

# POLICIES AND PRACTICES FOR PLASTIC WASTE MANAGEMENT IN THAILAND

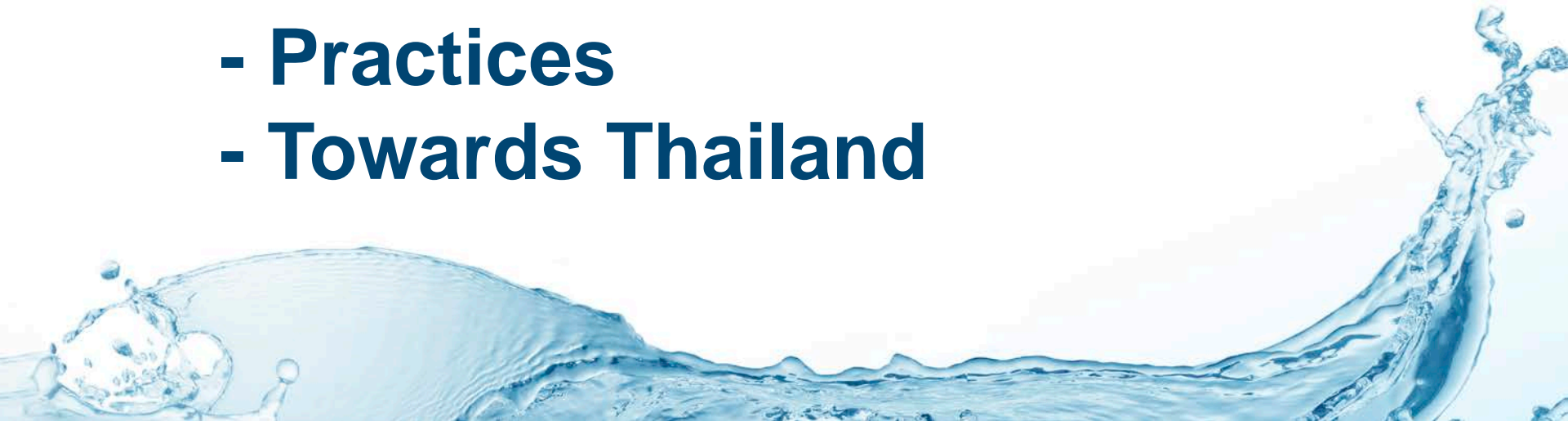


*Session 3: Hazardous substances, plastic waste and micro-pollutants of waters and their effects on nature*



# **Content:**

- Status and situation**
- Policies**
- Practices**
- Towards Thailand**



# Status and situation



## Top 10 sources of ocean's plastic waste



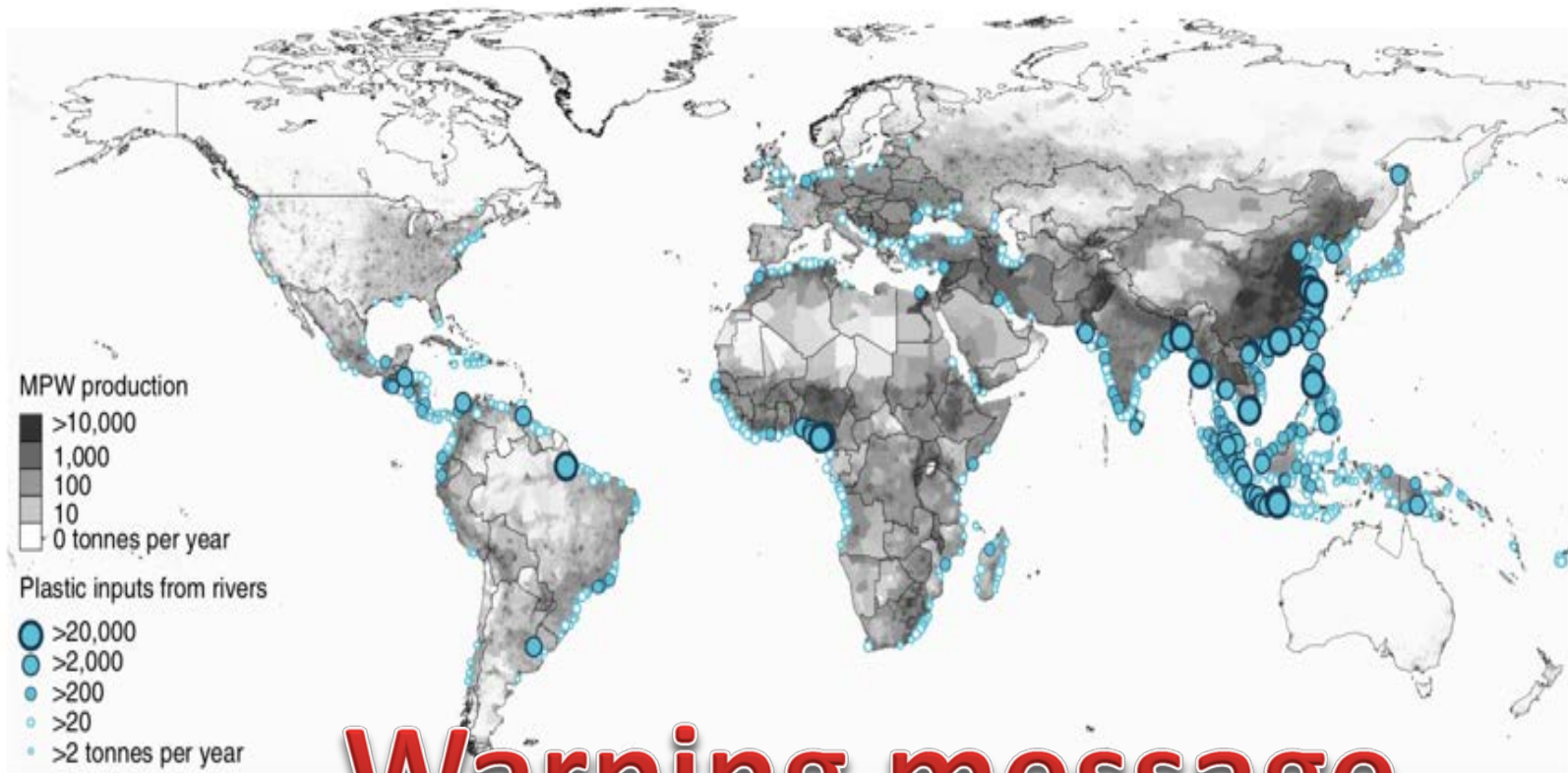
## From academy research

Jembech et. Al. (2015)

About 80% of marine plastic debris comes from land-based pollution. It was discharged into the ocean through about 10 main rivers, which are mostly located in Asia. If we reduce the discharged plastic debris about 50% from these rivers, the ocean's plastic waste will be reduced up to 37%.



# World situation



## Warning message

Lebreton et. al (2017)

# Thailand situation in year 2014



- **Proper disposal site – 480 sites**
- **Open Dumping - 1,970 sites (mostly in small size municipalities)**
  - Deterioration in the environment
  - Health of the population
  - Releasing greenhouse gases.
- **Small size municipalities lack funding and capabilities**
- **Public disillusioned by previous site operation and distrust new waste management projects**

# Thailand situation 2014-2018



2014

## **Road Map on Waste and Hazardous Waste Management**

Approved by the National Council for Peace and Order on the 26<sup>th</sup> August 2014

2016

## **National Solid Waste Management Master Plan (2016 - 2021)**

Approved by the cabinet on the 3<sup>rd</sup> May 2016

2016

## **Action Plan “Thailand Zero Waste” (2016 – 2017) According to the Participatory State Principle**

2017

## **Action Plan “Clean Province” (2018) According to the Participatory State Principle**

2018

## **20-Year Pollution Management Strategy and Pollution Management Plan 2017-2021**

Approved by the parliament on the 6<sup>th</sup> July 2018

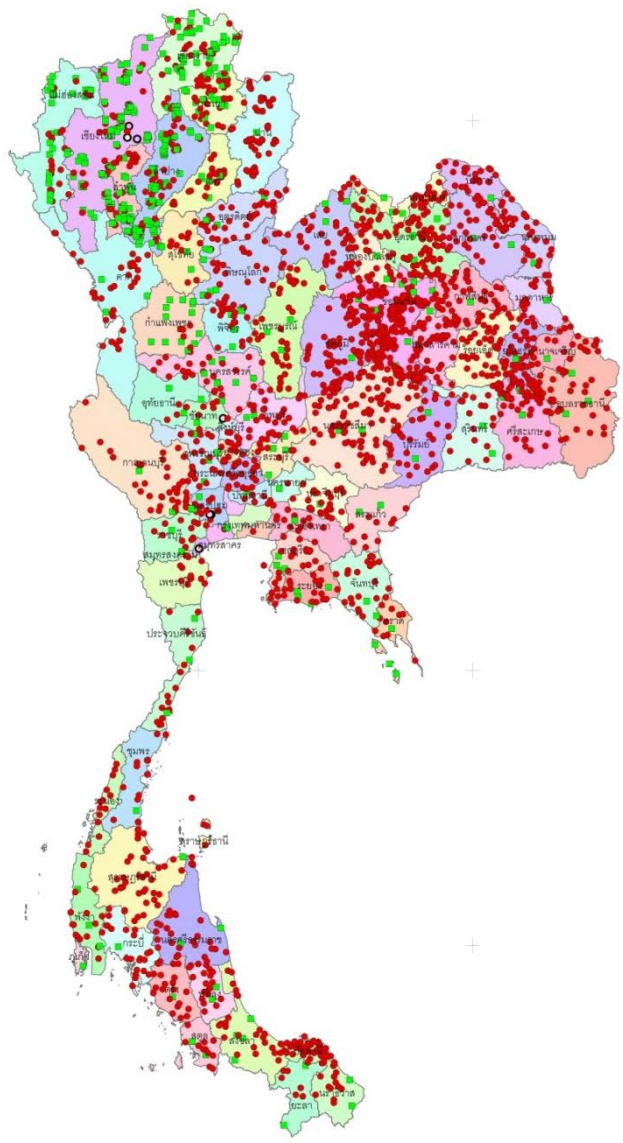


# MSW Status in year 2017



เราสร้างขยะ  
1.13 กิโลกรัม/คน/วัน

# MSW Status in year 2017



## 2,801 Overall waste disposal sites in Thailand

Appropriate management system (12%)	319 sites
appropriate landfill site	287 sites
Incinerator with air pollution treatment system	18 sites
Mixed method	4 sites
Mechanical and biological treatment system (MBT)	18 sites
Improper management system (88%)	2,474 sites
Dumpsite method	1,730 sites
in-appropriate landfill system	16 sites
In-proper incineration system (without ventilation treatment system)	71 site
Open spaces and outdoor burning activities	657 site



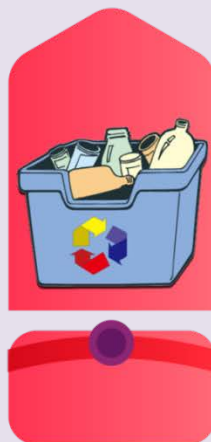
# Plastic waste management @ 2017



ปริมาณขยะพลาสติก  
ในประเทศไทย  
คิดเป็น 12 %  
หรือ 2 ล้านตัน  
ของปริมาณขยะทั้งหมด



สามารถ  
นำกลับไปใช้  
ประโยชน์  
ได้ปีละ  
0.5 ล้านตัน



ส่วนที่เหลือ  
1.5 ล้านตัน  
ถูกนำไปกำจัด  
ด้วยวิธีฝังกลบ  
หรือเตาเผา



บางส่วนตกค้าง  
ในสิ่งแวดล้อม



# Policies



## Principle of SWM Roadmap

- Reduced amount of accumulated waste
- Promoted appropriate MSW and Hazardous Waste
- Specific law on SW Management
- Instill National Discipline

## National Waste Management Master Plan

- Encourage citizens, including children, and the private sector to reduce waste at the source by following the **3Rs concept (Reduce, Reuse, Recycle)**
- Establish proper disposal methods for municipal solid waste and household hazardous waste by using **centralized facilities for clusters of municipalities** emphasizing waste utilization and **waste to energy methods**
- **All relevant sectors** participate in the management of solid and hazardous waste

# Policies



## Action plan “Thailand Zero Waste” and “Clean Province”

- Minimizing waste by separation at the source
- Establishing waste management database
- Establishing measures/models to handle the improper disposal wastes and hazardous wastes from communities
- Establishing management measures for infectious wastes and industrial wastes

## 20-Year Pollution Management Strategy and Pollution Management Plan 2017-2021

- **Strategy 1** Waste prevention and reduction at source
- **Strategy 2** Increasing efficiency in waste treatment and pollution control at source
- **Strategy 3** Development on waste management system





# Practices

## Initiatives and Best Practices

### Responses and management of marine debris

1. Conduct **research and assessment** of marine debris, plastic and microplastic.
2. Organize **clean-up activities** involving public participation in 23 coastal provinces.
3. Implement **waste reduction measures** in 7 selected pilot areas.
4. Establish marine debris **database and knowledge portal**.



### clean-up activities



beach



mangrove



coral zone

### Reduce using plastic in island



### Database and knowledge portal

3) Study the impact of marine debris on ecosystems in sand beaches

4) Study the impact of marine debris on special species in Gulf of Thailand/ Andaman Sea.

5) Research on micro plastic



1) Study of the amount of waste in river mouth areas



2) Study the impacts of marine debris on ecosystems in coral areas





# Practices



## No Smoke-free

- MOU to solve the problem of cigarette butts littering the country's beaches  
24 beaches in 15 provinces engaged in this project, including Bangsan in Chonburi and Pa-Tong on Phuket Island



## Zero Waste Action Plan and Civil State: The Nexus Clean City and Happy People Action Plan.

- Implementation and action plan under the Civil State approaches
- Up-scale public awareness and participation on waste reduction and waste separation according to 3R principle.



## 3R Activities: The Examples

- Setting-up junk shop entrepreneurship managerial efficiency for waste management



## Waste Collection & Transportation





# Practices



## สถานการณ์ขยะพลาสติก

ในช่วง 10 ปี ที่ผ่านมามีขยะพลาสติก เกิดขึ้น **ประมาณ 12%** ของปริมาณขยะที่เกิดขึ้นทั้งหมด หรือปริมาณ **ปีละ 2 ล้านตัน** มีการนำขยะพลาสติก กลับไปใช้ประโยชน์ประมาณ **ปีละ 0.5 ล้านตัน** ส่วนที่เหลือ **ประมาณ 1.5 ล้านตัน** บางส่วนจะถูกนำไปกำจัด ณ สถานที่กำจัดขยะมูลฝอย และบางส่วนตกค้างในสิ่งแวดล้อม ทั้งทางบกและทางทะเล

## N<sub>o</sub> เลิกใช้พลาสติกหุ้มฝาขวด Plastic Bottle Cap Seal

พลาสติกหุ้มฝาขวดน้ำดื่ม (Cap Seal)  
ประเทศไทยใช้มากที่สุดเท่าที่ห้รต่อปี

2,600 ล้านชิ้นต่อปี หรือคิดเป็น 520 ชิ้นต่อปี  
หากนำมาต่อกันจะมีความยาว 260,000 กิโลเมตร

คิดเป็นความยาวรอบโลก  
2 รอบ!!



## Cap Seal

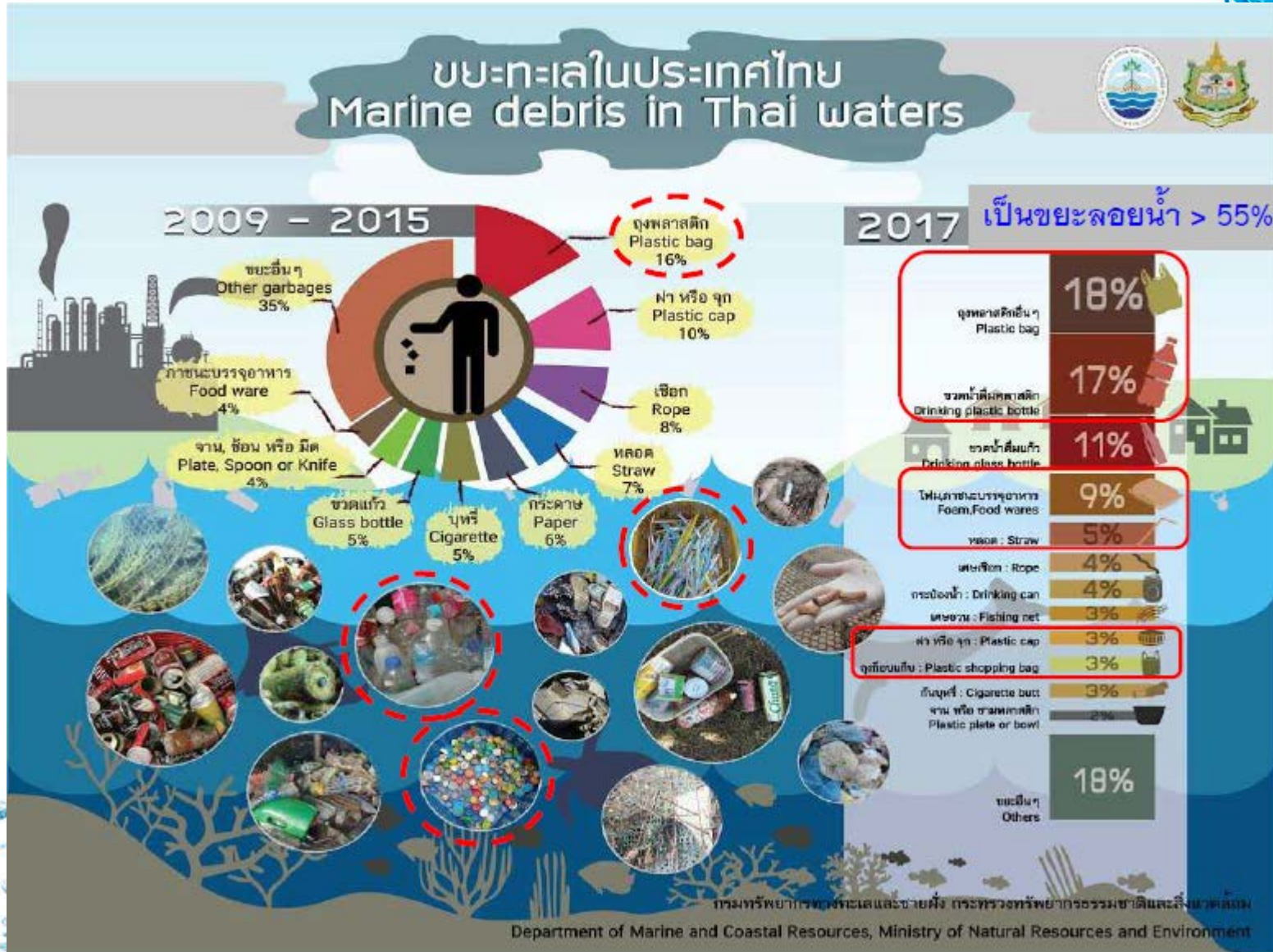
- พลาสติกหุ้มฝาขวด  
ประกาศกระทรวงสา  
ในกษณะบรรจุที่ปิด  
• มีขนาดเล็ก น้ำหนัก  
กึ่งบนบกและทะเล
- ยากต่อการจับเก็บ  
• กระจัดกระจายทั่ว  
• บางส่วนลบลูก  
พลาสติกหุ้มฝาขวด

## Stop using plastic cap seals





# Marine debris monitoring

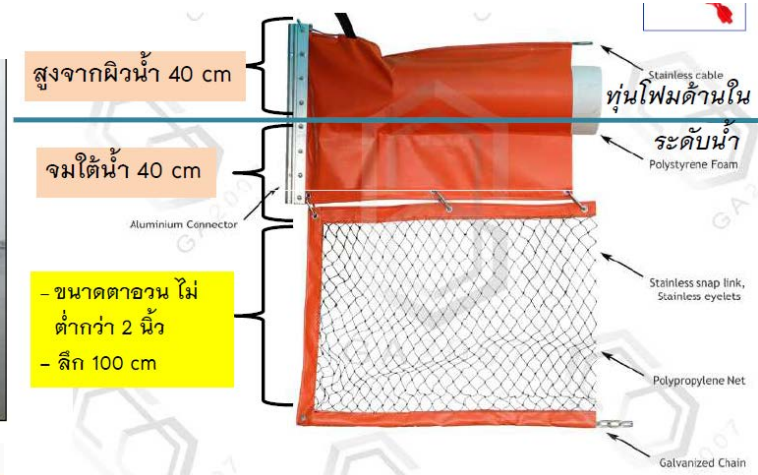




# Marine debris prevention and collection



ที่มา : <http://www.gaboo.com/oilboom-th>



# Promotion on Reducing Marine Debris



**ASEAN Conference in Reducing Marine Debris in ASEAN Region  
Phuket, Thailand, 22-24 November, 2017**





# We do good with our heart to reduce environmental damage



## Promotion on Reducing Marine Debris

(Cabinet Resolution, 17 July 2018)

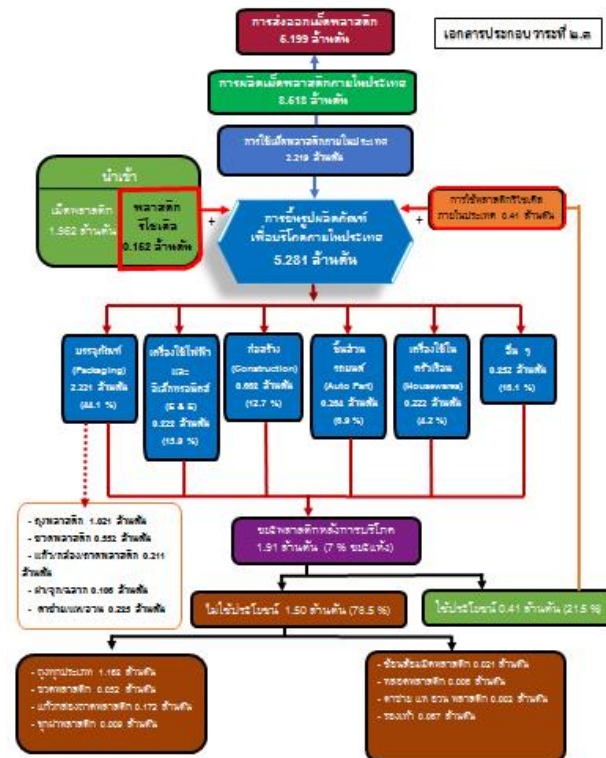
- Reduce plastic bags and foam boxes in the governmental offices and also develop the KPI
- Campaign the reduction of plastic bags in fresh markets/supermarkets
- Ban plastic bags and foam boxes in National Parks/Zoological Centres
- Set priority action in 24 coastal provinces



# Towards Thailand

## Plastic waste management sub-committee under NEB

## Plastic material flow analysis



# Thank You for Your Attention



[www.pcd.go.th](http://www.pcd.go.th)