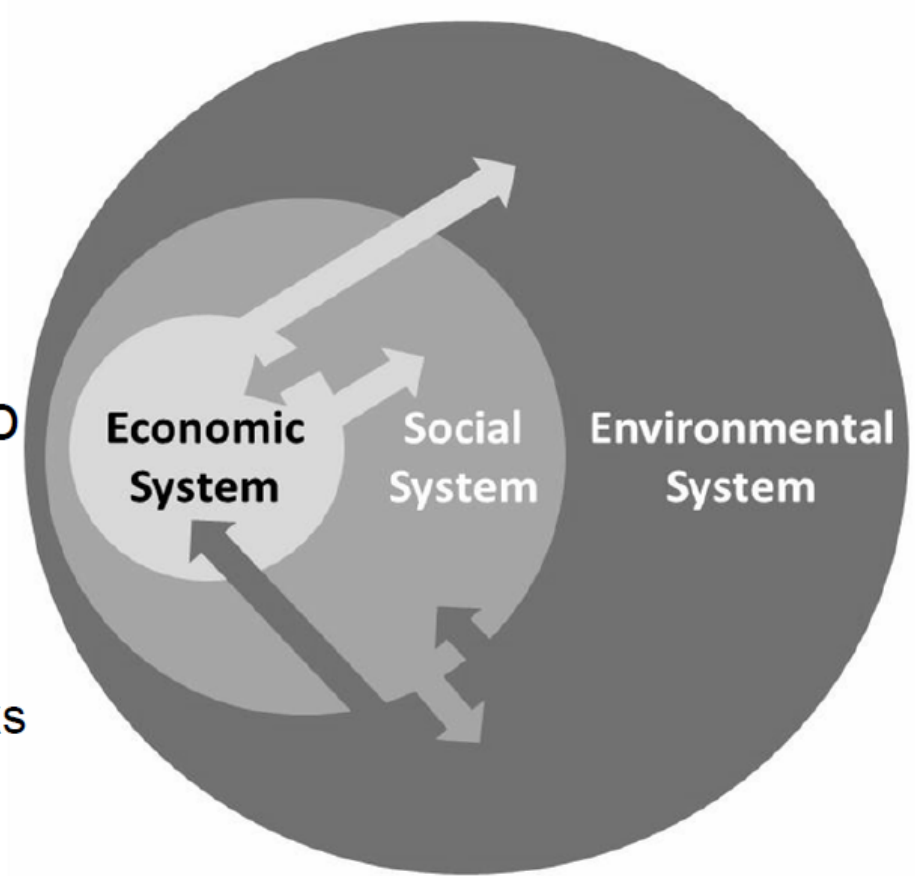
Circular Economy

Circular economy definition

economic system that uses a systemic approach to maintain a circular flow of **resources**, by recovering, retaining or adding to their **value**, while contributing to **sustainable development**.

Note 1 to entry: Resources can be considered concerning both stocks and flows.

Note 2 to entry: The inflow of virgin resources is kept as low as possible, and the circular flow of resources is kept as closed as possible to minimize waste, losses and release from the economic system



ISO 59000 family of standards

ISO 59 004 – Circular Economy – Vocabulary, principles and guidance for implementation

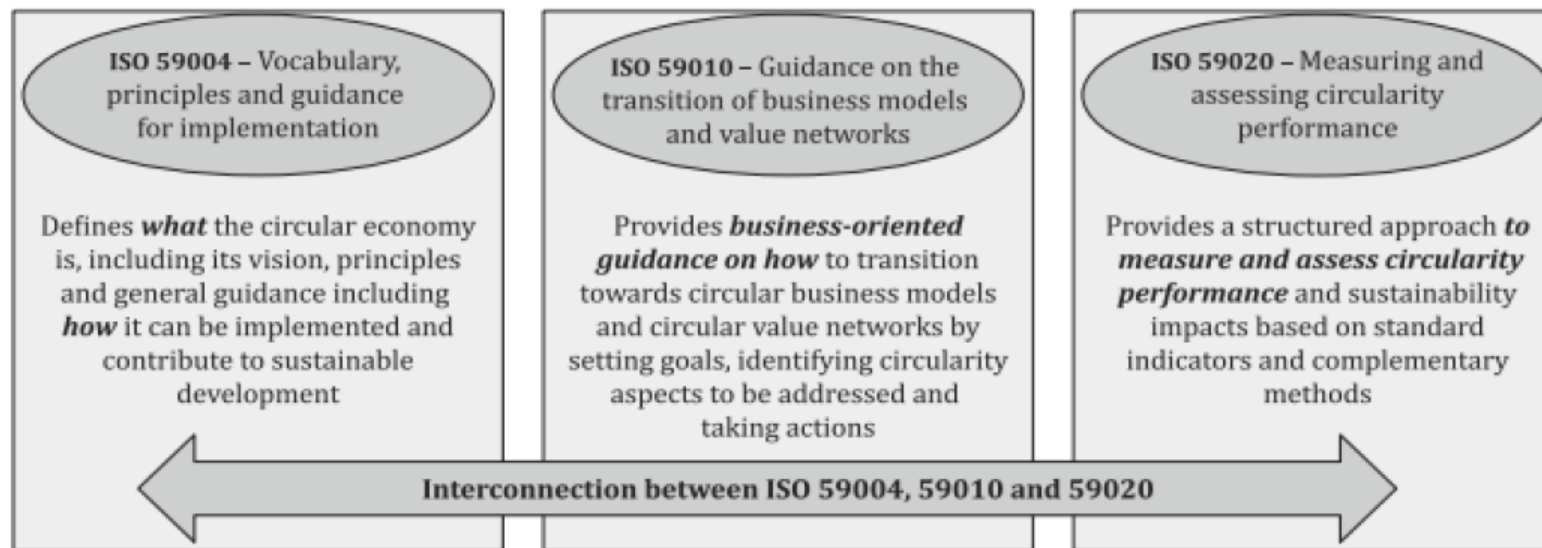
ISO 59 010
Circular Economy –
 Guidance on the transition of
 business models and value
 networks

ISO 59 020
Circular Economy –
 Measuring and assessing
 circularity performance

ISO 59 040
Circular Economy – Product
 Circularity Data Sheet

ISO 59 014
Environmental management and
circular economy – Sustainability
 and traceability of secondary
 materials recovery – Principles and
 requirements

ISO TR 59 031 – Circular Economy – Performance based approaches
ISO TR 59 032 – Circular Economy – Review of business model implementation



Circular Economy Principles

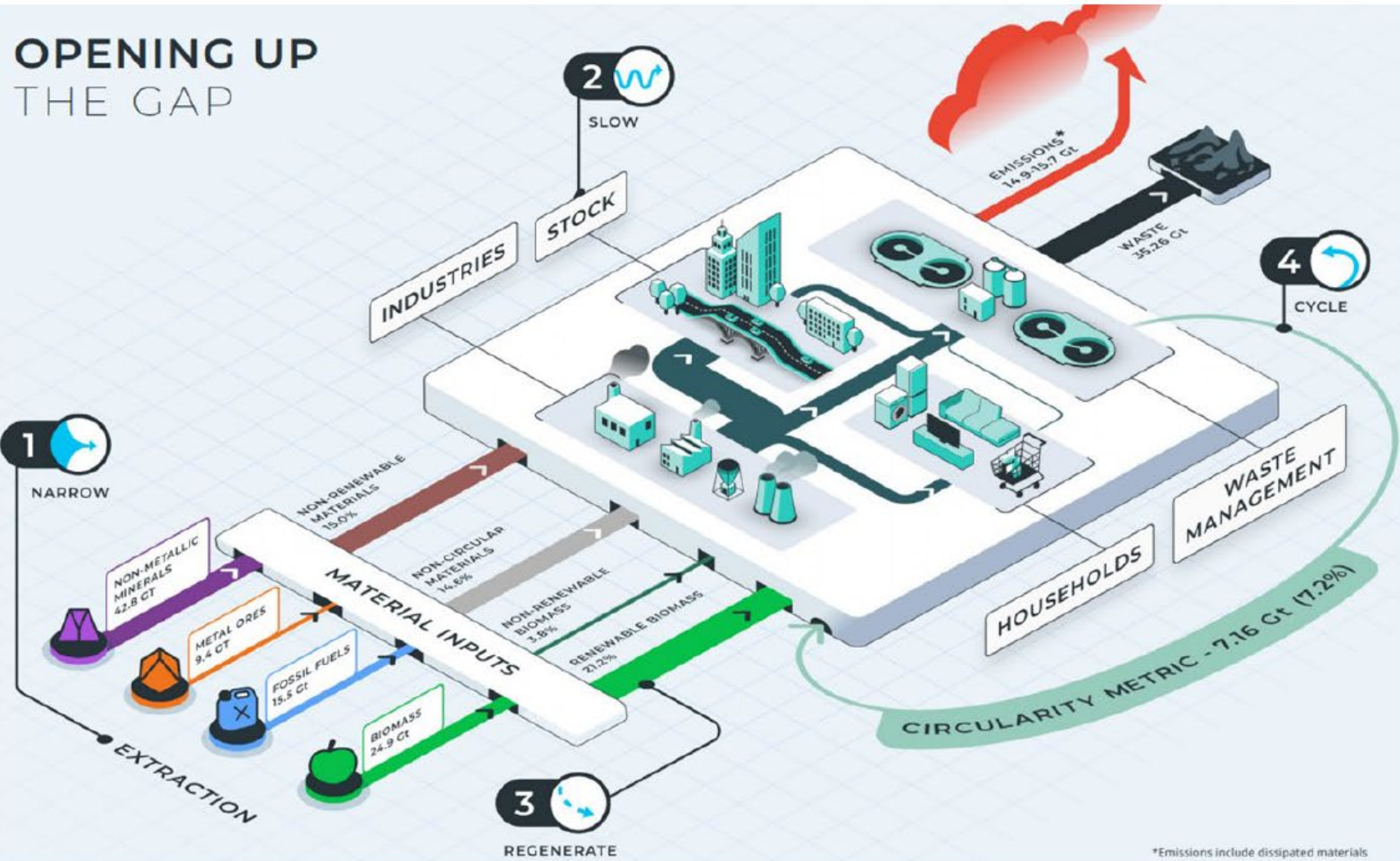
To make the transition to a circular economy, its international definition by ISO 59004 is accompanied by **principles** and **actions**.

6 principles that are interlinked and complementary

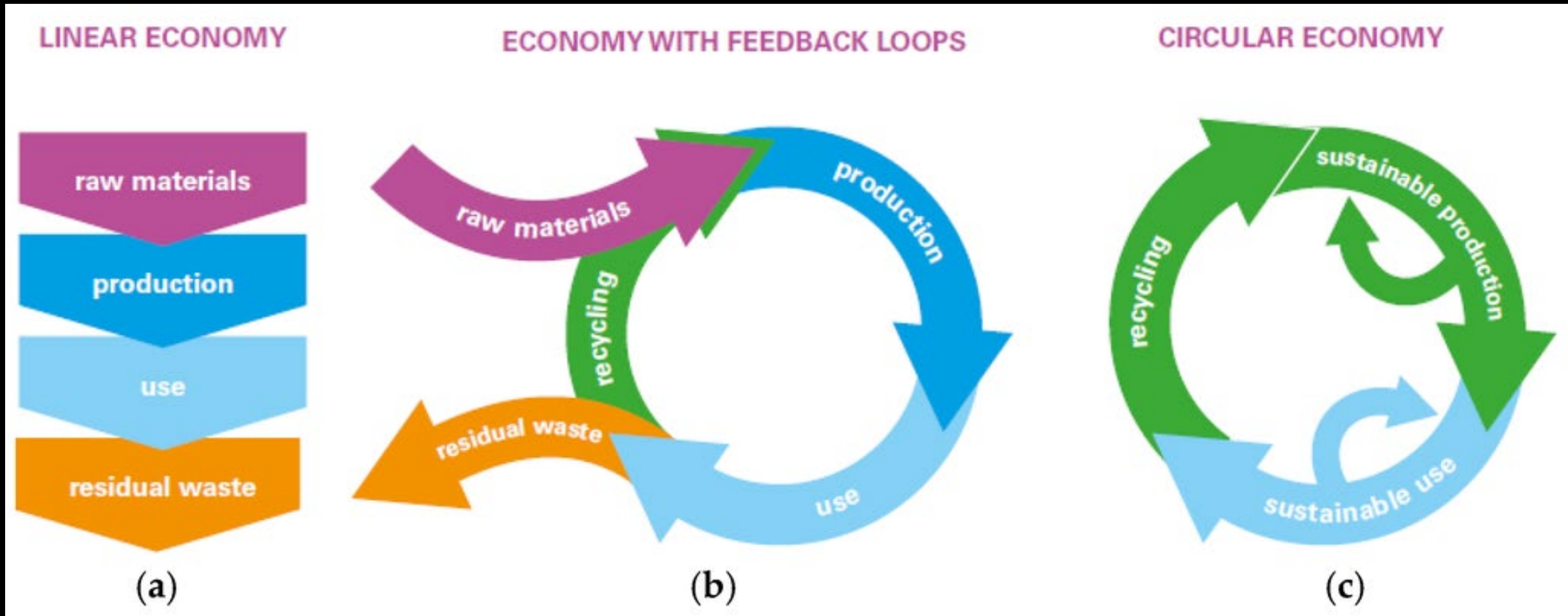
Systems thinking	Adopting a long term approach ...
Value creation	...to better use resources in an efficient way.
Value sharing	Collaborating along value chain and value networks...
Resource stewardship	...by closing, slowing and narrowing resources flows.
Resource traceability	Be accountable for sharing information with interested parties...
Ecosystem resilience	...and contribute to the regeneration of ecosystems and biodiversity.

Discussion

OPENING UP THE GAP



Applying the Circular Economy Principles and considerations, what are the areas where we can address?



- recycling and energy-recovery are at the heart of a recycling-based economy
- a circular economy clearly entails more and comprises more levels



Circular Economy System Diagram

OUTLINE OF A CIRCULAR ECONOMY

PRINCIPLE

1

Preserve and enhance natural capital by controlling finite stocks and balancing renewable resource flows
ReSOLVE levers: regenerate, virtualise, exchange

Biological Materials

Technical Materials



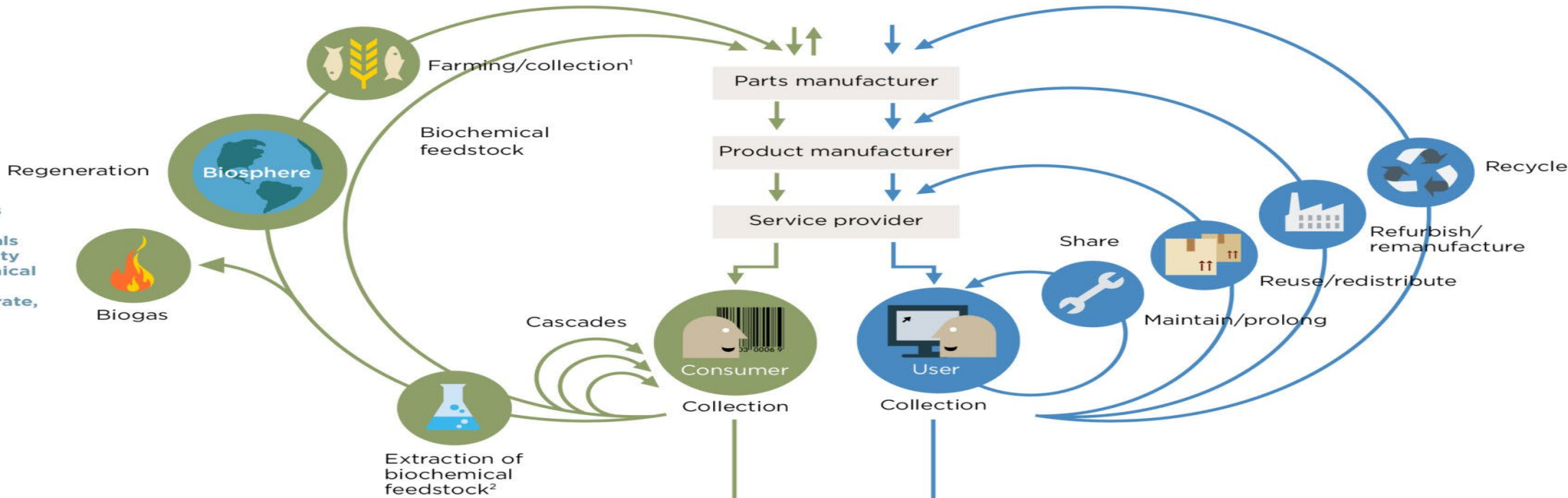
Renewables flow management

Stock management

PRINCIPLE

2

Optimise resource yields by circulating products, components and materials in use at the highest utility at all times in both technical and biological cycles
ReSOLVE levers: regenerate, share, optimise, loop



PRINCIPLE

3

Foster system effectiveness by revealing and designing out negative externalities
All ReSOLVE levers

Minimise systematic leakage and negative externalities

1. Hunting and fishing
2. Can take both post-harvest and post-consumer waste as an input

Source: Ellen MacArthur Foundation, SUN, and McKinsey Center for Business and Environment; Drawing from Braungart & McDonough, Cradle to Cradle (C2C).

“Circular Economy concept can allow for sustainable growth under resource and emissions constraints. Life Cycle Thinking provides a conceptual framework for its implementation.”

Raymond R. Tan, Ph.D. Life Cycle Thinking a Conceptual Framework for the Circular Economy

CIRCULAR ECONOMY & RECYCLING



EU Circular Economy Industry Platform

The platform is a web tool managed by BusinessEurope and its national members that contributes to the EU's agenda on circular economy.

- To showcase what each EU company is already doing on circular economy.
- To raise concerns on barriers and obstacles.
- To make industry voice heard on upcoming EU policy initiatives.
- To develop the network.
- To access the EU / Brussels debate on circular economy.





A COLLABORATION OF STAKEHOLDERS ACROSS THE SUPPLY AND WASTE VALUE CHAIN IN PARTNERSHIP WITH GOVERNMENT

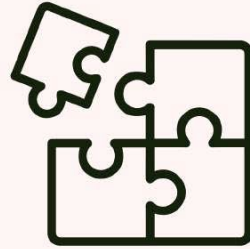
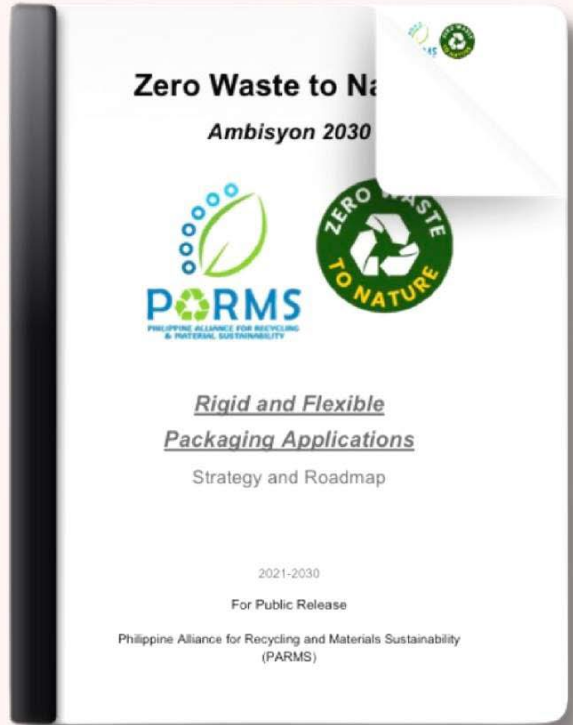
VISION:

Zero Waste to Nature by 2030

MISSION:

Develop and Implement a holistic and comprehensive program to increase resource recovery and reduce landfill dependence towards zero waste.





Strategy

Build a strategy for ZWTN

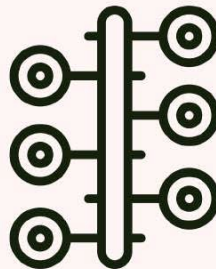
A combination of solutions (i.e. recycling, shift of materials, etc.) that collectively will ensure 100% diversion of post-consumer wastes



Enabling Policies

Define enabling policies

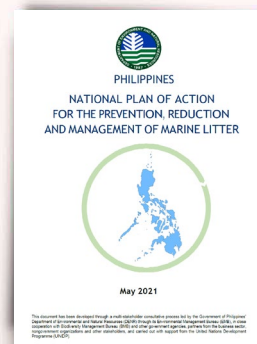
Targeted policies that will increase viability of identified solutions and enable effective implementation at scale



Glidepath

Define glidepath and key milestones

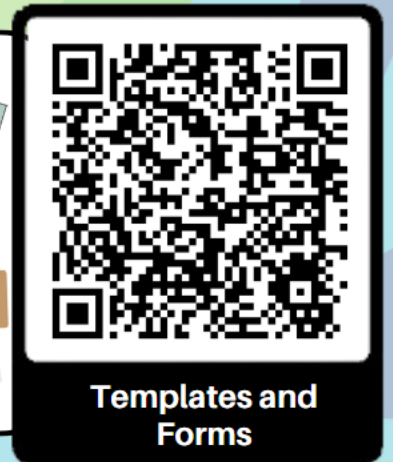
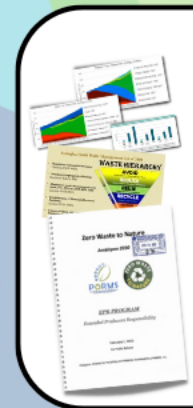
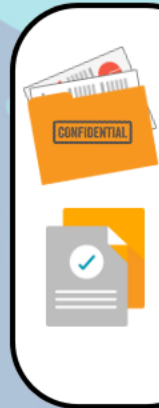
Reasonably ambitious trajectory of diversion rates in the coming years to meet 2030 target





OFFICIAL PARMS PUBLIC FOLDER

A public folder is available to download/view the PARMS EPR Program, Reportorial Requirements, Templates and Forms for everyone's convenience.



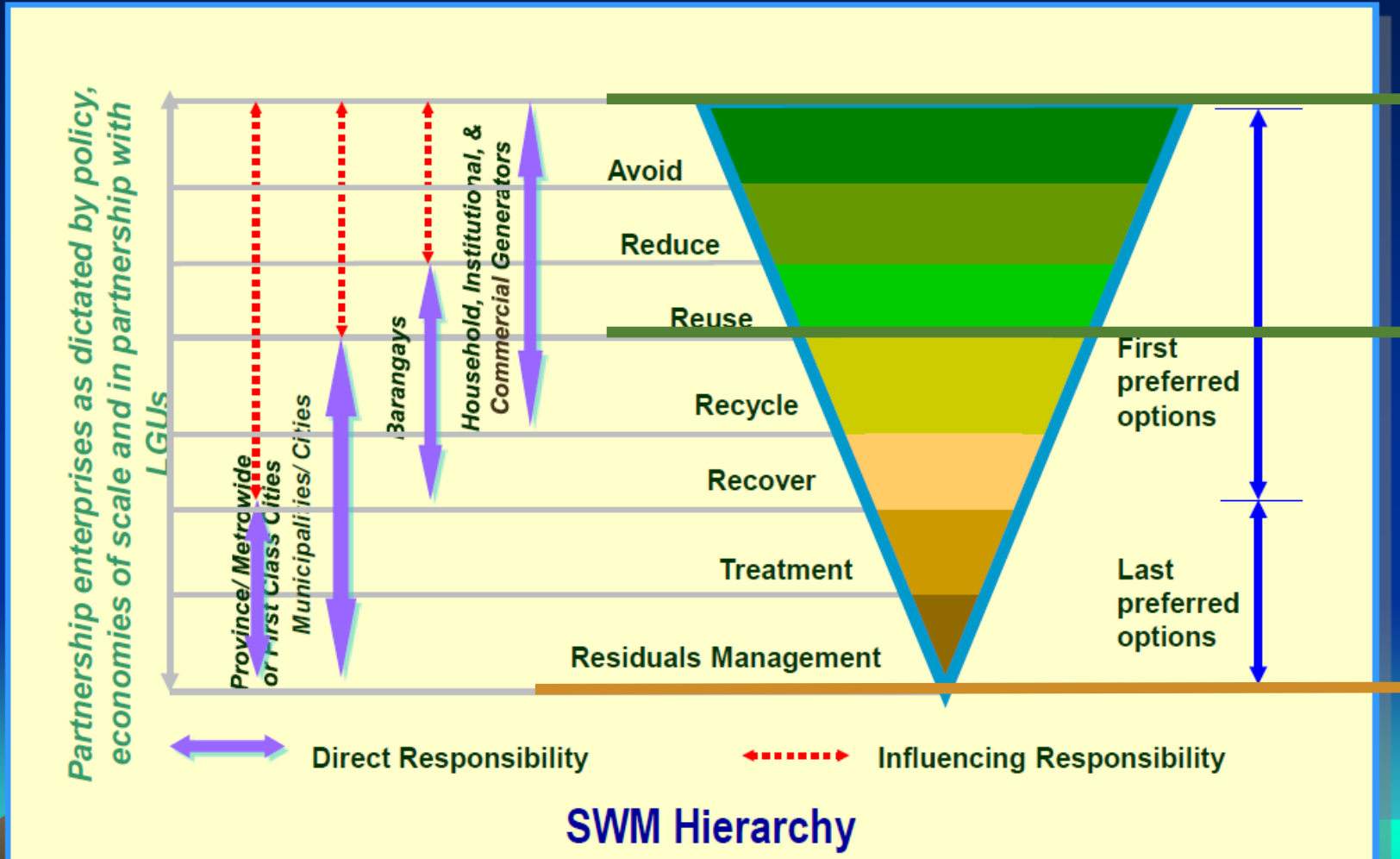
For more information visit our website at www.parms.com.ph

Figure 7. Solid Waste Management Hierarchy

Source: NATIONAL SOLID WASTE MANAGEMENT STRATEGY 2012 – 2016

RA 9003 IRR

NSWM Framework



RA 11898



Reduction of non-environment friendly packaging products



Recovery programs aimed at effectively preventing waste from leaking to the environment



ECAR REPORT



Covered by SGV Audited PARMS ECAR REPORT of COMPLIANT Obligated Enterprises

<https://bit.ly/ECAR-OE-comp>

PRO Name: Philippine Alliance for Recycling and Materials Sustainability (PARMS), Inc.
 EPR Registration No: 2023-P-00001
 Reference Year: 2023

Summary of Accountable Plastic Footprint

	Rigid (kg)	Flexible (kg)
Total accountable plastic footprint	102,268,576.02 kgs	65,429,174.78 kgs

Summary of Accounted Plastic Waste Diverted

	Rigid (kg)	Flexible (kg)
Total accounted plastic waste diverted	25,918,567.39 kgs	28,579,493.26 kgs

Plastic Waste Diversion Accomplishment

	Rigid (kg)	Flexible (kg)
Plastic Footprint	102,268,576.02 kgs	65,429,174.78 kgs
Plastic Waste Diverted	25,918,567.39 kgs	28,579,493.26 kgs
Actual Accomplishment (in %)	25.34%	43.68%
Required Diversion (in %)	20%	20%

EPR Compliance Report Consolidated Audited

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SWORN STATEMENT

We, the undersigned, do hereby certify that the information provided to the Department of Environment and Natural Resources (DENR), Environmental Management Bureau (EMB) pertaining to the EPR Compliance Report above are true and correct to the best of our personal knowledge, and based on the records in our possession. Hence we shall take full responsibility in complying with all the conditions and restrictions contained in the EPR Compliance Report

Crispian Lao
Founding President

Zedrik Avecilla
EPR Program Director

Scan QR code to view ECAR Report of Compliant OEs

<https://bit.ly/ECAR-OE-comp>

REPUBLIC OF THE PHILIPPINES)
 NATIONAL CAPITAL REGION)
 CITY OF MALABON)

SUBSCRIBED and sworn to before me, in Quezon City this 25th day of June, personally appeared with Driver's License id no. N0197217621

IN WITNESS WHEREOF, I have hereunto set my hand and official seal, the day, year, and place above written.

Doc. No. 199
 Page No. 100
 Book of - Y
 Series of 20 24

ATTY. ROSALINDA ROSARIO M. MENDOZA
 Notary Public
 My Commission Expires on 31, 2025
 IBP No. 140672024225
 PTA No. 555538 01/05/2024-QC
 IBP OR No. 397268 01/05/2024-QC
 ROLL No. 68465
 MCE Compliance No. VII-0021672 Valid Until April 14, 2025

ECAR Report for ECAR 2024



Footprint Year *

2022

Recovery Year *

2023

Obligated Enterprises

Total Rigid Waste Diversion

Reuse or Repurpose

13,040.00 kgs

Collection

318,686.02 kgs

Mechanical Recycling

19,302,497.54 kgs



Alternative Recycling

2,369,292.70 kgs



Co-processing

3,915,051.13 kgs

Waste-to-Fuel

0.00 kgs

Waste-to-Energy

0.00 kgs

Disposal (Sanitary Landfill)

0.00 kgs

Total Rigid Diversion

25,918,567.39 kgs

ECAR Report for ECAR 2024



Footprint Year *

2022

Recovery Year *

2023

Obligated Enterprises

Total Flexible Waste Diversion

Reuse or Repurpose

21,650.00 kgs

Collection

392,805.75 kgs

Mechanical Recycling

392,249.86 kgs



Alternative Recycling

501,510.96 kgs



Co-processing

26,673,517.69 kgs



Waste-to-Fuel

0.00 kgs

Waste-to-Energy

0.00 kgs

Disposal (Sanitary Landfill)

597,759.00 kgs

Total Flexible Diversion

28,579,493.26 kgs



Crispian Lao

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PARMS Founding President
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Together we will make a difference



The significant problems we have cannot be solved at the same level of thinking with which we created them.

Albert Einstein

