

COORDINATING MINISTRY FOR MARITIME AFFAIRS REPUBLIC OF INDONESIA

#### Improving Solid Waste Management Capacity as a tool for combating Marine Plastic Debris Issue

CTI-CFF 13<sup>Th</sup> Senior Officials Meeting (Pre- SOM and SOM-13) 27 – 30 November 2017 Makati City, Philippines

Manila, 30 November 2017

# INDONESIA

- 1. Largest archipelagic state in the world, with more than 17.000 islands
- 2. 6 million square km of waters, more than 91.000 km of coastal lines
- 3. Three time zones
- 4. 10 neighboring countries
- 5. Home of 23 % of global mangroves
- 6. Home of 30.000 km<sup>2</sup> Seagrass
- 7. Home of 75% of all known marine life
- 8. 4 Critical Choke Points for global navigations



# CHALLENGES



- **1. Fight Poachers**
- 2. Armed Robbers at Sea,
- 3. Hijackers at Sea
- 4. Slavery at Sea,
- 5. People Trafficking at Sea,
- 6. Mitigating Climate Change Effect,
- 7. Governmental Services to Remote Islands
- 8. Health of The Ocean

## CHALLENGES: Health of the Ocean

#### **OIL SPILL**

#### **SLUDGE OIL**

#### **OIL POLLUTION FROM FIXED PLATFORM**

#### **MARINE LITTER**

### COMPOSITION OF INDONESIAN MARINE LITTER



Source: World Bank 2017

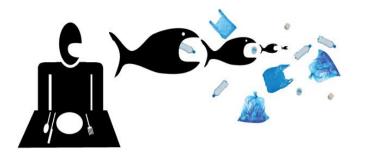
## MARINE PLASTIC DEBRIS - CONSEQUENCIES



**TOURISM :** MARINE PLASTIC DEBRIS, INVADING MORE AND MORE TOURISM AND COASTAL AREAS



#### **ENVIRONMENT AND MARINE LIFE :** MILLIONS OF MARINE LIFE THREATENED BY MARINE PLASTIC DEBRIS



**HUMAN HEALTH**: IT WAS FOUND THAT MORE THAN A THIRD OF SAMPLED COMMERCIAL FISH CONSUMED PLASTIC OR MICROPLASTICS

#### **Coelacanth**, ancient fish in northern Sulawesi, Indonesia



The living fossil "coelacanth: captured by fisherman, found consuming marine plastic debris, captured in Manado Bay, North Sulawesi (Newspaper, Tribun Manado, may 24<sup>th</sup>, 2012)

# COMMITMENT



Indonesia is to reduce wastes through reduce-reuse-recycle up to 30% until 2025, while targeting reduction of marine plastic debris as much as 70% by 2025

President Joko Widodo, at the Leaders Retreat, G20 Summit, Hamburg-Germany, Friday July 7<sup>th</sup>, 2017

#### G20 - High Level Conference on Marine Litter

## WHAT HAS BEEN DONE

Bremen, 30 May-1 June 2017









Bali, September 4 - 5, 2017

# **INDONESIA'S ACTIONS**



#### INDONESIAN OCEAN POLICY



Launched Presidential Decree of The Republic of Indonesia, No.16 of 2017 on INDONESIA OCEAN POLICY, February 2017



Established National Plan of Action on Marine Plastic Debris (2017-2025). May 2017

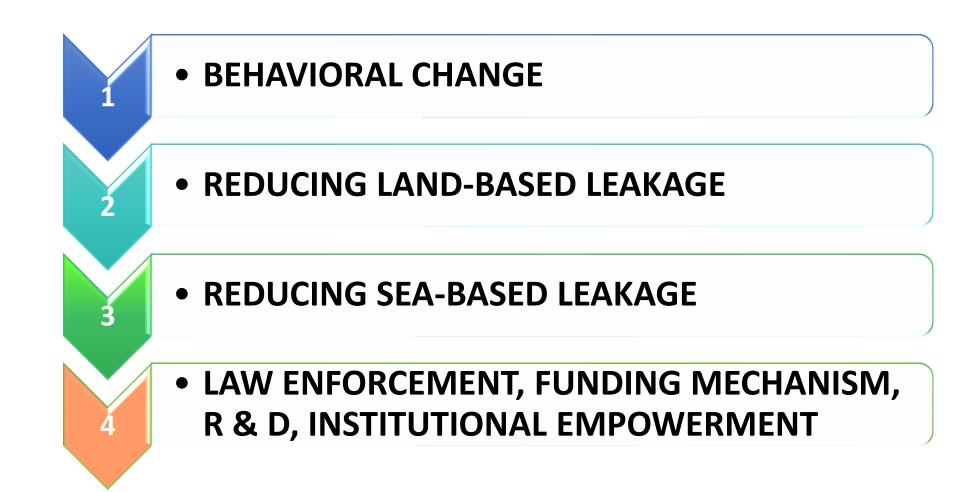


The Government of the Republic of Indonesia

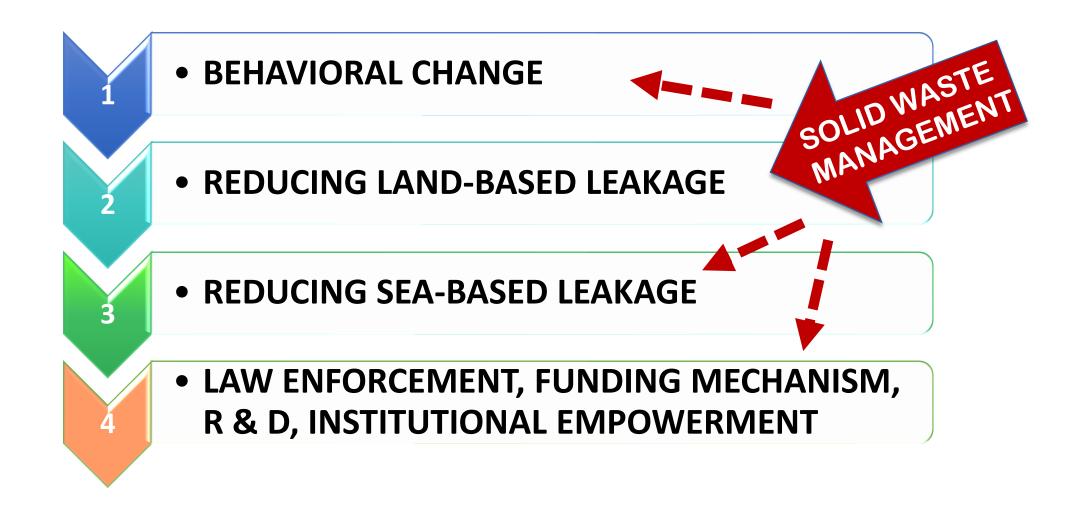
EXECUTIVE SUMMARY INDONESIA'S PLAN OF ACTION ON MARINE PLASTIC DEBRIS 2017-2025



## NATIONAL PLAN OF ACTION



## NATIONAL PLAN OF ACTION



# 1. PROMOTING BEHAVIORAL CHANGE

- EDUCATING YOUNG PEOPLE
  - INCREASING STAKEHOLDER AWARENESS
- INTER GOVERMENTAL COLLABORATION
- CROSS SECTOR COLLABORATION
- CHALENGING OF ELIMINATING PLASTIC WASTE

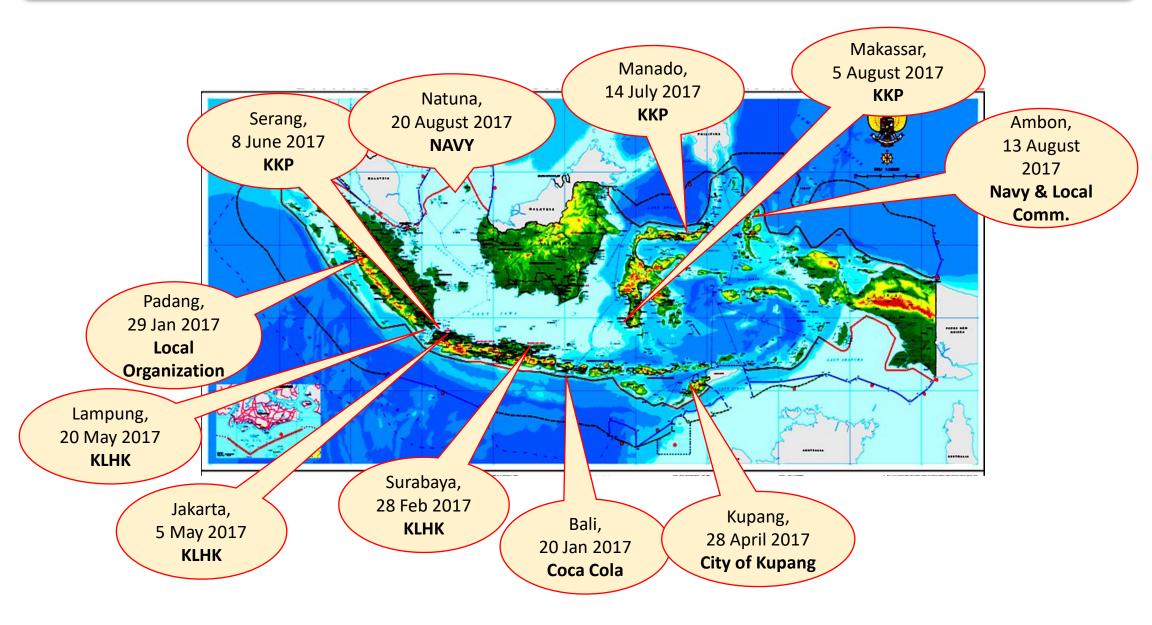
### CAMPAIGN ON COMBATTING MARINE PLASTIC DEBRIS





Attended by more than 200 high school , college students and communities at @America, JAKARTA

## **COORDINATED CLEAN-UP ACTIONS**



# 2. REDUCING LAND-BASED LEAKAGE



 PLASTIC DEBRIS COME FROM HOUSINGS, CITY STREETS CARRIED INTO THE OCEAN THROUGH CANAL
 MARINE POLLUTION TO SEA LIFE, ECOSYSTEM AND HUMAN







Cilincing - North Jakarta, May 4th 2017

### CANAL CLEAN-UPS, May 6<sup>th</sup>, 2017



Minister Luhut Pandjaitan leads the Canal Clean Ups

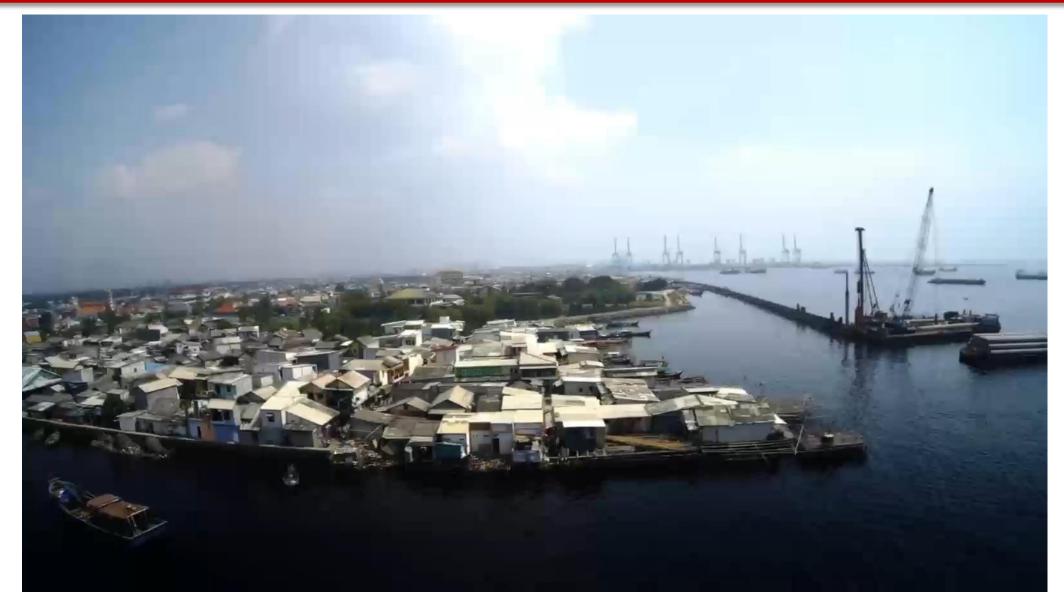






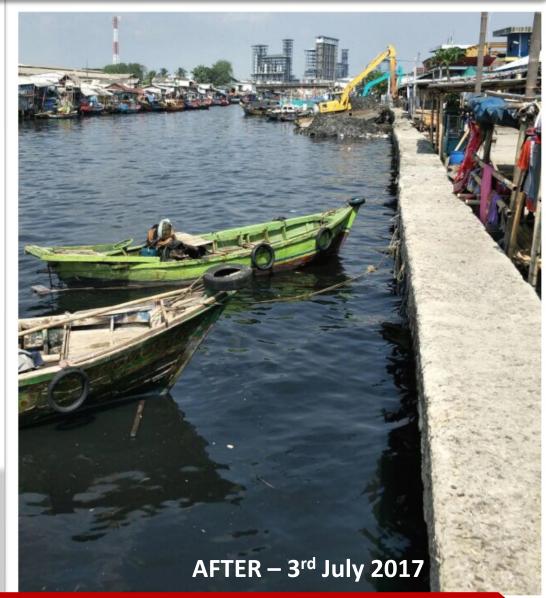
Supported by foreign embassies (USA, Danish, Belgium, S. Korea)

## Example Case – Cilincing Canal Clean Up, 2017



# CANAL CLEAN-UPS, before & 6 weeks later





## **3. REDUCING SEA-BASED LEAKAGE**





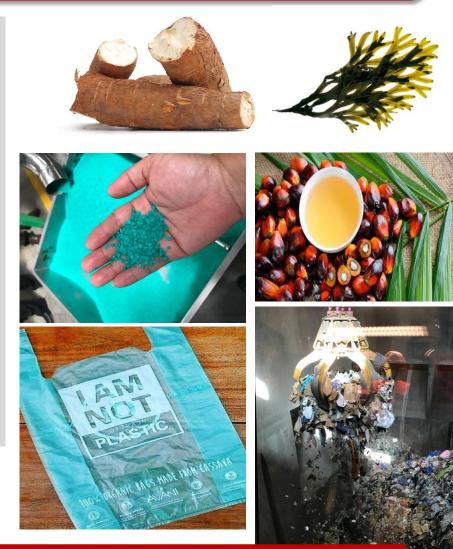


- GARBAGES COULD COME FROM MANY PLACES
- NEED BILATERAL AND REGIONAL
  COLLABORATION
- IMPROVING RELEVANT TECHNOLOGY FOR MONITORING AND COLLECTING THE PLASTIC DEBRIS FROM THE OCEAN

#### 4. LAW ENFORCEMENT, FUNDING MECHANISM, R & D, INSTITUTIONAL EMPOWERMENT

- INTRODUCING PAID PLASTIC BAG
- ENCOURAGING MANUFACTURERS TO USE RECYCLED PLASTICS AS INPUT MATERIALS AS MUCH AS POSSIBLE
- PRODUCING MORE BIOGRADABLE
  PLASTICS FROM CASSAVA, SEAWEED
  AND PALM OIL
- DEVELOPING PALSTIC-TAR ROAD (started June 2017)
- WASTE TO ENERGY SOLUTION





# PLASTIC-TAR ROAD









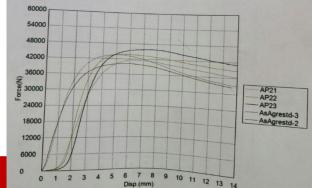




Pusat Teknologi Material

| Penelitian     |   |                  |                             |  |
|----------------|---|------------------|-----------------------------|--|
| Test File Name | PTM                                     | Product Name     | Aspal<br>ASTM D6927-06.xmak |  |
| Operator       | Penelitian asphalt 5 juli<br>20171.xtak | Method File Name |                             |  |
| Temperature    | Harun, Lukmana                          | Test Date        | 7/5/2017                    |  |
| Test Mode      | 26.6oC                                  | Humidity:        | 76%                         |  |
| Speed          | Single                                  | Test Type        | Compression                 |  |
|                | 50mm/min                                | Shana            | Rod                         |  |

| Name        | Diameter       |         |        |                          |                          |                          |
|-------------|----------------|---------|--------|--------------------------|--------------------------|--------------------------|
| Parameters  | Signaturer     | Height  | Volume | Max Force                | Max Stress               | Max_Disp.                |
| Unit        |                |         |        | Calc. at Entire<br>Areas | Calc. at Entire<br>Areas | Calc. at Entire<br>Areas |
| AsAgrestd-2 | mm<br>101.9800 | mm      | mm3    | N                        | N/mm2                    | mm                       |
| AsAgrestd-3 | 101.9800       | 73.8000 | 602499 | 40227.0                  | 4.92490                  | 5.68563                  |
| AP21        |                | 71.4700 | 583477 | 43500.0                  | 5.32561                  | 5.06066                  |
| AP22        | 101.9800       | 72.2800 | 590089 | 41599.2                  | 5.09289                  | 6.25229                  |
| AP23        | 101.9800       | 72.2800 | 590089 | 43870.3                  | 5.37094                  | 5.68563                  |
|             | 101.9800       | 72.2800 | 590089 | 45515.1                  | 5.57231                  | 6.23563                  |



WE need to fight this problem with passion to care our oceans that have given us so much for our human life. Lets get rid of this problem because WE CAN and WE CARE





COORDINATING MINISTRY FOR MARITIME AFFAIRS THE REPUBLIC OF INDONESIA