



# WASTE TO ENERGY: Incentives for MSMEs for Environmental Investment

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# Outline

- Background
- Policy on incentives for MSMEs
- Waste to Energy by MSMEs
- Remarks



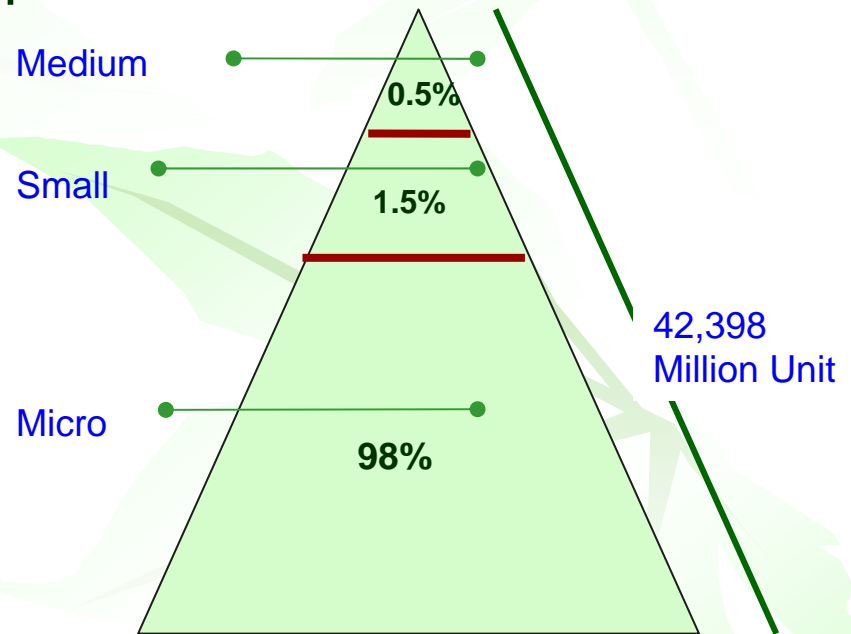
# Background

- Financial support for management of waste has always been problematic → particularly true for micro, small and medium enterprises (MSMEs);
- To anticipate the current energy crisis as well as climate change related issue → utilization of wastes as to become alternative sources of energy is one of solution;
- The GoI, therefore develops incentive schemes to support adoption of various technologies to convert wastes into energy, esp. for MSMEs.



# WHY MICRO, SMALL AND MEDIUM ENTERPRISES (MSEs)?

- Volume of MSMEs more than 99% and significant to Indonesian economic;
- By numbers, significantly contribute to load of environmental pollution;
- Potentially to improve environmental performance: recycling industries, composting.



**Yet, only 15% of micro and small enterprises in Indonesia have get access to existing financial sources.**



# Why Bank can not finance MSEs?

## 1. In terms of administration matter:

MSMEs often provide insufficient or unfeasible collateral  
Inadequate financial reports and/or business licenses

## 2. The MSMEs' business are considered to be a high risk investment due to the following reasons :

- MSMEs whose products are regarded as innovative product,
- MSMEs that need seed capital to develop new products
- MSMEs that are in developing stage
- MSMEs that need extensive funding but haven't entered their mature period
- MSMEs' businesses which are seasonal, such as plantation and fisheries.



# Environmental Policy

- Act 23/1997 → Government shall develop and implement type of instruments (preemptive, preventive and proactive) to enhance environment management in Indonesia;
- Mixed Policy Approach → CAC, MBIs, & partnership.  
Among others the instruments is economic instruments  
→ include: polluters fee, financial incentive, tradable permit, etc.



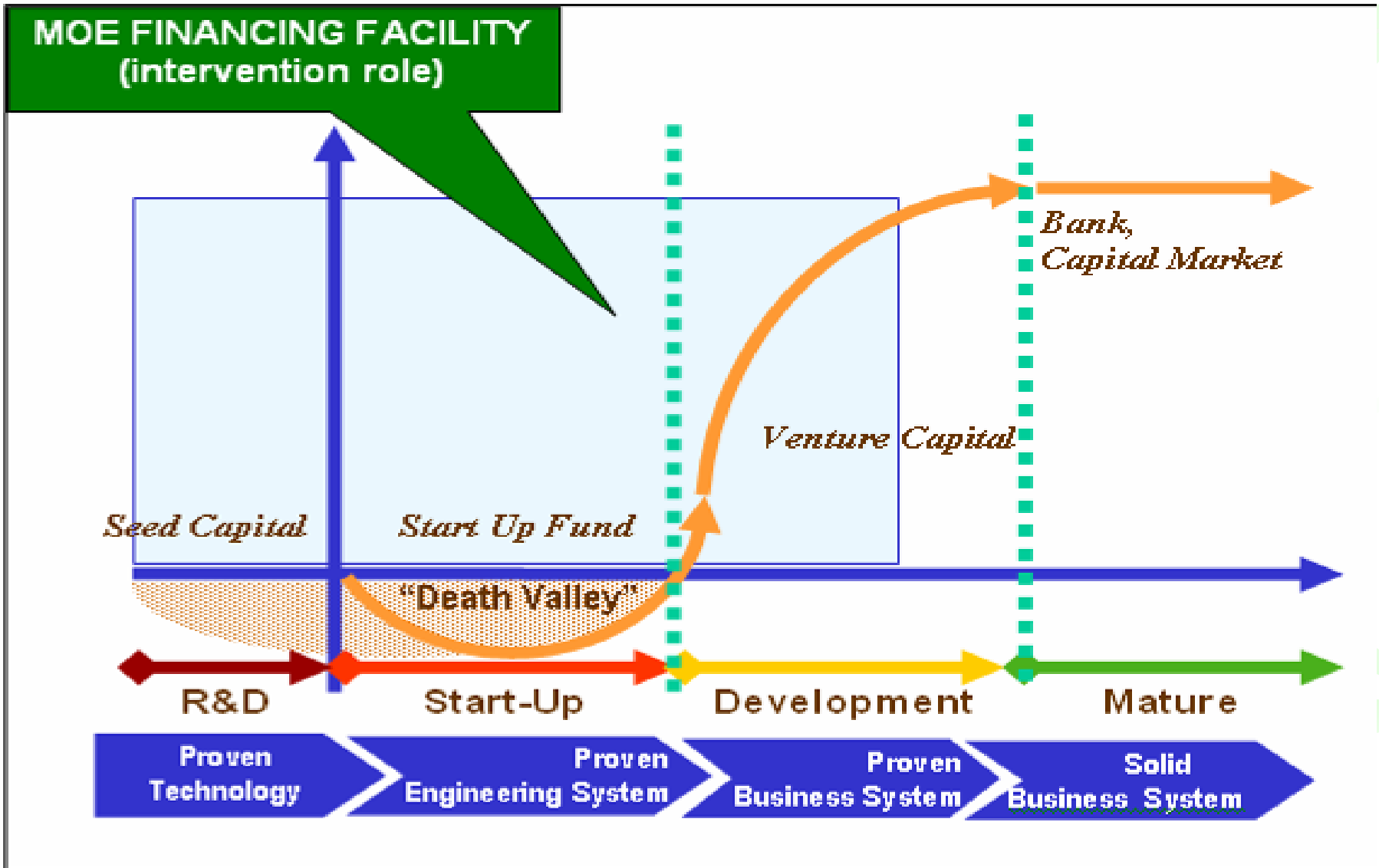
# Existing Incentive Schemes Provide by MoE



- Soft Loan Programs
- Import Duty Exemption Program
- Debt for Nature Swap (DNS)
- GEF (multilateral fund)
- ODS Phase-out Trust Fund
- Subsidy/grant program for composting program
- Special Allocated Fund for environmental management by Local Government



# GOVERNMENT INTERVENTION





# Environmental Soft Loan Schemes for Environmental Investment

	JBIC-PAE	IEPC-KfW 1	IEPC-KfW 2	DNS (Debt for nature Swap)
Target Groups	All scales of enterprises	SMEs	SMEs	MSEs
Banks	5 National Nasional (State own/private)	4 Regional banks + 1 National Bank	2 APEX Bank, 4 Regional Banks + 1 National Bank	1 Syariat Bank
Type of credit	Investment	Investment	Investment (75%) + working capital (25%)	Investment (60%) + working capital (40%)
Interest Rate (effective)	Equal to Central Bank' Rate	11 - 14% pa	Minimum 2% below market	syariat (equal to 10 - 13% pa)
Technical Asisstance	- none -	Regional Consultant	Technical Asisstance Unit (TAU)	Technical Asisstance Unit (TAU)



# EXAMPLES OF ENVIRONMENTAL INVESTMENT FOR MSEs

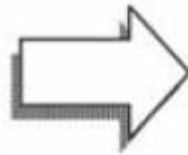
## WASTE TO ENERGY



# Animal Waste for BIO COOKING-GAS



BEFORE, using fire woods



AFTER, using biogas



# Biogas for Electricity





# Biodiesel unit from waste oil



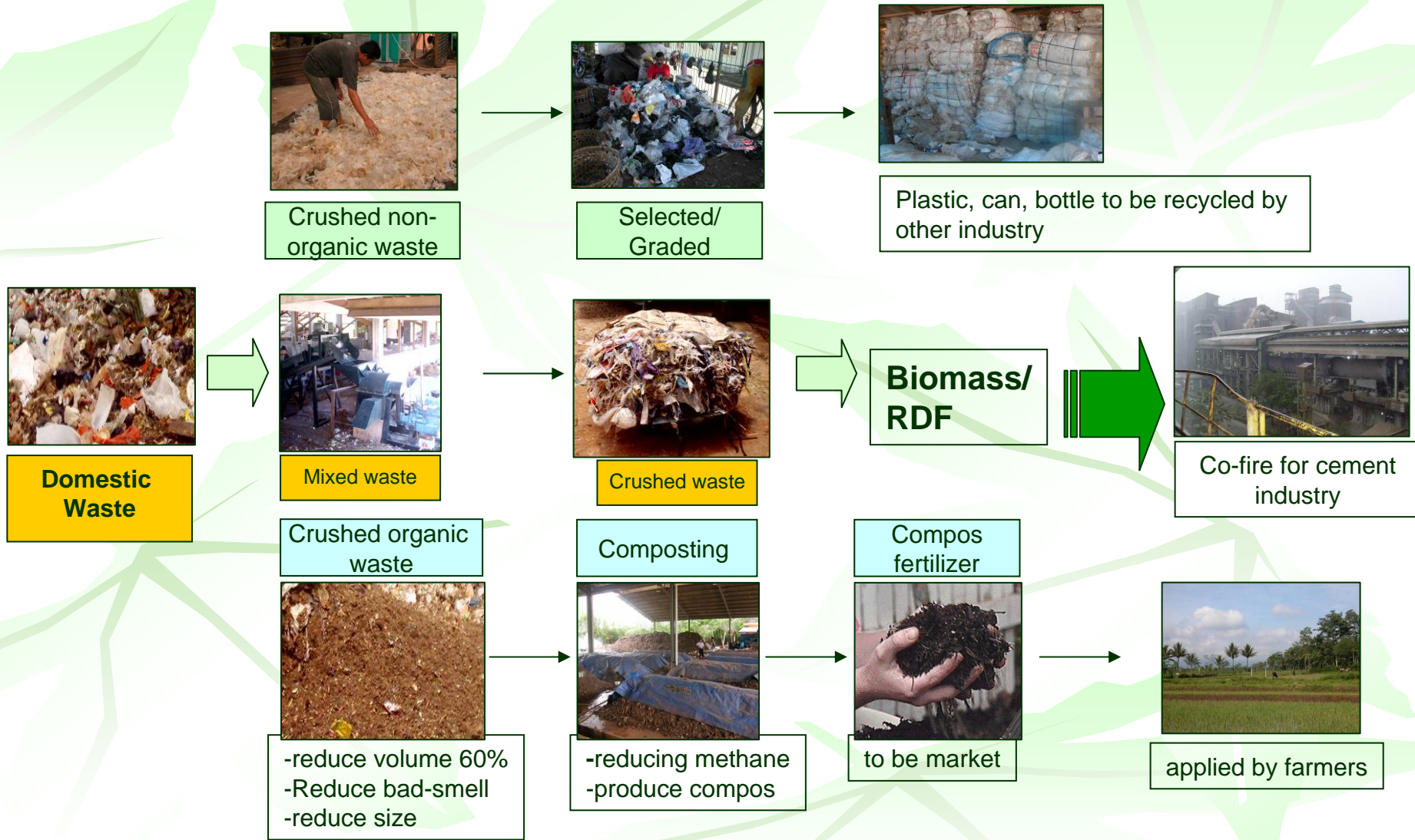
**Recycling unit of waste-oil at Islamic School, Makassar (capacity 1 ton/day of 2 batch)**



Produce biodiesel for their domestic purpose



# ENERGY FROM DOMESTIC SOLID WASTE





*Penyolakan sampah menjadi Biomass*  
**PT. INDOCEMENT** *sebagai pemakai Biomass*



# Further Development

- Utilize CDM scheme → small scale, bundled and sectoral CDM
- Embark toward Environmental Fiscal Reform → among other to address climate changer regime, i.e. carbon tax, adaptation fund, etc.
- Involve broaden financial institutions and stakeholders → through Central Bank, other institutions, private companies, etc



# Remarks

- Incentive schemes needed to encourage MSMEs, to improve their, both production and environmental performance.
- Implementation of the schemes show that financial benefits could be achieved through environmental Investment → financial institutions are to see that environmental investments could be economically interesting
- The scheme provide a triple-win solution → economic, environment and development.



THANK YOU

Further Information:

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