

Implementation of 3Rs in Thailand - what has been done and what needs to be done

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Background

The Solid Waste Management Association (Thailand) (SWAT), established in September 2015 as a non-profit organization, has objectives to:

- develop and support activities related to solid waste management;
- enhance waste management practices and technical standards;
- coordinate and cooperate with all stakeholders domestically and internationally on waste management;
- disseminate knowledge and raise awareness among the public on waste and environmental management.

Membership is categorized into 4 sectors including business, government, academic and general public sectors



SWAT Conference 2020

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Reduce Recycling & Recovery in Action – Inspirational Stories and Case Studies

26 February 2020
BITEC, Bangkok, Thailand

Program Agenda

08.00-09.00 Delegate Registration

09.15-09.30 **Welcome Remarks**
Mrs. Sunee Piyapanpong, President
Solid Waste Management Association (Thailand)

09.30-09.50 **KEYNOTE SPEECH: Improving Waste Management with a Circular Economy Approach**
Dr. Stefanos Fotiou
Director, Environment and Development, UN ESCAP, Thailand

09.50-10.30 **SPECIAL SESSION: Unlocking Circular Economy**
Mr. Jerome Le Borgne South East Asia Project Director
Suez Thailand

10.30-10.45 **Coffee/Tea Break**

SESSION 1: Making Business Sense from Recycling and Recovery

10.45-11.10 **Passion for Planet - Upcycling to Save the Ocean**
Mr. Svein Rasmussen
Chief Innovator, Starboard, Thailand

SESSION 3: Reduce and Recovery of Food and Organic Waste

14.45- 15.10 **Food Waste Prevention and Reduction in Hospitality Business**
Mr. Benjamin Lephilibert
Managing Director, Lightblue Consulting, Thailand

15.10- 15.35 **Reduction of Food Loss and Food Waste in Action**
Mr. Michael Riley
Sustainability Manager, Bangkok Marriott Marquis Queen's Park, Thailand

15.35-16.00 **Biogas Production from Organic Fraction of MSW – Experience of Actual Operation in Thailand**
Dr. Apipong Lamsam
Managing Director, Papop Co., Ltd.

16.00-16.25 **Cost Effective Way to Turn Organic Waste Problem into Profit**
Mr. Prasit Tirakarn
Research and Engineering Manager,
Thai Recycle Waste Hub Co., Ltd., Thailand

16.25-16.30 **Closing Remarks**



Why have Thais become environmentally aware?



RIP

มาเรียม พะยูนน้อย

Thai idol dugong that was killed by plastic waste

The image features a background with a light blue gradient. A dark teal horizontal band is positioned across the middle. The text "Reduce and Reuse" is centered within this band in a white, sans-serif font. The overall aesthetic is clean and modern, typical of a presentation slide.

Reduce and Reuse

3Rs Implementation



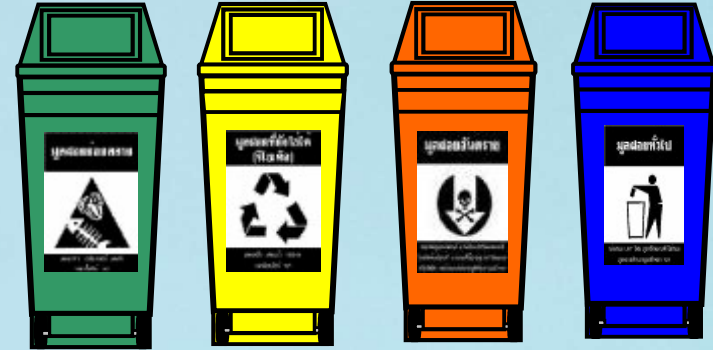
Private company initiatives

From 7 Nov 2018 – 13 Jan 2019:

- 102,323,402 bags reduced
- 20,464,681 THB donated to Siriraj Hospital



3Rs Implementation



- Prohibition of plastic bags and Styrofoam containers in national parks (announced by the Department of National Parks, Wildlife and Plant Conservation, Thailand on 8 June 2018)
- Solid and hazardous wastes separation-priority action in all provinces



3Rs Implementation


- Many universities such as Mahidol University, Thammasat University and Chulalongkorn University have promoted reduction or ban of plastic use at stores and canteens on campus and reduction of food waste.
- Food and organic waste is also collected to make compost on campus.



3Rs Implementation

Example of Reuse Programs

Reduce waste by donating your unwanted items to these non-profit organizations in Bangkok



PRECIOUS PLASTIC BANGKOK
A community-based plastic recycling initiative that uses simple-to-build machines to turn plastic waste into new products. www.fb.com/PreciousPlasticBangkok



PANKAN SOCIETY
Donate your second-hand clothing, bags, shoes and household items, which will be resold to raise funds to support children's scholarships at the Yuvabadhana Foundation. www.pankansociety.com



SECOND CHANCE BANGKOK
This local initiative by the residents of Klong Toey takes donations of quality second-hand goods and sells them to residents in the Klong Toey area at affordable prices. www.scbkk.org



ZERO BAHT SHOP
Located at On Nut Soi 14, this is Thailand's very first swap shop organized by the Thailand Institute of Packaging and Recycling Management for Sustainable Environment. Instead of throwing away single-use plastics, you can bring them here and swap them for consumer goods such as packaged food, drinks and many other household products.

3Rs Implementation

Reduce Marine Litter

IT'S EASY TO LOVE KOH LIPE

WITH THE PURCHASE OF A "LOVE KOH LIPE" WATER BOTTLE YOU CAN HELP REDUCE PLASTIC ON KOH LIPE. LESS PLASTIC MEANS THE ISLAND YOU FELL IN LOVE WITH TODAY WILL REMAIN BEAUTIFUL AND ENCHANTING FOR YEARS TO COME.

BUY A "LOVE KOH LIPE" REUSABLE WATER BOTTLE FOR 200 BAHT, AND GET FREE DRINKING WATER REFILLS AT ANY OF THE KOH LIPE BUSINESSES MARKED ON THE MAP.



Starting from 1st February 2018, it is illegal to smoke on 24 popular beaches around Thailand.



The image features a background of a misty, mountainous landscape. A dark teal horizontal band is centered across the image, containing the text "Recycling and Recovery" in white. The overall color palette is dominated by various shades of teal and light blue.

Recycling and Recovery

Collection and Recovery

Waste donation



Informal collection



Recyclable waste bank





Drop off station/bin



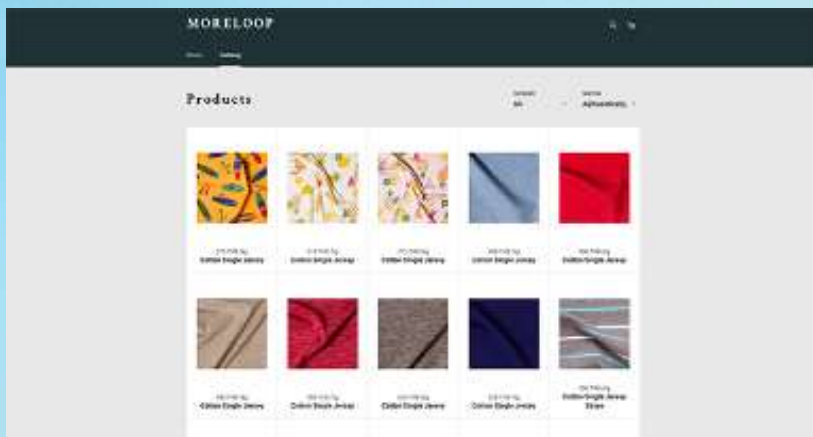
Collection of waste leaked to the environment



Recycling and utilization



Upcycling



- Higher value
- Higher quality

Source: moreloop

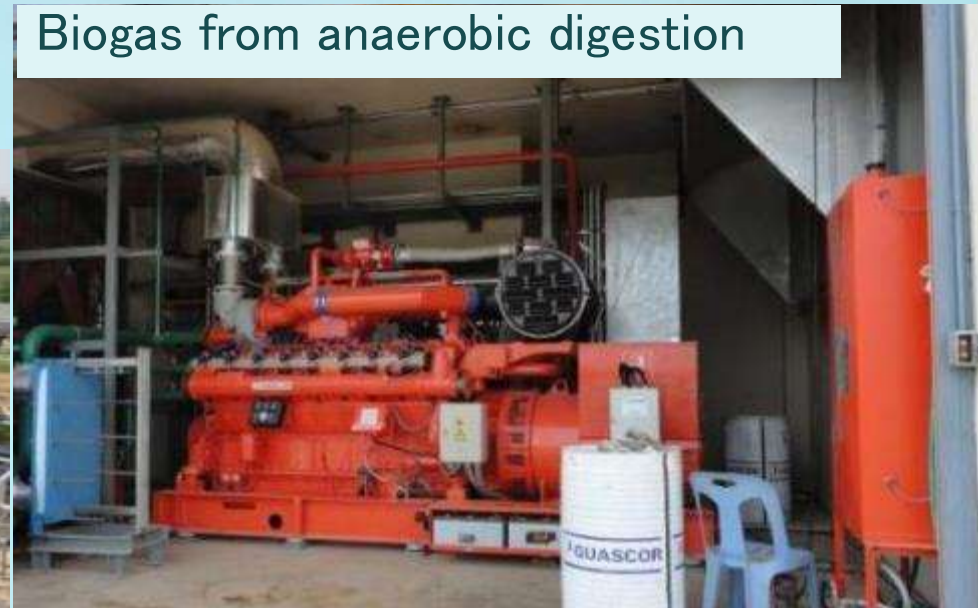
Example of waste to energy

RDF production



Photo by P. Tularak

Biogas from anaerobic digestion



Waste incineration

Bangkok Metropolitan Administration

C&G 創冠

www.cg-ep.co.th



โรงพยาบาลมุลพอย
จังหวัดภูเก็ต



Phuket Municipality

Installed Capacity of Waste-to-energy operating facilities (MW)



Total = 252.5 MW
 (from 22 facilities in operation)
total = 317 MW (unpublished figure)

- = >100 MW
- = 5–100 MW
- = <5 MW

Source: www.erc.or.th (as of January 2019)

E-waste Management

Greenpeace Thailand

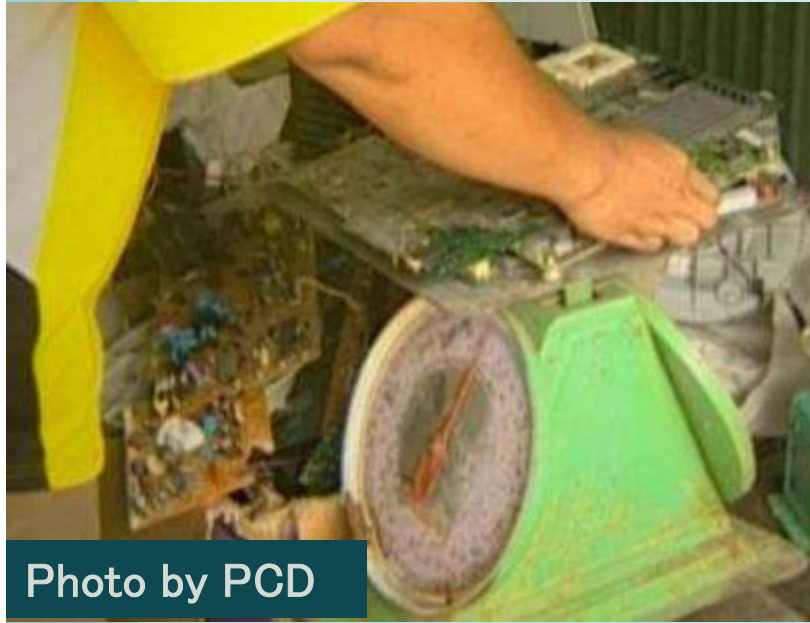


Photo by PCD



Photo by Patarapol Tularak





Photo by PCD

Dismantling and Sorting (for recycling)

Mechanical Process

Demanufacturing Facilities



Dismantling & Segregation Line

Waste Streams



Logo Removal



Customized Waste Process



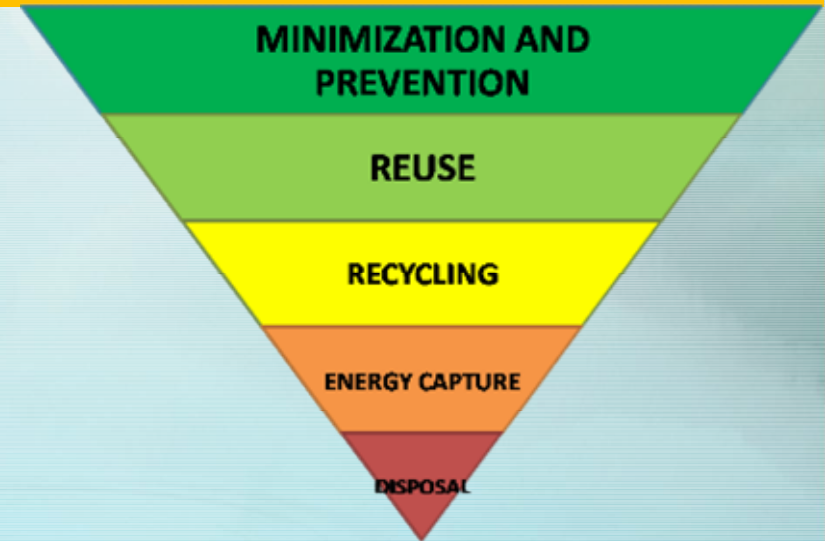
Source: TES-AMM



Source: Wongpanit Group

Major challenges

- Priority:
 - Reduce/reuse vs Recycling
 - material vs energy recovery
- Mindset / perception [e.g. waste is gold, waste is mine]
- Lack of standardization
- External costs (residue waste and emission)



Major challenges

- Emerging waste from delivery services
- Waste import
- Food and beverage waste
- Economic incentives vs Awareness campaign
- Widening gap (financial and education)



Thank you

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