



City-to-city cooperation on participatory waste management strategies:

Lessons from Battambang-Phitsanulok

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Step 1: Identify problems of SWM in Battambang city



- **About 60 ton/day of waste is collected and dumped in designated disposal site by a waste collection company. Sometimes burning is practiced.**
- **High risk of heavy metal contamination to paddy fields**
- **Local government is lack of capacities both in terms of personnel and budget**
- **Lack of legal enforcement**



- High percentage of organic waste (>70%)
- Existing of composting plant



On average, about 1 ton/day of organic waste is composting

Because

- No waste separation at source
- Time consuming for separation of organic waste at the composting plant

Step 2: Make political commitments and seek supports

- The vice mayor has strong commitment to improve municipal solid waste in Battambang
- Getting supports from the mayor
- Seek for external supports
 - IGES
 - Phitsanulok Municipality, Thailand
 - etc.



Why Phitsanulok Municipality is selected?

- No good model city in Cambodia
- Waste management practices of Phitsanulok Municipality seems to be applicable in Battambang city – scale, budget, etc.
- The size of the city and culture are not so different



Step 3: Identify key stakeholders

- It can be different based on the context of each city
- For Battambang
 - Provincial government
 - City government
 - Waste collection company
 - Market owner
 - Market committee
 - Vendors
 - Market cleaner
 - Market waste collector
 - Composting plant operator
 - Residents

Step 4: Improve capacity and relationship of key stakeholders

- Received training at Phitsanulok Municipality
 - 22 representatives: City government, markets & residents, waste collection company, composting plant operator (NGO)
 - Participatory waste management, waste separation at source, composting, and quantification of GHG emissions
 - Lecture, site visit, and brain storming
- Improved stakeholder's relationship and shared ultimate goal to improve waste management in the city



Step 4: Formulate working group

- Trained stakeholders formed a working group which lead by the vice mayor
 - Representatives from the city government
 - Representatives from markets
 - Representatives from communities
 - Representative from waste collection company
 - Representative from composting plant operator
- The working group facilitates and implements pilot project

Step 5: Setting ultimate goal

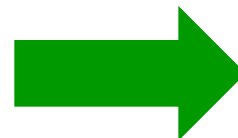
- Working group have dialogues to identify ultimate goal and strategies for implementation
- Public hearing
- The goal or the program should generate benefits to various stakeholders

Battambang city

- **Increase organic waste to composting facility**
- **Reduce waste to landfill to save landfill space, minimise environmental impact, and reduce GHG emissions**

Step 6: Develop plan and strategy to implementation

- Active discussion to formulate the working plan according to the local conditions
- Conducting questionnaire surveys with vendors and residents in surrounding communities
- Drafting a local directive on waste separation at source for composting based on multi-stakeholders consultation
- Public hearing – consultation with stakeholders
- Intermittently consultation with partner city, donors and stakeholders



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- គ្រប់គ្រងសំណល់រាវក្នុងគ្រួសារតាមរបៀបដូចខាងក្រោម៖

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IGES ESCAP

Step 7: Start implementation

- Implement the projects in three main markets and surrounding communities
- Awareness raising campaign by the City (involvement of university students)
- Learning by doing – adjust the practice to overcome problems
 - Increase numbers of bins for waste separation by waste collection company
 - Rearrange waste collection points and storage area
 - Try to collect compostable waste and non-compostable waste separately
 - Etc.



Step 8: Monitoring and evaluation by the third party



Step 9: Review the implementation strategies

- Often, problems arise through the course of implementation
→ Need to review the strategies and find solution together with stakeholders
- After each meeting, role sharing of each stakeholder must be cleared



Achievement (2012-2013)

- Implemented a pilot project in 3 markets in 2012 but reduced to 1 market (private) in 2013
- Increase sorted organic waste to composting plant from 30 to 70 tonnes per month
- Reduce direct greenhouse gas emission by 13 tonnes carbon dioxide per month (saving 24 tonnes carbon dioxide per month based on a lifecycle approach)

Out of plan (co-benefits)

- Some sorted organic waste is sold or given to farmers as animal feed
- Residents have questioned on why not also separating plastic waste

Potential of sustainability and scaling-up

- The private market has recruited new staff for promoting cleanliness and organic waste separation at source
- The national government has grant the city a 'city beauty and waste management office' with a scholarship to train officer
- The vice mayor who is very committed to the waste management program becomes the mayor and the supporting staff become the chief of the city beauty and waste management office
- Battambang city becomes a member city of Climate and Clean Air Coalition (CCAC) which can receive more technical support to improve solid waste management to reduce emissions of short-lived climate pollutant (mitigating climate change)

Keys to success

- High administrative commitment from the City and support from the provincial government → Aiming for a national award
- Confident of trained stakeholders
- Active cooperation from all stakeholders: City (high administrator), NGO (COMPED), waste collection company (CINTRI), market's operator and trained residents
- Strong commitment of the stakeholders (city, market operator, waste collection company, composting operator, trained residents)
- Regular onsite monitoring and supervision by the third party
- Financial support
- **Patient and Listening to Each Other!**

Benefits of city-to-city cooperation

- Visualised the benefits of waste management by seeing good examples from the partner city – role model city
- Gained more confident to conduct the project
- Intermittently received technical support from the partner city
 - not to duplicate the same mistake
- Reduced cost for consultant
- Improved relationship between the two cities
- Etc.



Benefits of participatory waste management

- Reduce risk of failure
 - Receive more supports and gains knowledge input from key stakeholders
- More capacity to work
 - All stakeholders will allocate their resources
 - Budget
 - Personnel
 - Idea
 - Etc.

Yes, We Can and You Too!

