



## **Dow Packaging & Specialty Plastics (Asia Pacific)**

### **OCS Engagement**

*Implementing Efforts to Protect The Environment*

*27 September 2023*

**Seek Together™**

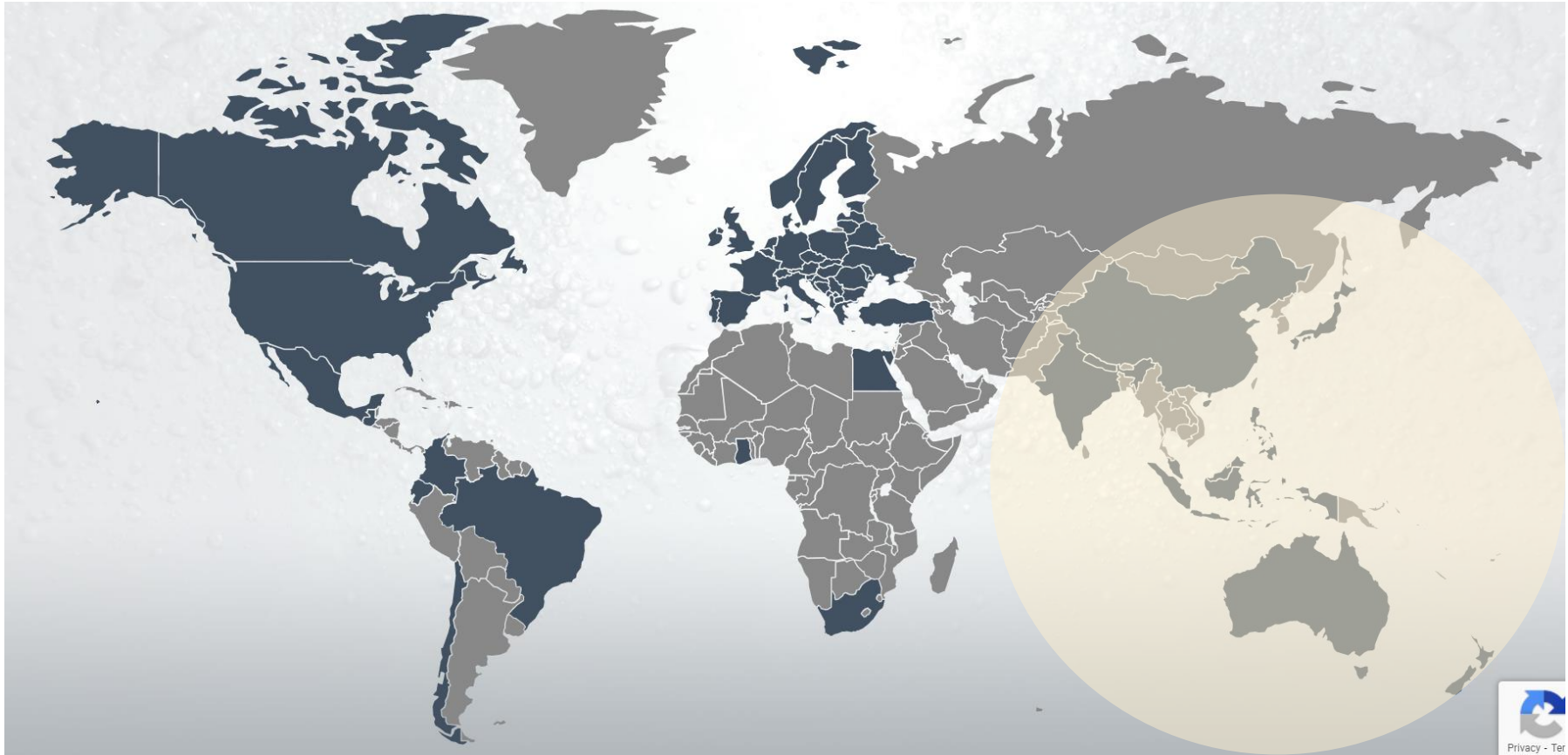
# WHAT IS OPERATION CLEAN SWEEP (OCS)?

- Product stewardship program of the American Chemistry Council and Plastics Industry Association (PLASTICS)
- Best practices to contain pellets, flakes and powder from loss
- Covers manufacturing through transportation and end use
- Goal is to:
  - Help every plastic resin handling operation implement good housekeeping and containment practices
  - Work towards achieving zero pellet, flake, and powder loss
  - Improve relations with organizations that expect the industry to minimize environmental footprint
- Adopted by international partners
- <https://www.opcleansweep.org/>

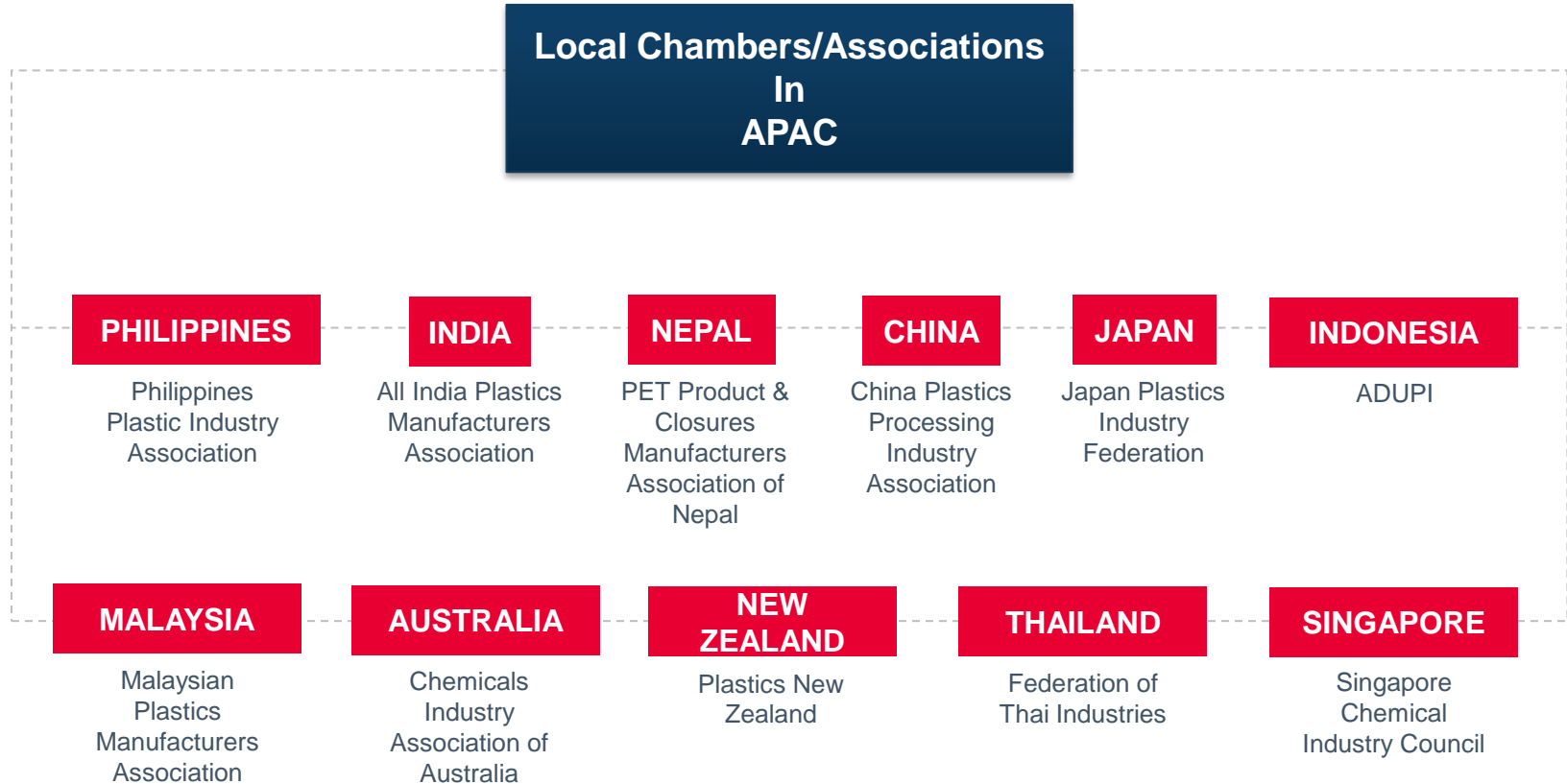




# OPERATION CLEAN SWEEP – IN APAC



# NEED SUPPORT OF MANY CHAMBERS TO SOLVE ONE PROBLEM!





# What's In It for Converters & Distributors: Why Join the OCS Program ?

As a responsible member of plastics industry

- ✓ Improve your reputation with local stakeholders and the community, minimizing your environmental impact
- ✓ Contribute to the preservation of water quality & marine ecosystem
- ✓ Keep more material in the value chain; improved efficiency
- ✓ Comply with local regulations
- ✓ Reduce the likelihood of the accidents due to falling wastage



# What can the industry players do to be part of OCS Program?

**Sign up for OCS at MPMA: “I commit to the Zero Pellet Loss!”**

- Implement best maintenance practices to prevent loss of pellets, flakes & powders;
- Contain, recover or properly dispose of pellets, flakes & powders



# How can the industry players implement some best practices?

Implement proper housekeeping and containment practices to help achieve zero pellet, flake, and powder loss, for example:

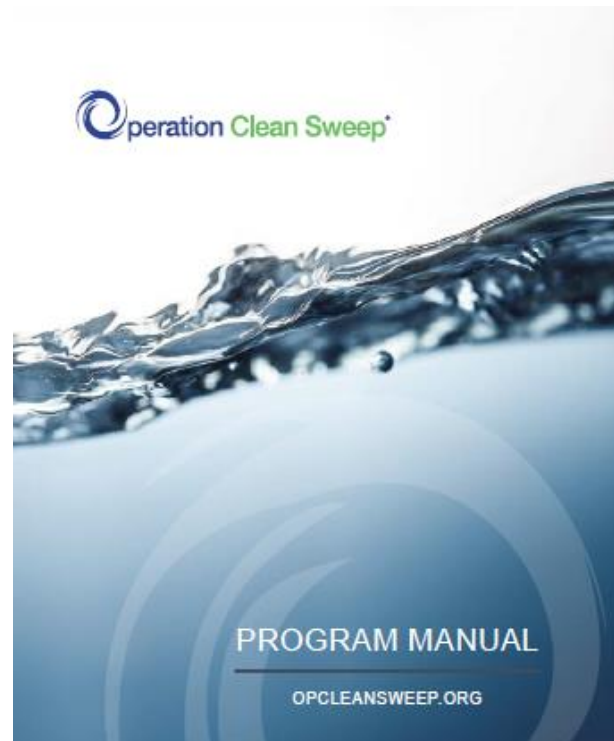
- Properly empty and seal trucks and railcars
- Provide catch trays for use at unloading valves
- Design pumps with systems to remove pellets before water discharge





# Make Necessary Facility Upgrades

- Review OCS Manual
- Assess and install containment systems
- Ensure employees have ready access to cleanup equipment



# Raise Employee Awareness

- Establish written procedures
- Conduct regular training and awareness campaigns
- Encourage each worker to sign the employee commitment pledge
- Solicit employee feedback on your program



## Operation Clean Sweep

Each industry sector: resin producers, transporters, bulk terminal operators, plastics processors, has a role to play in eliminating resin pellet, flake, and powder loss.

### Why Strive for Zero Pellet, Flake, and Powder Loss?



It's good for the environment

Researchers have reported that seabirds, turtles and fish ingest a wide variety of plastic items, including pellets, flakes, and powder. These materials can affect the animal's ability to breathe, swallow, or digest foods properly. When pellets, flakes, and powder are accidentally eaten by wildlife, they can block their digestive tracts, which could lead to malnutrition or even starvation.



It's the law

Violations of storm water regulations in states like California can result in civil penalties of up to \$25,000 per incident (California Water Code § 13385). Any person discharging unauthorized waste could be found guilty of a misdemeanor or felony and subject to additional criminal penalties (Water Code § 13256 and 13387).



It promotes safety and saves costs

Loose pellets, flakes, and powders can cause workers to slip and fall. While industry is committed to safety, slips and falls are a major portion of plastics industry accidents and can mean lost work time, higher worker compensation costs and lower employee morale. Reducing the risk of falls due to uncontained pellets, flakes, and powder is a better option for both our employees and our companies. Pellets, flakes, and powders are valuable. Uncontained resin pellets, flakes, and powder are not only detrimental to the environment, they are detrimental to your bottom line. Save costs by containing those valuable materials.



Operation Clean Sweep Can Help

Operation Clean Sweep (OCS) is a program designed to help every plastic resin handling operation implement good housekeeping and pellet, flake, and powder containment practices to work towards achieving zero pellet, flake, and powder loss. Administered by the American Chemistry Council (ACC) and the Plastics Industry Association (PLASTICS), OCS helps companies towards achieving zero pellet, flake, and powder loss. It has been implemented in thousands of plants around the world, all adding to the effort to protect the environment.



# DOW WALKS THE TALK!

## Starts from 2019

Closely work with regional Dow logistics on OCS implementation on P&SP APAC manufacturing sites and Logistics Service Providers

P&SP APAC **30** Whs/sites and **14** logistic vendors have achieved OCS compliance but not pledged

Dow Transportation Incident Management Module revised to accommodate reporting needs

OCS sustainable practices through contract language and auditing/assessment program integrated into Dow Road, Transport & Warehouse Team regular audit



# APAC P&SP WHs OCS SUSTAINABLE INITIATIVES

## Solution to control plastic pellet exposure



### Resolutions:

- Installing searchlights on the forklift
- Improve the operation skills of workers
- Installing plates between stacking goods
- Performance evaluation and tracking of operators

## Solution to control plastic pellet escape



### Resolutions:

- Installing filter around sewers in working area
- Cleaning of equipment, forklifts and trucks before leaving
- Integrate new process into 5S procedure

## Solution to control plastic pellet escape



### Resolutions:

- Daily check and collection of plastic pellets
- Deep cleaning of plastic pellets by vacuum cleaner
- Dedicated recycle bins for collection



**No more pellets entering the oceans!**

Part of marine litter consists of pellets used to produce articles for everyday life. Mixed with other debris they are at risk to be ingested by marine animals. Pellet loss prevention falls almost exclusively under the responsibility of all steps in the supply chain, like manufacturing, transporting and handling.

**Operation Clean Sweep®**

**A programme towards Zero Pellet Loss**

Designed for industry to prevent the loss of pellets into the environment, Operation Clean Sweep® (OCS) offers tools assisting each partner in the plastics industry, resin manufacturers, carriers and plastics processors with good handling practices and maintenance of industrial sites.

**Production Storage Logistic Export**







Insert picture if desired

# Q & A

Seek **Together**™



Seek

Together™