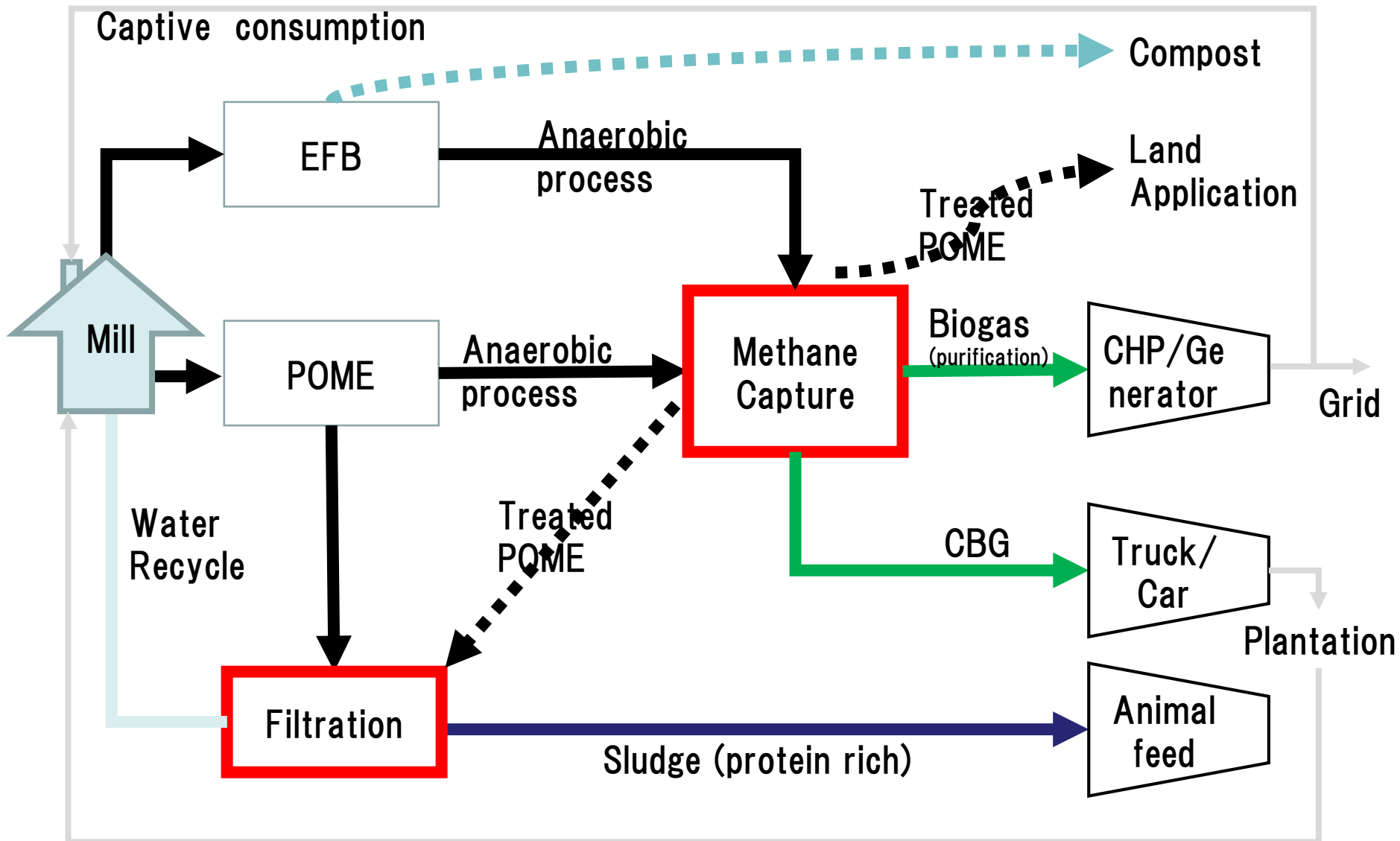


# FY2015 survey on co-benefits approach to the issue of wastewater from palm oil factories in Indonesia

- Aim of this project
  1. Consider the introduction of a co-benefits approach to treating wastewater from palm oil factories
  2. Offer assistance for improving life cycle assessment (LCA) tools that can be used at palm oil factories
  3. Consider technical guidelines on recovery and utilization of methane at palm oil factories
- Project plan

Aim of project	FY2015	FY2016	FY2017
Introduction of co-benefits technologies to treat wastewater	<ul style="list-style-type: none"> <li>- Selection of technologies</li> <li>- Selection of site for a pilot project</li> <li>- Development of a draft project plan</li> </ul>	<ul style="list-style-type: none"> <li>- Feasibility study for a pilot project</li> <li>- Implementation of a pilot project</li> </ul>	
LCA tool	<ul style="list-style-type: none"> <li>- Collection of information for improving LCA tools</li> </ul>	<ul style="list-style-type: none"> <li>- Assistance for improving LCA tools</li> <li>- Assistance for spreading and raising awareness of LCA tools</li> </ul>	
Development of technical guidelines on recovery and utilization of methane	<ul style="list-style-type: none"> <li>- Development of a rough plan</li> </ul>	<ul style="list-style-type: none"> <li>- Development of technical guidelines</li> <li>- Assistance for spreading and raising awareness of the technical guidelines</li> </ul>	

# Technical requirements in Indonesia that need to be met to establish a sustainable palm oil industry



e.g., Transportation of Palms to Mill

Technical requirement

# FY2015 survey on co-benefits approach to the issue of sewage from palm oil factories in Indonesia

Note: photos were taken during on-site visit of PTPN7 in Sumatra Island

Upper left: transportation of fresh fruit bunches (FFB)

Upper right: anaerobic treatment pond

Lower left: compost treatment for empty fruit bunches (EFB)

Lower right: a mill



# Current issues and future strategies

Category	Issue	Future strategy
Technology	How to choose technologies that could be widely used in the future, not those that have already become common	Continue discussions with companies that have apparently promising technologies (though some of those techniques are under development and it is sometimes difficult to gather information on them)
	How to select technologies that can achieve co-benefits	Consider combining multiple technologies to achieve co-benefits instead of focusing on a single technology
Cost	How to raise finances needed to conduct the pilot project	Proceed talks with related organizations to raise finances needed for the pilot project Consider a financial plan to smoothly proceed the pilot project
Calculation of effects on co-benefits	Methods to calculate and assess co-benefits	Decide an evaluation method referring to similar cases, findings from previous discussions and other factors