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Subject: Confirmation of Acceptance as Presenter for Erasmus + ECoGREEN Bootcamp Event

Dear Astari,

I am pleased to inform you that your proposal to present at our upcoming Erasmus + ECoGREEN Bootcamp Event in Hasselt University on 2 – 6 September 2024 has been accepted. We appreciate your interest in sharing your expertise with our participants.

As a presenter, you are expected to deliver your presentation with the topic: Waste Bank as a driver for innovation and entrepreneurship on Thursday, September 5th, 2024 at 9 am – 10 am. Should you have any questions or need further information, please do not hesitate to contact us.

We look forward to your participation and thank you once again for your willingness to contribute to Erasmus + ECoGREEN Bootcamp Event.

Best regards,

Lotte BOOSTEN





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ECoGREEN BOOTCAMP

5 SEPTEMBER 2024

WASTE BANK AS A DRIVER FOR INNOVATION AND ENTREPRENEURSHIP

Astari Minarti

Dept. of Environmental Engineering,
Faculty of Landscape Architecture and Environmental Technology
Universitas Trisakti





OUTLINES



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INTRODUCING WASTE BANK AS A GRASSROOT APPROACH

CREATE YOUR INNOVATION TO BOOST YOUR LOCAL WASTE BANK PERFORMANCE

SHARE YOUR IDEAS



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LEARNING OBJECTIVES



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Why is it important to consider Small Medium Enterprise (SME) as one of the contributors to environmental pollution?

Small and medium enterprises (SMEs) are critical drivers of growth in developed and developing economies alike.

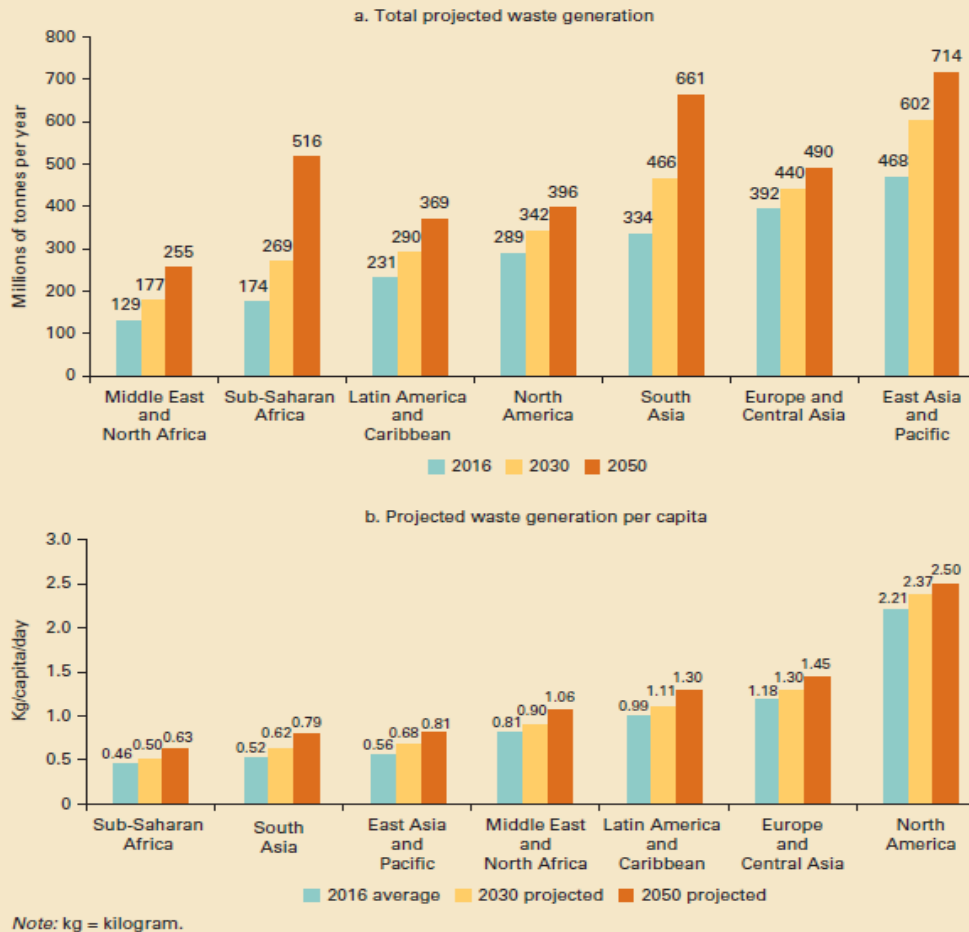


TRANSFORMING WASTE INTO WEALTH



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Figure 2.7 Projected Waste Generation by Region



Source: World Bank Group, 2018

Community waste management – a definition

Waste management and recycling practiced by community based organizations.

These could be in provincial towns, villages, remote rural areas, small island communities or parts of cities in low and middle income countries where there is no, or inadequate, municipal waste management service.

Community waste management includes waste reduction, collection, sorting, selling materials, recycling, composting, and safe disposal.

Importantly, the techniques are low-cost and do not require specialist knowledge or skills.



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INTRODUCTION: SOCIAL ENTREPRENEURSHIP IN THE CIRCULAR ECONOMY



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CIRCULAR ECONOMY:

REDUCE – REUSE – RECYCLE – REFUSE – REFORM

Solid waste management is the process of collecting, treating, and disposing of solid materials that are discarded by society. Effective waste management is crucial for maintaining public health and environmental quality. One of the key frameworks used in solid waste management is the 3Rs: **Reduce, Reuse, and Recycle** which then expanded to **Refuse dan Reform** as the implementation of Circular Economy concept to support SDGs.

- **Reduce:** to minimize the amount of waste generated in the first place.
- **Reuse:** to extend their life cycle and reduces the need for new resources.
- **Recycle:** to convert waste materials into new products.
- **Refuse:** to decline products or services that are not necessary or that contribute to waste.
- **Reform:** to make changes in systems, policies, and practices to improve sustainability and reduce waste.



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THE CONCEPT OF WASTE BANK

The Waste Bank is Indonesia's solution for overcoming the waste problem while simultaneously implementing the concept of a circular economy. It is beneficial for community and nature sustainability.



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Waste banks are innovative community-based initiatives that promote the collection, sorting, and recycling of waste by allowing individuals to deposit their recyclable materials in exchange for financial compensation or other incentives.

The basic idea behind a waste bank is simple:

1. People bring their recyclable waste, such as plastics, paper, metals, and glass, to a designated waste bank.
2. The waste is then weighed, and the depositor is credited with an equivalent value, often in the form of savings or other rewards.
3. These deposits can accumulate over time, providing a tangible incentive for individuals to participate in recycling activities.
4. The collected waste is then sold to recycling companies, generating revenue that can sustain the waste bank's operations.



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SIMPLIFIED WASTE FLOW MAP



adapted from Peta Alur Sampah [Ocean Plastic Prevention Accelerator, 2022]





OUR WASTE BANKS SAVED 5,256kg OF WASTE FROM ENTERING OUR OCEANS IN 2021

WHAT IS A WASTE BANK?

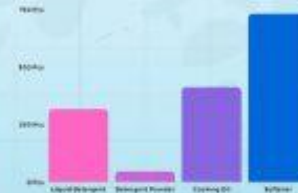
A Waste Bank is a system of collecting & sorting solid waste that borrows on the concept of banking, but saving waste instead of money. 'Savers' have a savings book and can earn credits to borrow money that will later be returned with solid waste worth the money borrowed.

What makes up the waste?



CLEAR has established a six month mentoring program in the Pangandaran area, supporting the community to set up waste banks and become "WASTE WARRIORS".

Total waste prevention through Refill Store



CLEAR's refill store has been operating for approximately 3 months. In that time, we've saved as many as **1030 pieces of plastic** from entering the environment or going into landfill.



6

Number of active waste banks involving 5-10 women as management



271

Number of households served. Around **1084** people directly benefit from the waste bank



Source: waste bank recycling records data 2021

[@clearcommunity](#) [@baletau](#)

Recycle Waste Bank at KMUTT Bangmod campus



THE RECYCLED WASTES DEPOSIT AT RECYCLE WASTE BANK



PAPER

53.09%
43,376 kg



GLASS

6.96%
5,686 kg



METAL

23.50%
19,199 kg



PLASTIC

16.45%
13,439 kg



THE ACTIVITY FLOW OF WASTE BANK



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A GLANCE OF WASTE BANK IN INDONESIA



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Gundaling I Berastagi residents are exchanging collected waste for groceries such as eggs and cooking oil at the Mela Melket waste bank. (Photo Courtesy of Danone-AQUA)



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THE CONCEPT OF WASTE BANK



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Fostering Innovation through Waste Banks

Waste banks encourage innovation in several ways:

1. Product Design and Upcycling:

Waste banks promote creative thinking in the reuse and upcycling of materials. Entrepreneurs can develop new products from waste, such as fashion items from discarded fabrics, furniture from pallets, or art pieces from scrap metal. This process often leads to unique, eco-friendly products that appeal to niche markets.

2. Waste Sorting and Processing Technologies:

The need to efficiently sort, clean, and process waste for recycling has led to the development of new technologies and methodologies. Innovators are creating low-cost, accessible machines and systems that can be used in waste banks to improve the quality and efficiency of waste processing, making recycling more viable and profitable.

3. Digital Platforms and Mobile Apps:

Technology plays a crucial role in modernizing waste banks. Entrepreneurs are developing digital platforms and mobile apps that connect waste banks with users, track waste deposits, provide real-time data, and facilitate transactions. These platforms enhance transparency, efficiency, and user engagement, making waste management more accessible to a broader audience.

Do you want to become a next level
upcycling entrepreneur?

Take part in **RENEW2020**

The first European Creative **Waste Recycling course!**

The first European Creative Waste Recycling course!



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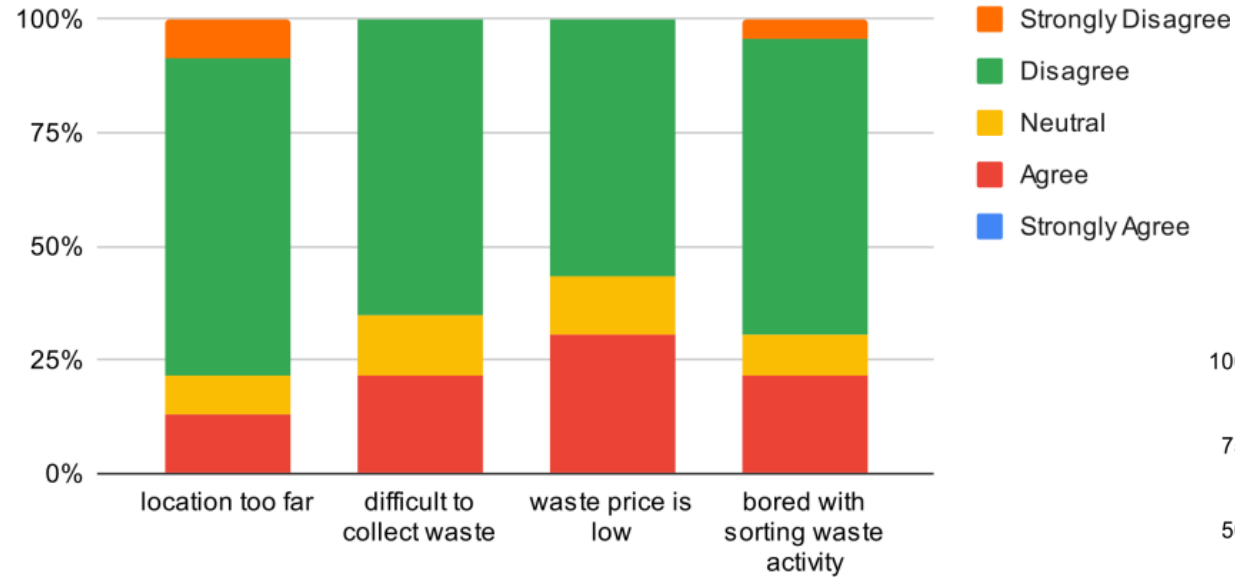


CHALLENGES AND OPPORTUNITIES

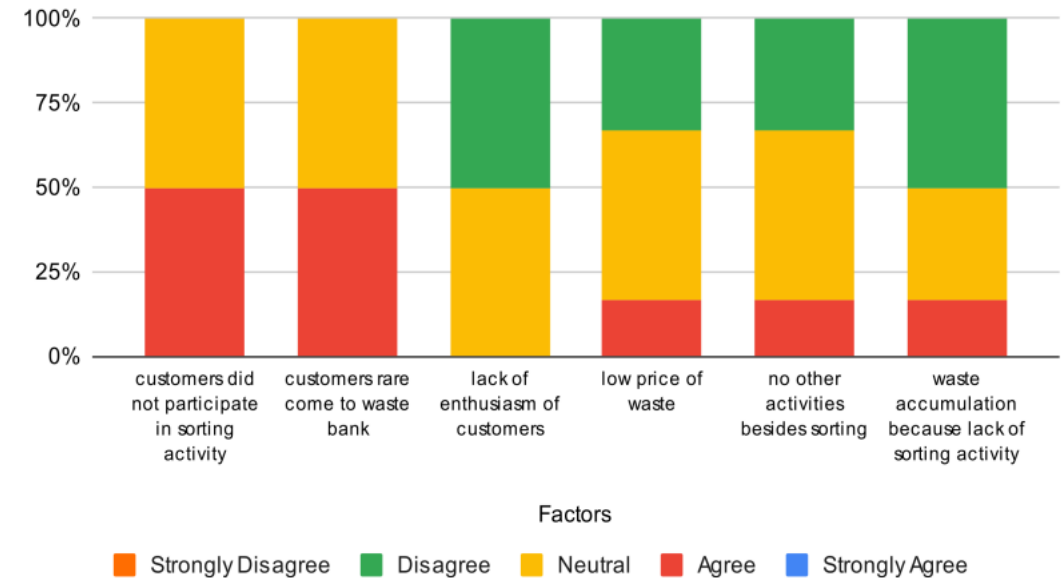


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Obstacles faced by waste bank customers



Obstacles faced by waste bank committee



Source: Ismiraj et al. (2023). Perceptions of Community-Based Waste Bank Operators and Customers on Its Establishment and Operationalization: Cases in Pangandaran, Indonesia.



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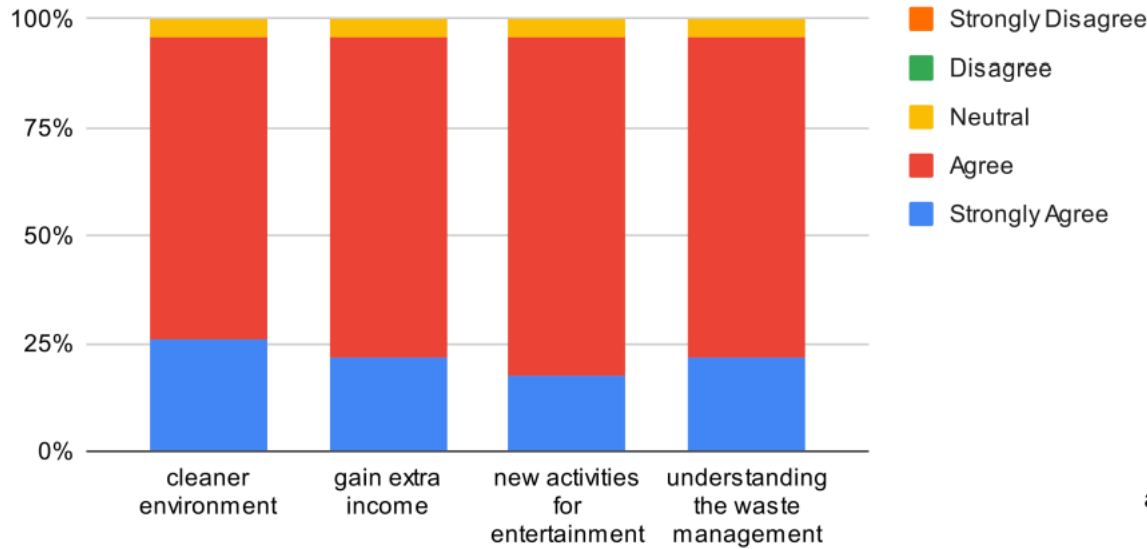


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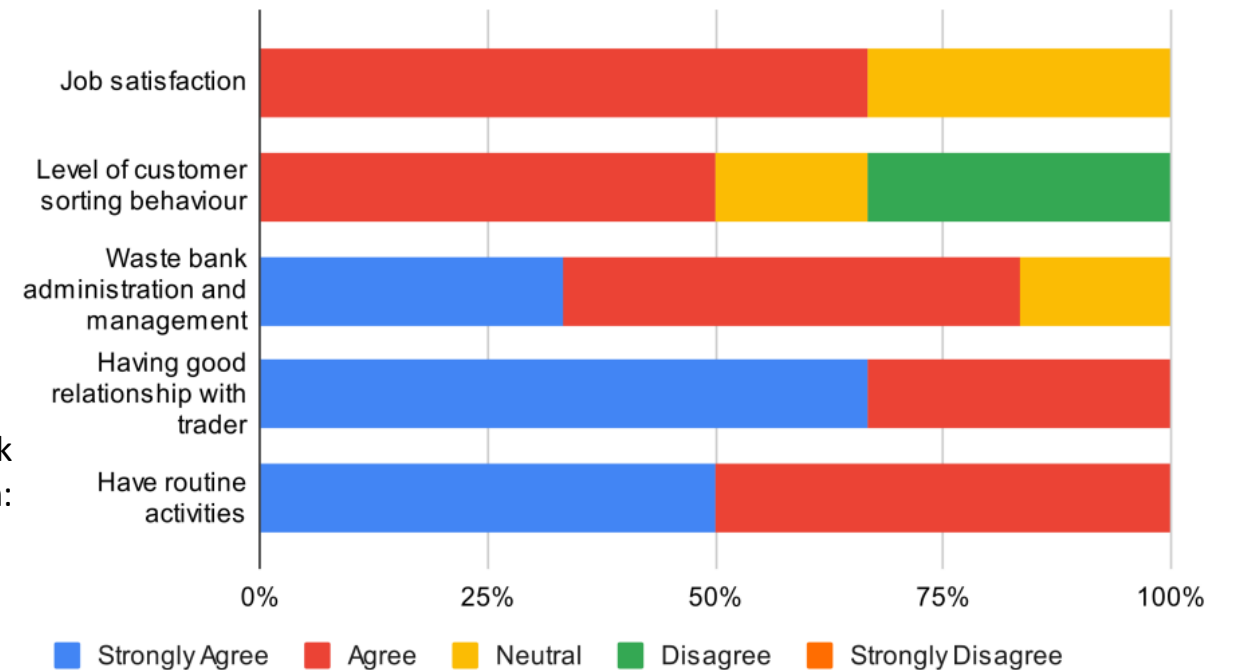


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Customers perception on benefits of waste bank operation



Committee perception on waste bank operation



Source: Ismiraj et al. (2023). Perceptions of Community-Based Waste Bank Operators and Customers on Its Establishment and Operationalization: Cases in Pangandaran, Indonesia.





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Thank you

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