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Quantifying and Monetizing Co-benefits: The Case of Pro-Poor Waste-to-Resource Strategies In Developing Countries : Experience of Waste Concern with Composting Project

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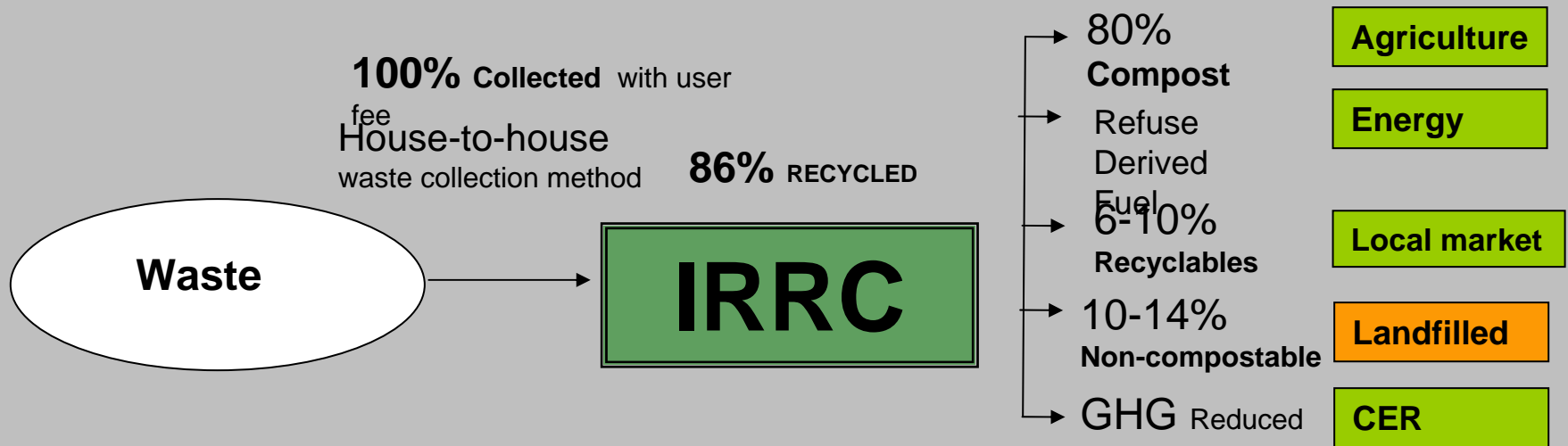


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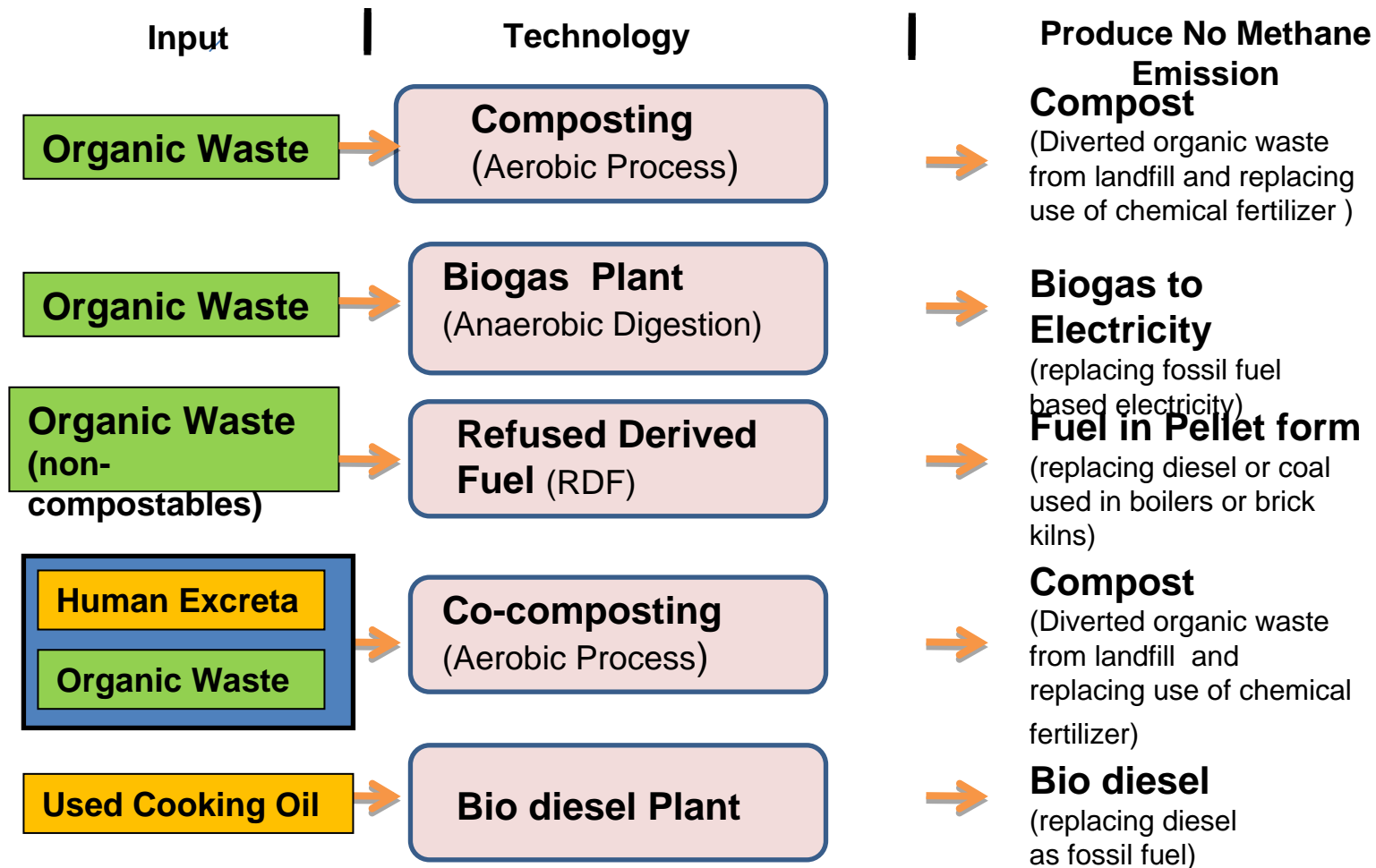
- I. What Is Waste to Resource Approach?**
- II. Economic Opportunities From Climate Change Mitigation Projects**
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What is Waste to Resource Approach?

- ❑ Waste to Resource is an approach which converts waste into economic outputs, such as compost, refuse derived fuel (RDF), biogas, bio fuel and also contributes to emission reduction. This approach promotes upstream management of waste and avoids end-of-pipe approaches of managing waste.
- ❑ Since 2007, the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), in partnership with Waste Concern, has been promoting decentralized and Integrated Resource Recovery Centers (IRRCs) in secondary cities and small towns in Asia-Pacific with the objective to recover value from waste and provide livelihood opportunities to the urban poor. IRRC is based on waste to resource approach.
- ❑ IRRC is a facility where significant portion (80-90%) of waste can be composted/recycled and processed in a cost effective way near the source of generation in a decentralized manner.



IRRC model and economic



IRRC model converts waste into resource and reducing green house gas methane (CH₄)

How to Quantify and Monetize Co-benefits

The calculations and data reported here refer to a registered CDM composting project operated by Waste Concern in Dhaka, Bangladesh. The project was approved in July 2006 as a registered CDM project. Verification of CERs was completed by DNV in June 2011 and December 2013, and CERs have been issued from 2009 to 2012.

We have also collected and used data from our partner organizations (Sevanatha and ENDA) from Sri Lanka and Vietnam respectively to develop this paper.



Steps to Quantify and Monetize Co-benefits

Step 1

Quantify emission reduction from composting of municipal organic waste

Step 2

Identify quantifiable impact indicators of the project apart from GHG emission reduction

Step 3

Collect baseline data for the co-benefit indicators identified

Step 4

Collect data of quantifiable indicators after implementation of the project

Step 5

Calculate the net co-benefits of the project

Emission Reduction by Processing 1 (one) Ton of Organic Waste



Problem	Co-benefits	Co-Benefit Indicators	Type of Benefit	Baseline Data	Condition After Implementation of the Project	Net Co-benefit
Unmanaged organic waste generates methane if kept in anaerobic condition.	Aerobic composting technique can produce good quality compost and at same time avoid GHG emissions.	Amount of GHG reduced.	Public	0.	0.5 tons per ton of organic waste composted	0.5 tons per ton of organic waste composted.

GHG Mitigation through Composting of Organic Waste



Recycling 1 (one) ton of organic



LOW EMISSION
CAPACITY BUILDING
PROGRAMME

Creation of New Jobs= 2 nos.
Create 2 new jobs for the urban poor, including waste pickers



Co-Benefit Indicators	Type of Benefit	Baseline Data	Condition After Implementation of the Project	Net Co-benefit
Number of safe jobs created for low income people and waste pickers. Increase in income of workers by having safe jobs.	Both public and private	Average income of waste picker in is Taka 2600 per month out of which 15% are medical expenses per month. Average disposable income is Taka 2210 per month.	2 jobs per ton. Average income of waste pickers working in the plant is Taka 7000 per month.	2 jobs per ton. Average increase in income of waste pickers by working in the compost plant is Taka 4400 per month.