NAMAs in MRV Manner for Waste Sector in Vietnam and opportunities for JCM

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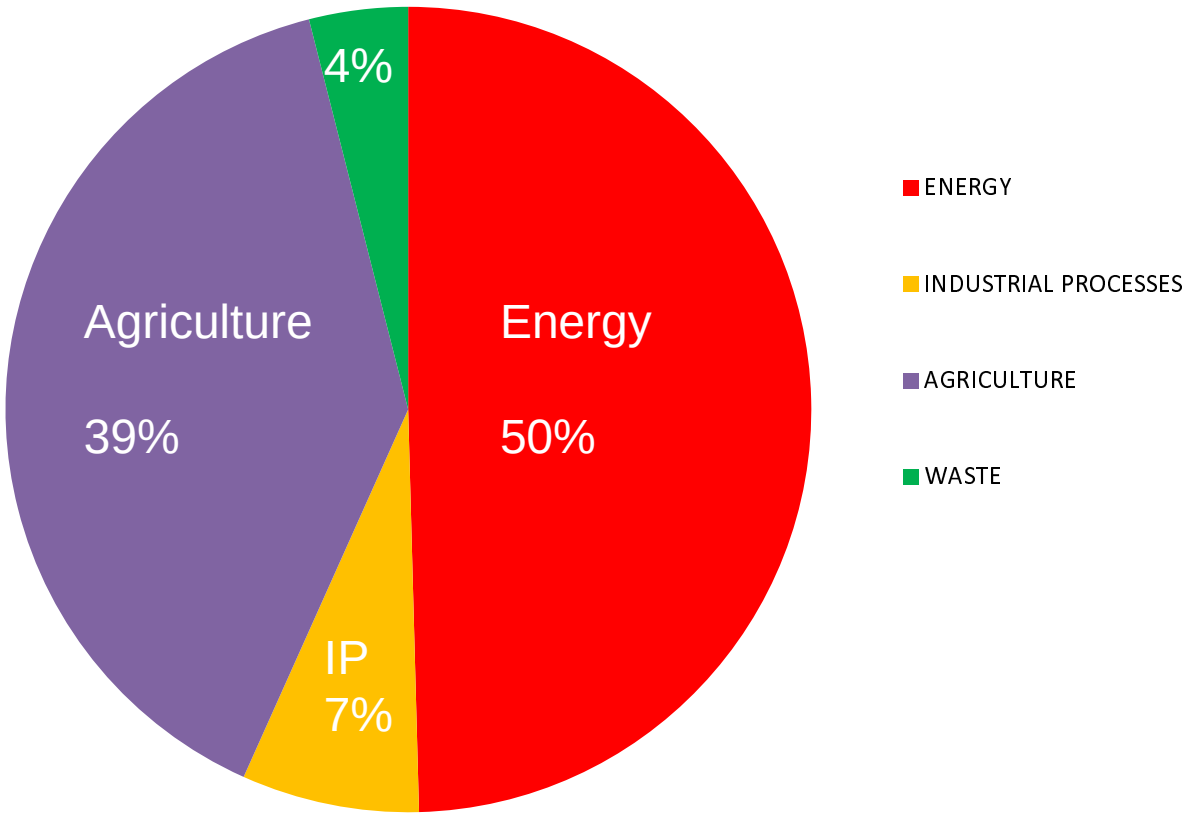
GHG emission by sector in Vietnam in 2005

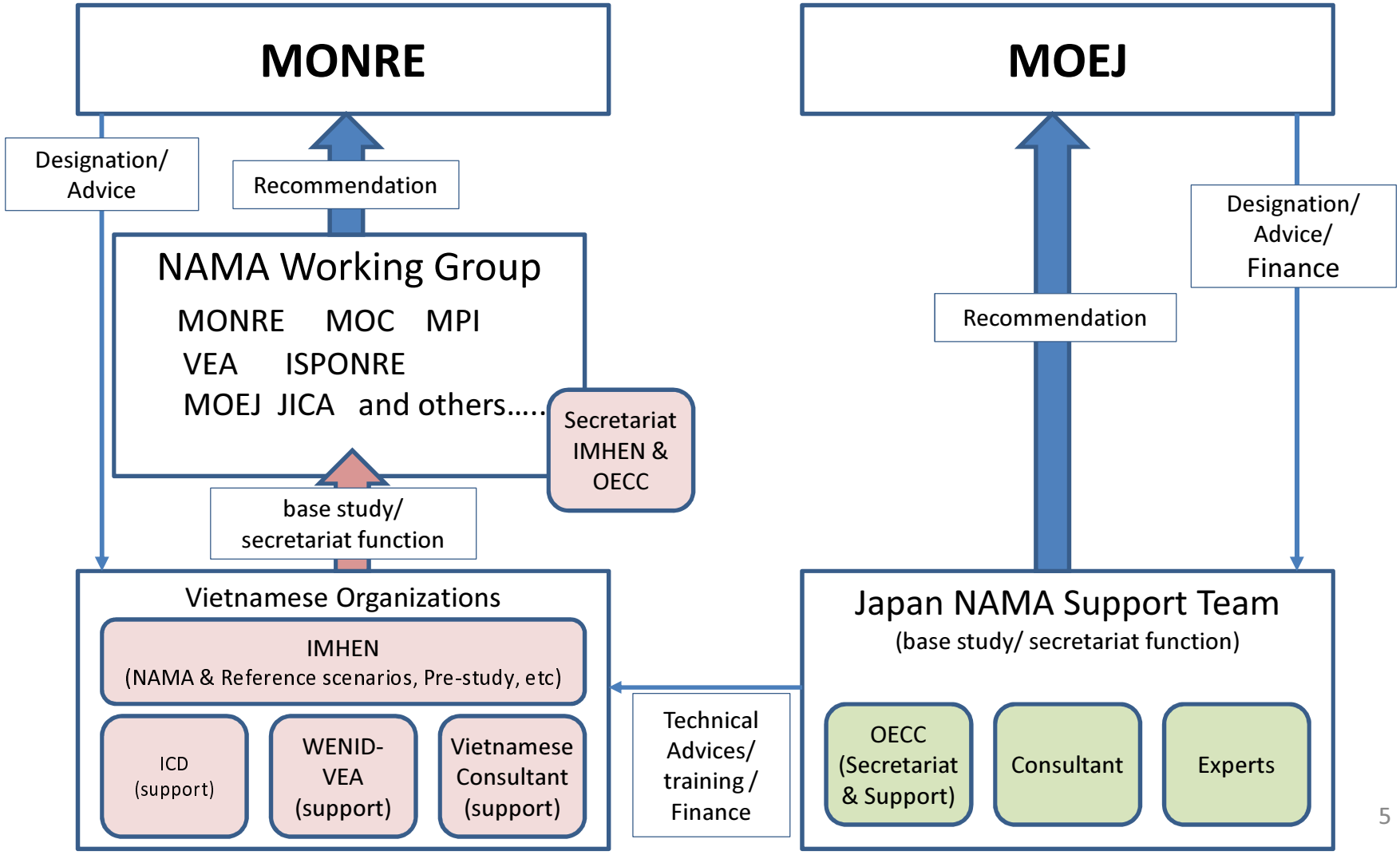


Source: Capacity building for National GHG inventory in Vietnam project supported by JICA (2010-2014)

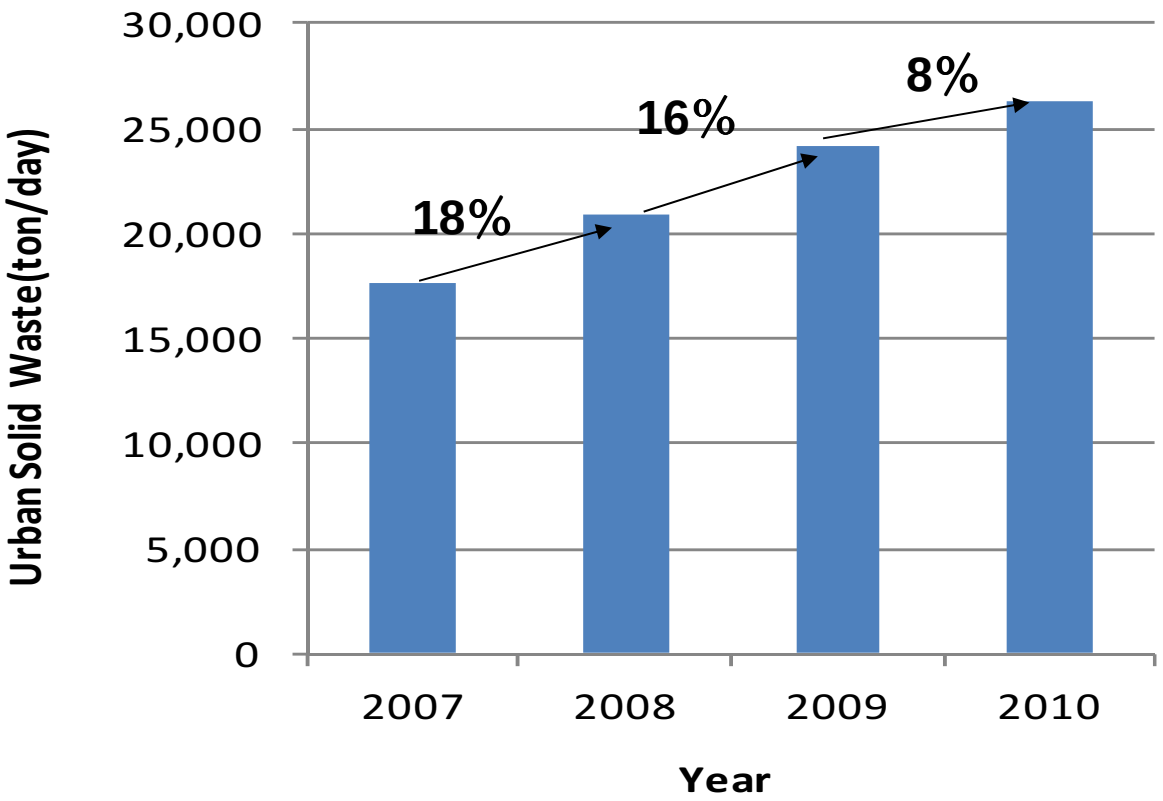
NAMAs in Waste Sector in Vietnam

- General information:
  - At COP17 in Doha, the MONRE, Vietnam, with other ministries, and the MOEJ generally agreed to launch capacity-building on NAMAs in a MRVable manner;
- Objectives:
  - To determine BAU and NAMAs scenarios in the Waste Sector in Vietnam.
  - To propose a domestic NAMAs guideline in MRV manner in waste sector.

Working Group



Municipal Solid Waste in Vietnam



{Source: MONRE (2011) *National Environmental Report 2011: Solid Waste*, p. 16}

Preliminary Results

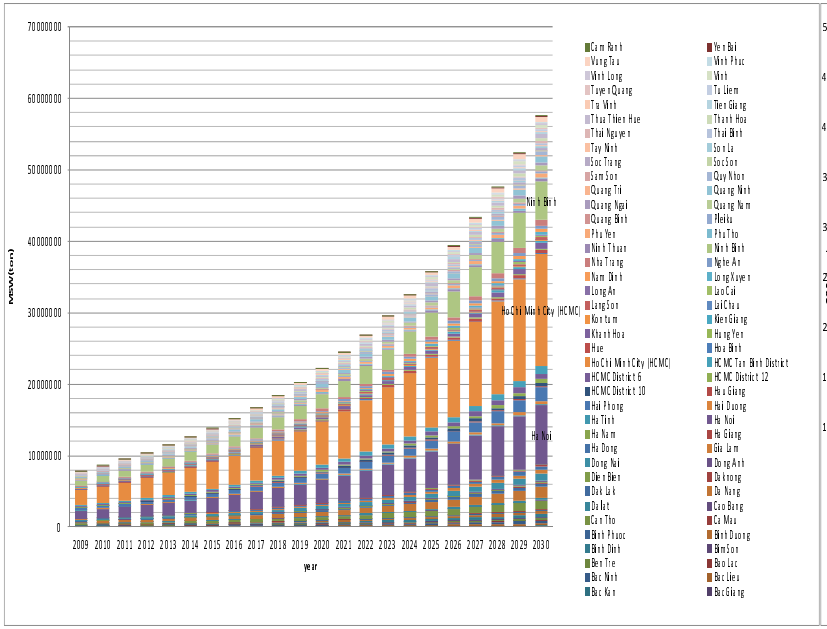
1. Established an **inter-ministerial WG**, which may be a core group for national-level decision making (and policy-level MRV).
2. Identified **BAU and emission reduction potentials** (2012 to 2020) with a bottom-up approach to quantifying GHGs.
3. Identified useful **low carbon technologies** that can be introduced for NAMAs.
4. Identified NAMAs scenarios for Waste Sector in Vietnam.
5. Jointly held a side event at COP18 in 2012 and another side even at SB38 in 2013.

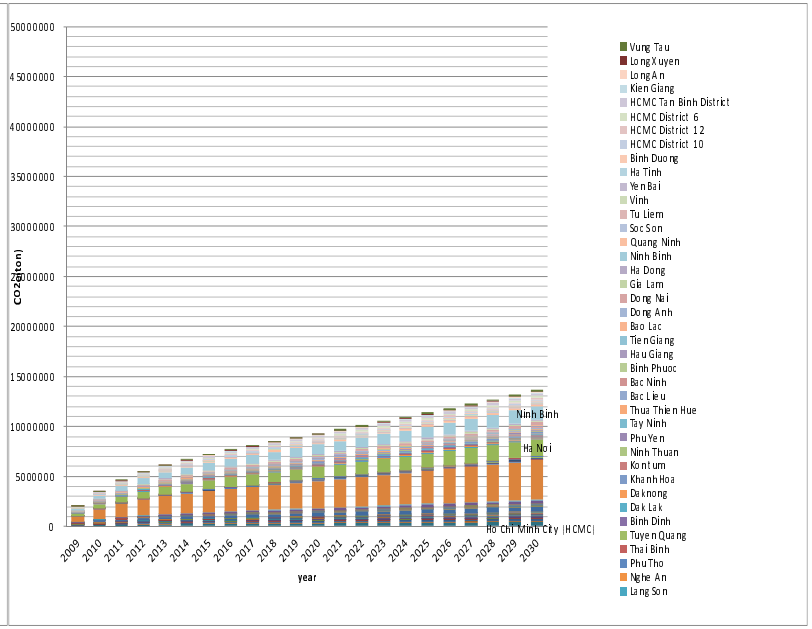
BAU Scenarios

	Scenario 1	Scenario 2
Growth Rate of MSW	10% (Based on the 2011 National Envi. Report)	3.27% (based on estimated future growth in population and GDP)

Cal. Method: IPCC 2006:

$$BE_y = \varphi \cdot (1-f) \cdot GWP_{CH4} (1-Ox) \cdot \frac{16}{12} \cdot Frac \cdot DOC_f \cdot MCF \cdot \sum_{t=y_0}^{y} \sum_{j} A_{j,t} \cdot DOC_j \cdot (1-e^{-k_j}) \cdot e^{-k_j \cdot (y-t)}$$

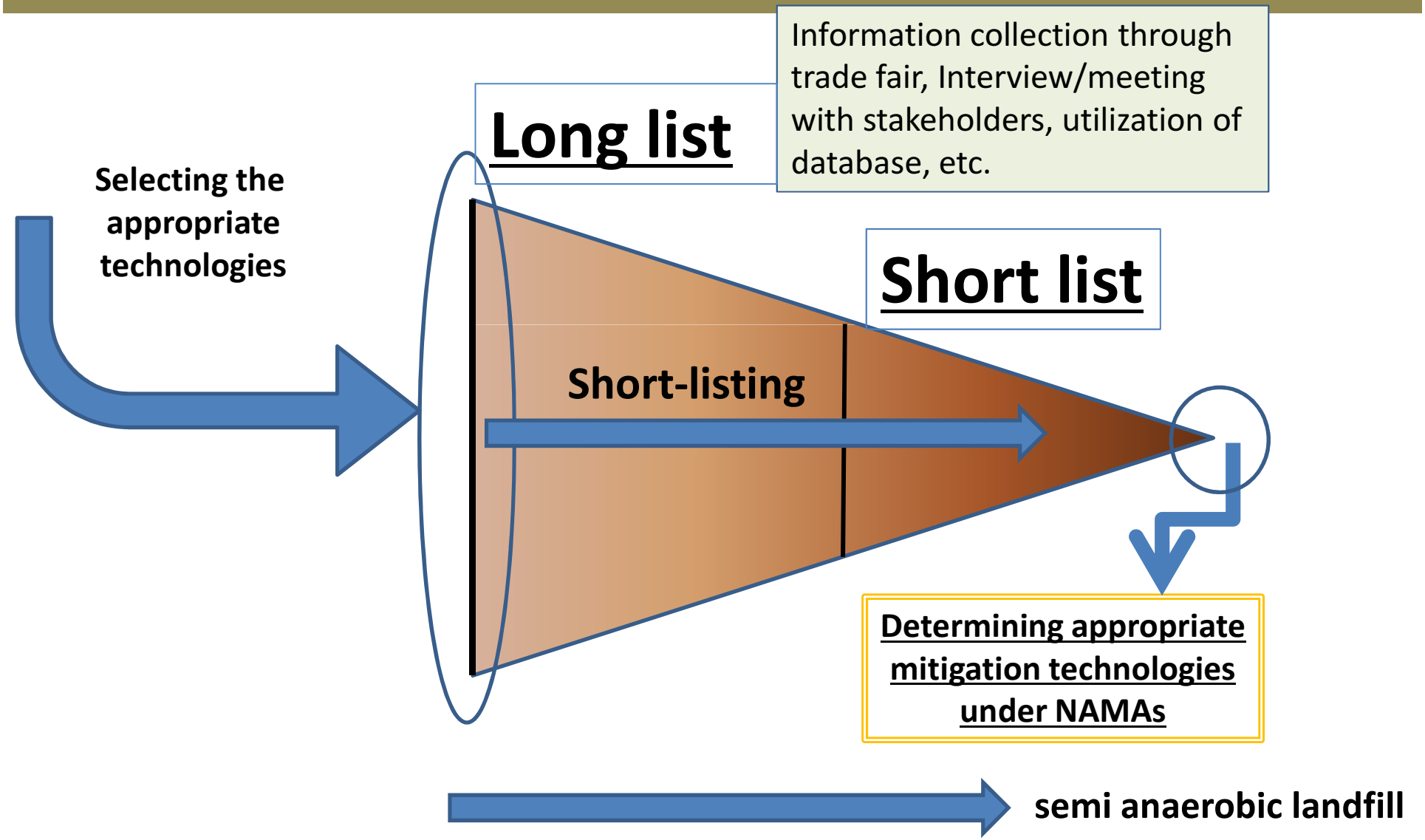




Total GHG Emissions from 2013-2020:
97,576,475 tCO_2e

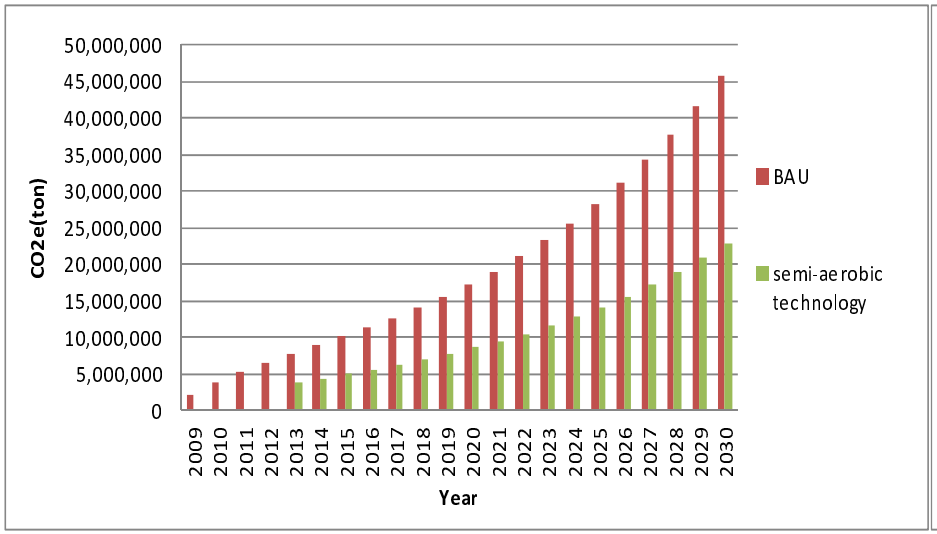
Total GHG Emissions from 2013-2020:
62,869,748 tCO_2e

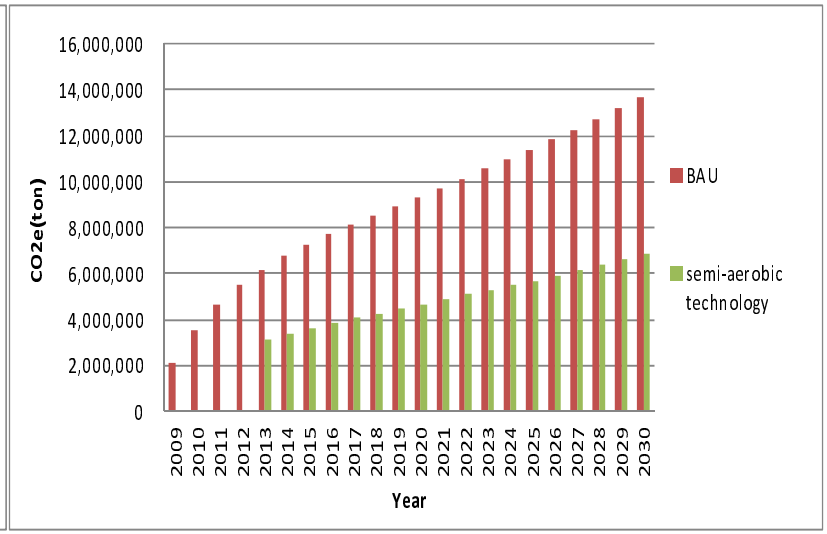
Technologies For Waste Sector



NAMA Scenarios for Waste Sector in Vietnam

	Scenario 1	Scenario 2
Growth Rate of MSW	10% (Based on the National Envi. Report 2011)	3.27% (based on estimated future growth in population and GDP)
Selected Tec.	Semi-aerobic Landfill	Semi-aerobic Landfill





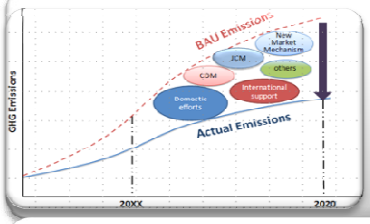
Total GHG emissions reduction (2013-2020): **48,788,238 tCO_{2e}**

Total GHG emissions reduction (2013-2020): . **31,434,874 tCO_{2e}**

2013 FY Activities

1. Collect information of **technology option**

2. Collect **data & information for BAU and NAMA scenario** in the waste sector



3. Improve **BAU and NAMA scenario** in the Waste sector

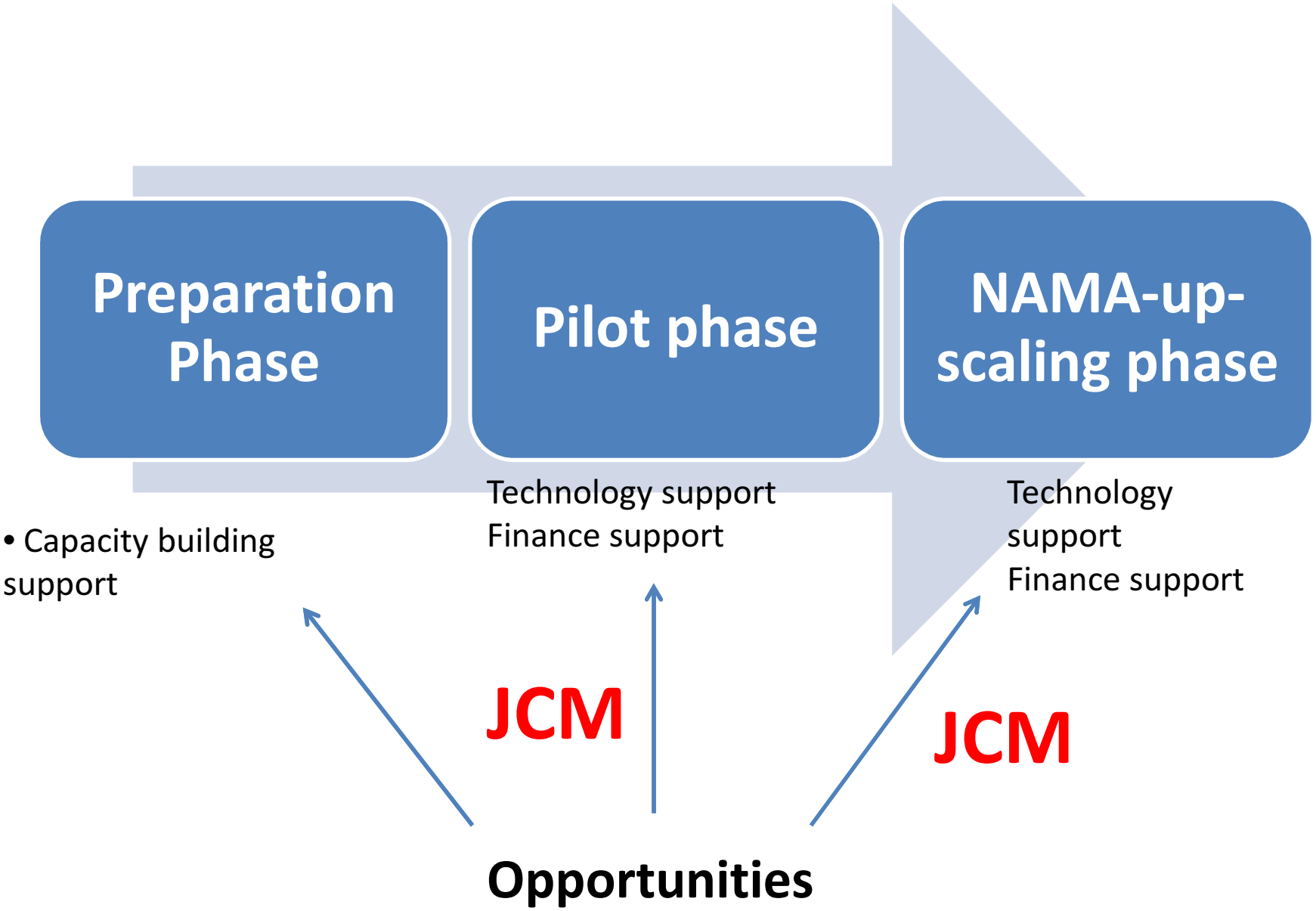
4. Organize Workshops

5. Drafting **NAMA Implementation plan**

Opportunities for Linking JCM Activities with NAMAs in Vietnam

- The Agreement of JCM was signed by Vietnamese and Japanese governments in July 2013;
- The ultimate goal of NAMAs and JCM is to reducing the GHG to mitigate climate change;
- JCM can be consider as an additional tool to support NAMAs at pilot stage and up scaling stage;
- JCM can take advantage of NAMAs by referring its designed scenarios, institution, technologies and strategies.

NAMA Scheme


Preparation Phase
Pilot phase
NAMA-up-scaling phase
• Capacity building support
Technology support
Finance support
Technology support
Finance support
JCM
JCM
Opportunities

Remaining challenges to implement NAMA and JCM projects

- Both NAMAs and JCM concepts are relatively new in Vietnam (and international communities);
- Not yet popular for stakeholders;
- Lack of proper institution such as policy, strategies, institutional arrangement to support the implementation of NAMAs and JCM in VN
- Lack of capacity; Lack of human resources;
- Lack of finance, esp. for renewable energy projects such as wind power, solar power which require high investment and cost;
- Lack of awareness from communities on climate change mitigation actions;

Thank You Very Much !

どうもありがとうございました