The Contribution of Private Sector in Community and success cases sharing

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25 April 2024
Founded in 1897 by a chemist and innovator, Herbert Henry Dow.

Dow is the world’s leading material sciences company with a purpose to use our expertise in collaboration with our partners to help deliver a sustainable future.

Our ambition to be the most innovative, customer-centric, inclusive and sustainable materials science company.

Dow’s portfolio delivers a broad range of differentiated science-based solutions for high-growth markets.

- **2022 NET SALES**: $57B
- **INNOVATION CENTERS**: 12
  - In 10 countries on 4 continents
- **MANUFACTURING SITES**: >100 sites
  - In > 30 countries
- **GLOBAL REACH**: >150 countries

Infrastructure  Packaging  Mobility  Consumer Care  Industrial Solutions
Global Scale, Local Reach and Collaborative Innovation

104 manufacturing sites in 31 countries
12 Innovation Centers in 10 countries on 4 continents

U.S. & Canada
34 manufacturing sites in 2 countries

Latin America
15 manufacturing sites in 4 countries

Europe, Middle East, Africa & India
37 manufacturing sites in 15 countries

Asia Pacific
18 manufacturing sites in 10 countries
Dow started its business in Thailand in 1967, then expanded through a joint venture with SCG Chemicals in 1987.

Today, Thailand is the largest manufacturing hub of Dow in Asia Pacific, with 13 plants in 3 industrial estates in Rayong province, namely

- Map Ta Phut Industrial Estate
- Asia Industrial Estate
- WHA Eastern Industrial Estate (Map Ta Phut).
Dow’s Sustainability Journey: Increasing Value Over Time

Footprint
Reducing costs, waste and risk

Handprint
Redesigning products and processes for customers

Blueprint Thinking
Rethinking business models and collaborating to grow impact

2005
EH&S Goals

2015
Sustainability Goals

2025
Sustainability Goals

2030
and Beyond

Climate Protection, Circular Economy and Safer Materials
Increasing our commitments to achieve zero-carbon emissions and advance circularity while helping meet rising demand for safer and more sustainably produced materials for our customers and society
Industry Leader in Environmental Sustainability

PROTECT THE CLIMATE
By 2030, Dow will reduce its net annual carbon emissions by 5 million metric tons vs. its 2020 baseline (15% reduction). By 2050, Dow aspires to be carbon neutral (Scope 1 + 2 + 3 plus product benefits).

Clear path to reduce carbon emissions 30% by 2030, from 2005 levels

Advanced plans to build the world’s first net-zero carbon emissions, integrated ethylene cracker and derivatives site in Fort Saskatchewan, Alberta

Announced a project with X-energy to install advanced nuclear technology at our Seadrift, Texas, site to provide safe, reliable low-carbon power and steam

Developed Scope 1 and 2 carbon emissions reduction plans for Dow’s 25 highest-emitting sites

TRANSFORM THE WASTE
By 2030, Dow will transform plastic waste and other forms of alternative feedstock to commercialize 3 million metric tons of circular and renewable solutions annually.

We are collaborating to invest in key technologies and infrastructure to significantly increase global recycling

>80% of Dow products sold into packaging applications are reusable or recyclable

Close the loop by enabling 100% of Dow products sold into packaging applications to be reusable or recyclable.

CLOSE THE LOOP

Post-consumer recycled resins: REVOLOOP™ sales and supply partnerships in every geography

Developing advanced recycling feedstocks

Introduced one of first bio-based, high-performance polyolefin elastomers
Banchang Material Recovery Facility (MRF)

- Co-funding between government and private sector
- 1st Plastic Circularity Community Enterprise in Thailand
- Established through strong commitment with the effective collaborative partnership
- Local and Affordable Technology and Innovation

- Waste management system
- Build the ecosystem for waste management system
- Eliminate the plastic waste leaked into the environment

- Bring extra income to the community
- Creating a job opportunity for community residences

- Build the awareness and knowledge
- Community engagement
- Develop to be Innovation Learning Center for recyclable materials

This MRF is located at Ban Chang Municipality, Ban Chang District, Rayong Province, the eastern part of Thailand.
Banchang Material Recovery Facility (MRF)

- Operated in Q4, 2023 onwards
- 4 jobs created
- 7 tons of recyclable materials collected
- 500 members
Banchang Material Recovery Facility (MRF) – Process Flow

<table>
<thead>
<tr>
<th>Action Area</th>
<th>Action Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Business</strong></td>
<td>- Recycling from Community members (Community members)</td>
</tr>
<tr>
<td><strong>Material Recovery Facility</strong></td>
<td>- Recycling from Collecting Hubs (Collecting Hubs)</td>
</tr>
<tr>
<td><strong>Organizations</strong></td>
<td>- Recycling from Organizations, Hotels, Shops, Schools, Temples (Organizations, Hotels, Shops, Schools, Temples)</td>
</tr>
</tbody>
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**Process Flow**

1. **Rigid Packaging**
   - PET (Polyethylene Terephthalate)
   - HDPE (High-Density Polyethylene)
   - PP (Polypropylene)
   - PE (Polyethylene)
   - Metal / Glass
   - Paper

2. **Flexible Packaging**
   - PET (Polyethylene Terephthalate)
   - PP (Polypropylene)
   - Metal / Glass
   - Paper

3. **Organic Waste**
   - Vegetables, Fruits, Food Scrap

**Results Products**

- Recyclable materials
- Upcycling products
- Organic Waste

**Final Result**

- Upcycling products
- Organic Waste
- Recyclable materials
Building Thailand Plastic Circularity Ecosystem

- Consumers: Waste Segregation
- Informal Sector: Registry & Capacity Building
- municipality/Landfills: Upgrade to MRF
- MR/AR/RDF: No plastics to landfills

- PCR Policy
- Eco-Design
- Household/building/mall/school, etc.
- Segregation
- Collection by local authority
- Management in households
- Recyclable
- Dry
- Wet

- Individual Waste Collector
- Junkshop
- Community MRF
- Government/private sector MRF

- Local Waste management center
- Mechanical Recycler
- Chemical Recycler
- Waste to Energy

- PCR Standard
- PCR Content Mandatory
- PCR Policy
- Standard

- TEi3R
- Building Thailand Plastic Circularity Ecosystem
SMART RECYCLING HUB: BUILDING PLASTIC CIRCULARITY ECOSYSTEM

Building Plastic Circularity Ecosystem
PPP Plastics Implementation Partners

Civil Society Organization
- TBCSD
- FTI
- RSIC
- TE

Private Sector
- Ajinomoto
- BASF
- Colgate-Palmolive
- GC
- SCGC

Government Organization
- Thailand Environment Institute
- Ministry of Planning and National Development
- Ministry of Science, Technology and Higher Education
- Ministry of Public Health

International Organization
- IUCN
- UNDP
- YUNUS Thailand
- TERRACYCLE

Educational Institution
- Thailand Open University
- Phra Prathom Chedi Rajabhat University

PPP Plastics
Network Partners

43 Organizations

General Business
Target: Bangkok and 3 EEC provinces to recover **high-quality plastic** feedstock of at least **50,000 tons/year by 2026**

- **Feasibility Study** (6 months in Nong Khaem, 12 months in other BMA and EEC)
- **Infrastructure development**
  - BMA Nong Kham ➔ 1 MRF Unit (40 tons/day)
  - Other BMA and EEC ➔ 5-10 units
Collaboration is the key for success