



# Biomass Gasification Technology - Sustainable Energy for Agri-Food Processing and Waste Management

Switch-Asia 2021 Leadership Academy

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Oxfam in Vietnam  
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# Unsustainable agri-processing



# Unsustainable agri-processing



## Problems

- High production cost
- Smoky and dusty processed products
- Health problems
- GHG emission



# Diverse, huge & unused biomass



- 118 mill tons of biomass available (MoIT, 2015), but only 11% is being used (Danida, 2017)
- Unused biomass is equivalent to 38.8 mill tons of diesel valued 22.5 bill USD



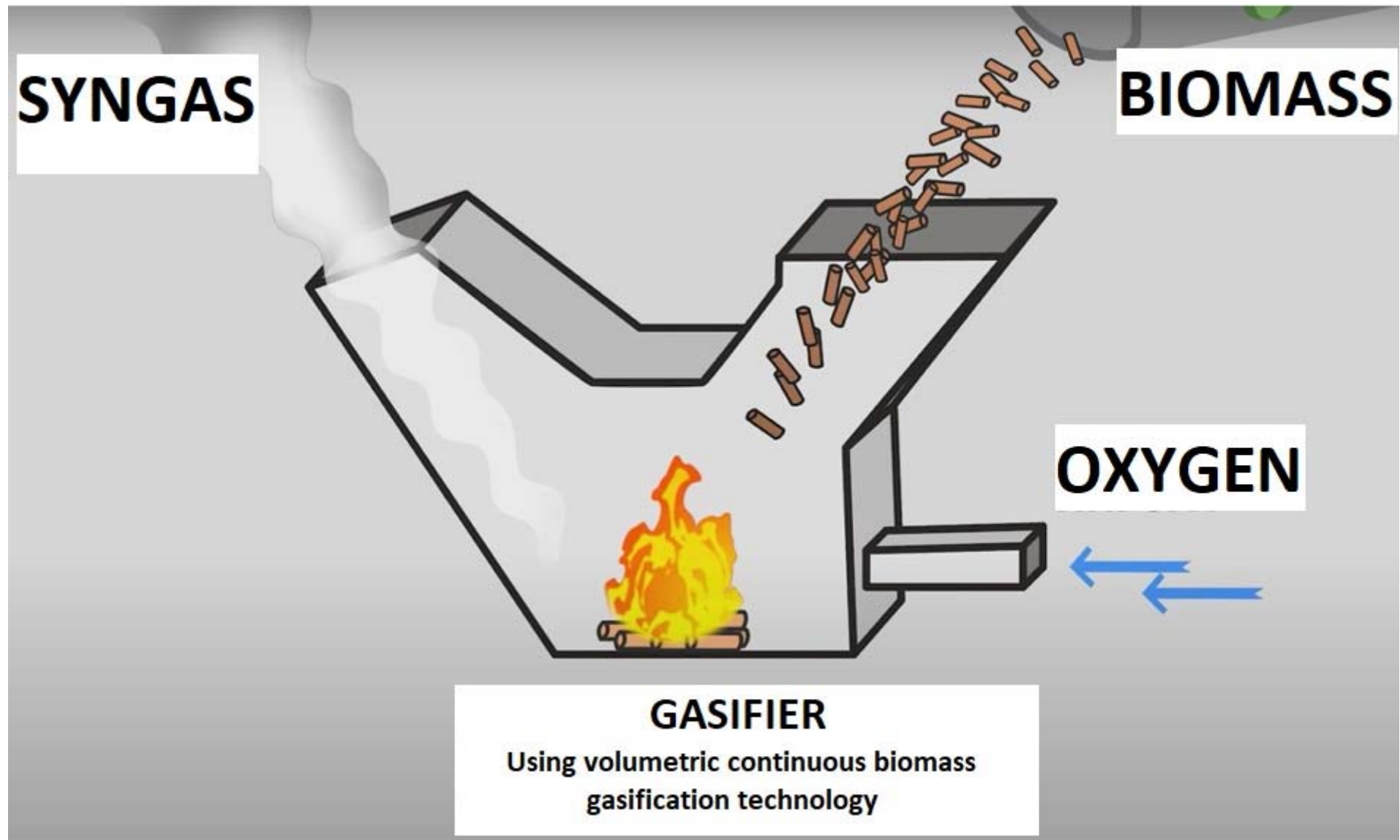
# Diverse, huge & unused biomass



**Unused biomass is either burnt or dumped to the ground causing environmental pollutions**



# Biomass gasification technology



# Biomass gasification technology



# Biomass gasification technology

- 50% lower cost compared with coal, diesel and gas
- Accepting various types of biomass, including high-moisture
- Highly available sources of biomass at local
- Reducing emissions
- Effective waste management
- Generating jobs and incomes, particularly for women in biomass businesses





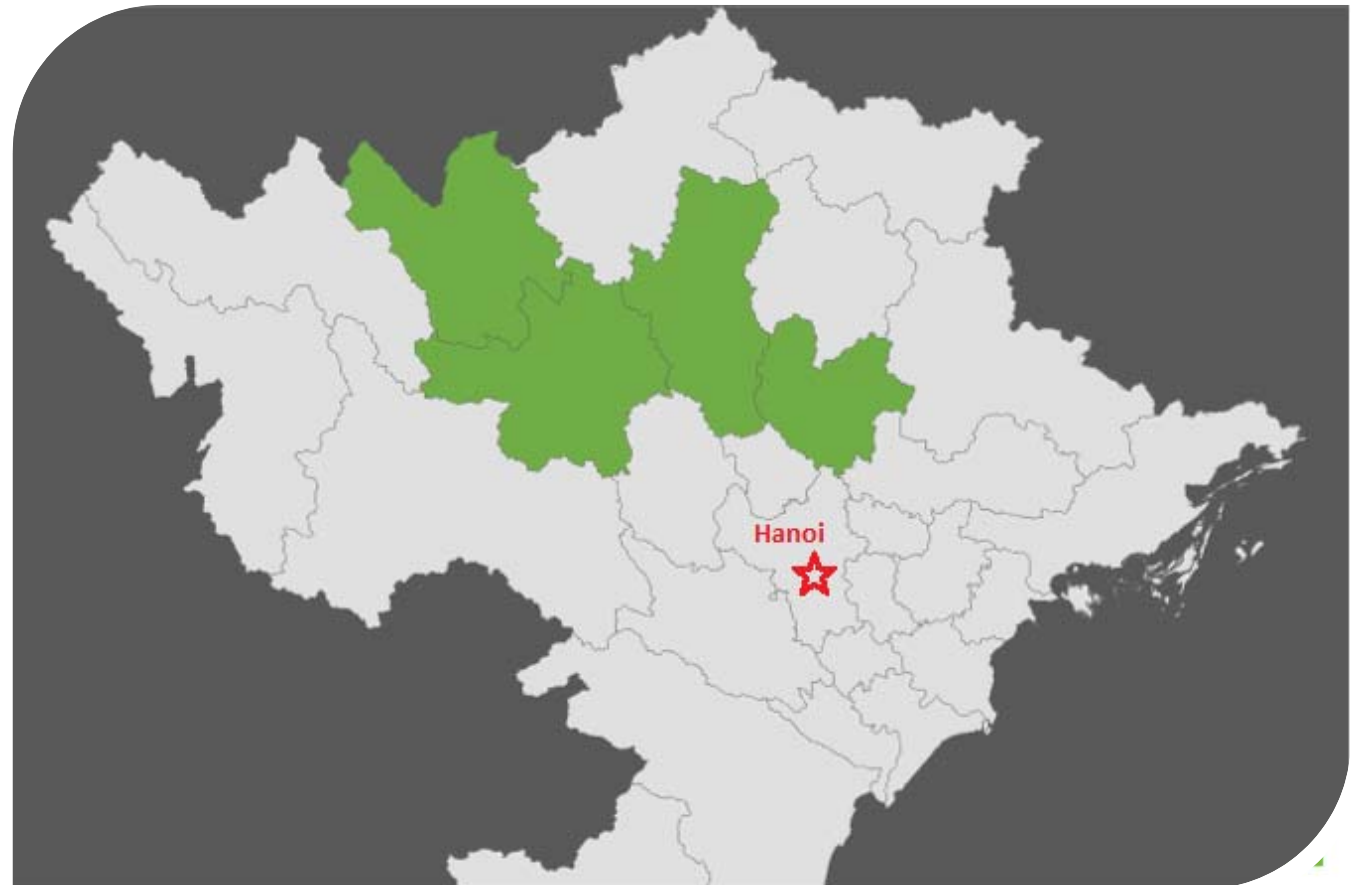
# Project snapshot

## Target groups:

- 2,500 Agri-MSMEs
- 100 mechanical businesses
- 400 biomass collection businesses

## Final beneficiaries:

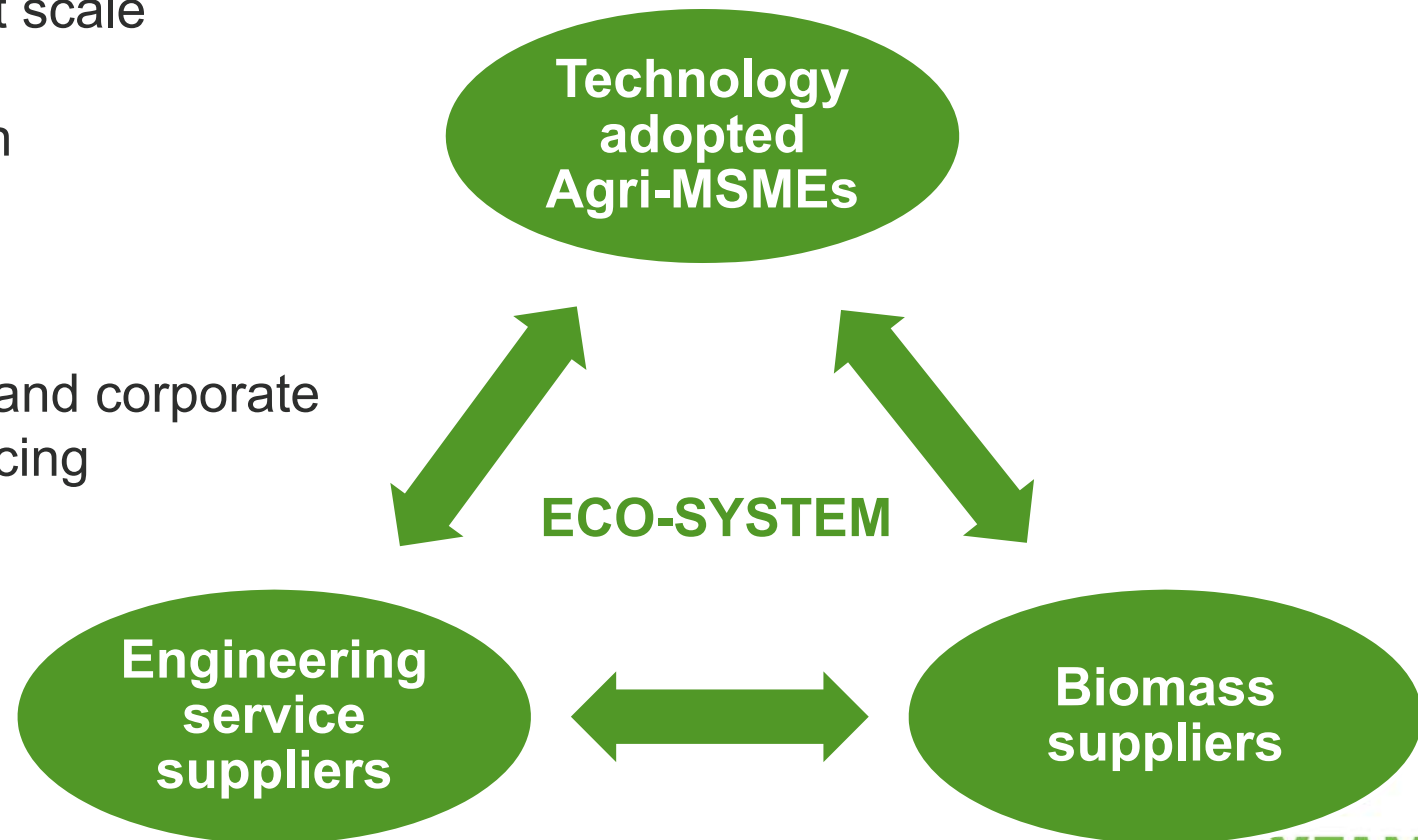
- 1.2 million people (50% are women) – benefiting from improved income and health



# Project snapshot

## Technology transfer to local:

- Replication at scale
- Self operation
- Sustainability
- Government and corporate policy influencing



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# Project snapshot

**Overall Objective:** To promote sustainable agri-food processing and contribute to enhancing waste management in Vietnam by facilitating the adoption of CBGT as renewable energy among agri-MSMEs

## Outcome 1:

Agri-MSMEs achieve improved product quality and efficient energy consumption and contribute to managing rural waste

## Outcome 2:

Increased availability of mechanical and biomass supply services and access to finance for agri-MSMEs

## Outcome 3:

Buy-in and support from relevant government agencies for further adoption and replication of technology

# Challenges

- Resistance to change of MSMEs
- Chopping of biomass
- High competition in biomass use
- Scattered distribution of biomass



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# Summary of MEL discussion

**THANK YOU**

Project video: <https://www.youtube.com/watch?v=eucz8q12fHI>

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