



Co-funded by the European Union



german cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by



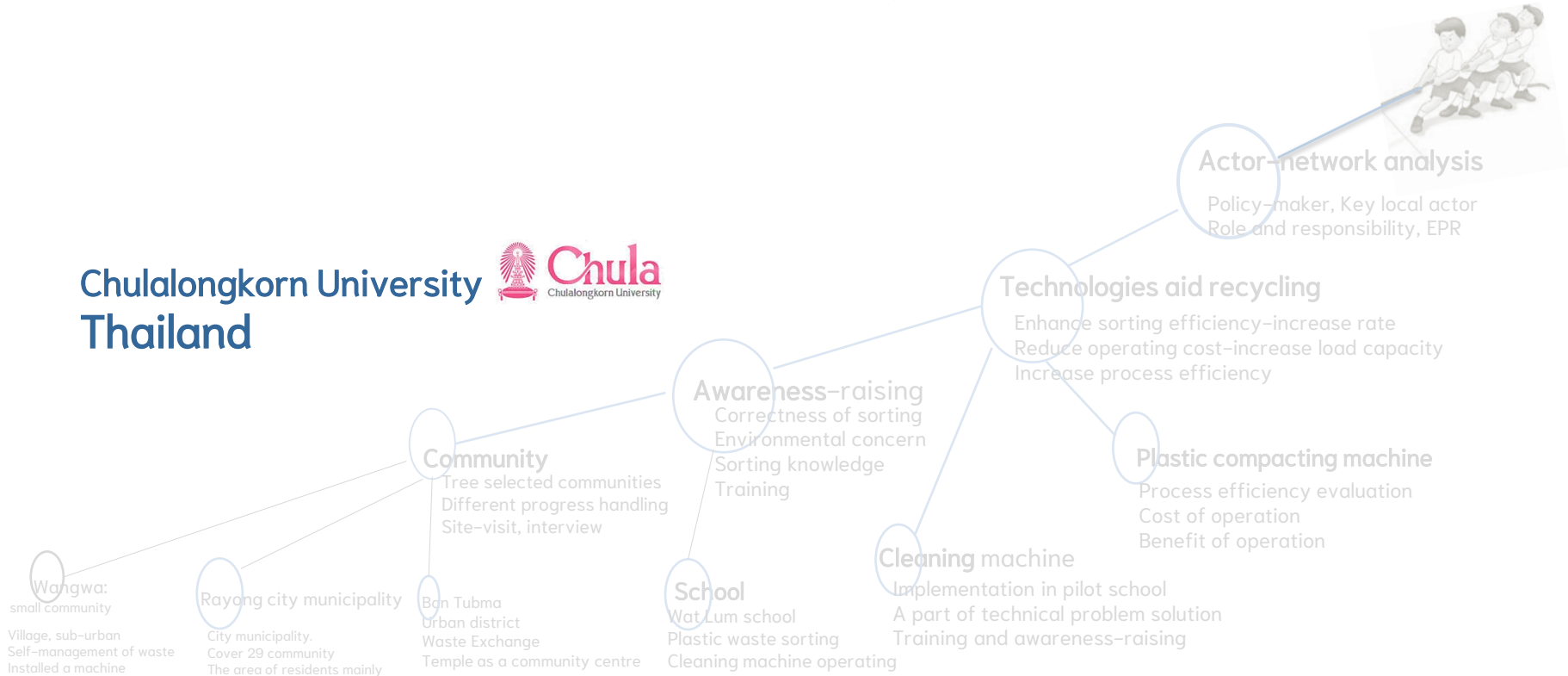
Deutsche Gesellschaft für internationale Zusammenarbeit (GIZ) GmbH



Rethinking Plastics
Circular Economy Solutions to Marine Litter

Enhancement of plastic packaging waste segregation performance for closed-loop recycling

Chulalongkorn University
Thailand





Co-funded by the European Union



german cooperation
DEUTSCHE ZUSAMMENARBEIT

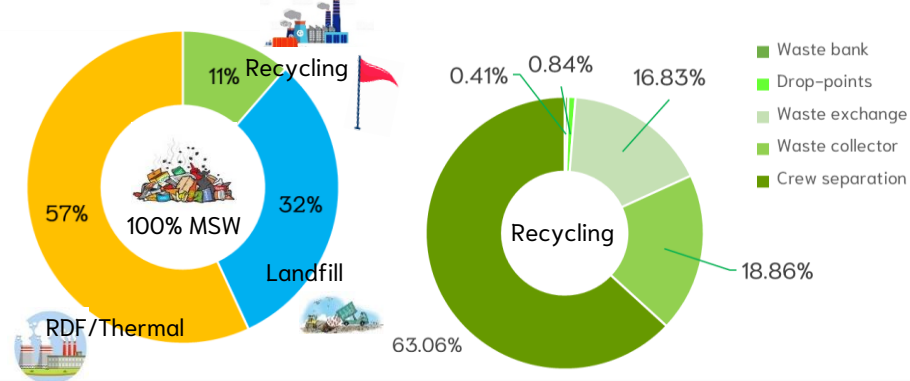
Implemented by



Deutsche Gesellschaft für internationale Zusammenarbeit (GIZ) GmbH



Rayong city municipality: recycling of waste



The benefit of technology aid recycling

- Resources consumption saving:**
 - Labor and operational time
 - Water consumption (cleaning): 400 L/d, 80 m³ (43 USD/y)
 - Cost of transportation: 19 USD/ton (2,270 USD/y)
 - Storage area: 28 m²/ton
 - Processed cap.: 109 ton plastic (back to recycling)
- Emission reduction**
 - from correct sorting: 0.9 tCO₂eq/t plastic
 - from reducing oil/ (transportation): 0.06 tCO₂eq/t plastic
 - total emission reduction: 6.68 tCO₂eq/y



Cleaning machine compactor



Factors to success in plastic waste segregation



Inside: **Attitude/awareness**

Outside:

1. Community leadership
2. Strong collaboration & Networking
3. Knowledge (skill)
4. Technology



Key driving force

1. Environmental factor 
2. Economic factor 
3. Environmental awareness

Challenge?

The sustainability of recycling activity (attitude or environmental awareness concern to separate plastic from MSW)



- Report/transfer
- Onsite training
- Time management
- Team management
- Onsite meeting/data collecting
- Online platform/training/meeting
- Data collecting: onsite/online
- Commissioning and training
- Equipment installation**
- Design/building/equipment
- Target interview/ deep interview
- community/site-visits survey

What did we do in the pilot project?



Co-funded by the European Union



german cooperation

DEUTSCHE ZUSAMMENARBEIT

Implemented by



THANK YOU



Funding-implementor: GIZ Thailand, European Union, German cooperation
Rethinking plastic team: K Alvaro, K. Elena, K. Lena, K Imm
Royong governors: Rayong city municipality, Ban Tubma municipality, Wangwa community, Wat Lum Mahachai Chumpob school, all local community members

Presented by: Pratin Kullavani jaya, PhD
Project head: Prof.Orathai Chavalparit, PhD
EMSI, Chulalongkorn University (contact: orathai.cha@chula.ac.th)

<http://rethinkingplastics.eu/>