

Urban Water and Sanitation Maehongson Municipality



Agenda

Background

- General information of the city
- Vision
- City's Planning

Waste water Treatment

- State of waste water and management

Household Grease Trap Installation Project

- Conceptual framework
- Procedure & activities
- Output and outcome

Conclusion

- Mae Hong Son Model for sustainable city
- Challenges and Barriers

MAE HONG SON

- Thailand northern border city to the Burmese
- A deep valley hemmed in by high mountain ranges
- the charm of scenery and fascinating culture of TAI YAI or TAI
- area of 6 km²
- 6,521 populations
- 3,900 households

VISION

Be Green, Clean and Peaceful City.

Be livable, Security, Hearty and Happiness City.

The people have the better Quality of life, occupation and sustainable income and also adhere to the religion.

The accessible education.

The life and tradition preservation and also TAI local wisdom conservation.



City's Planning

- **The 3 years city development plan**

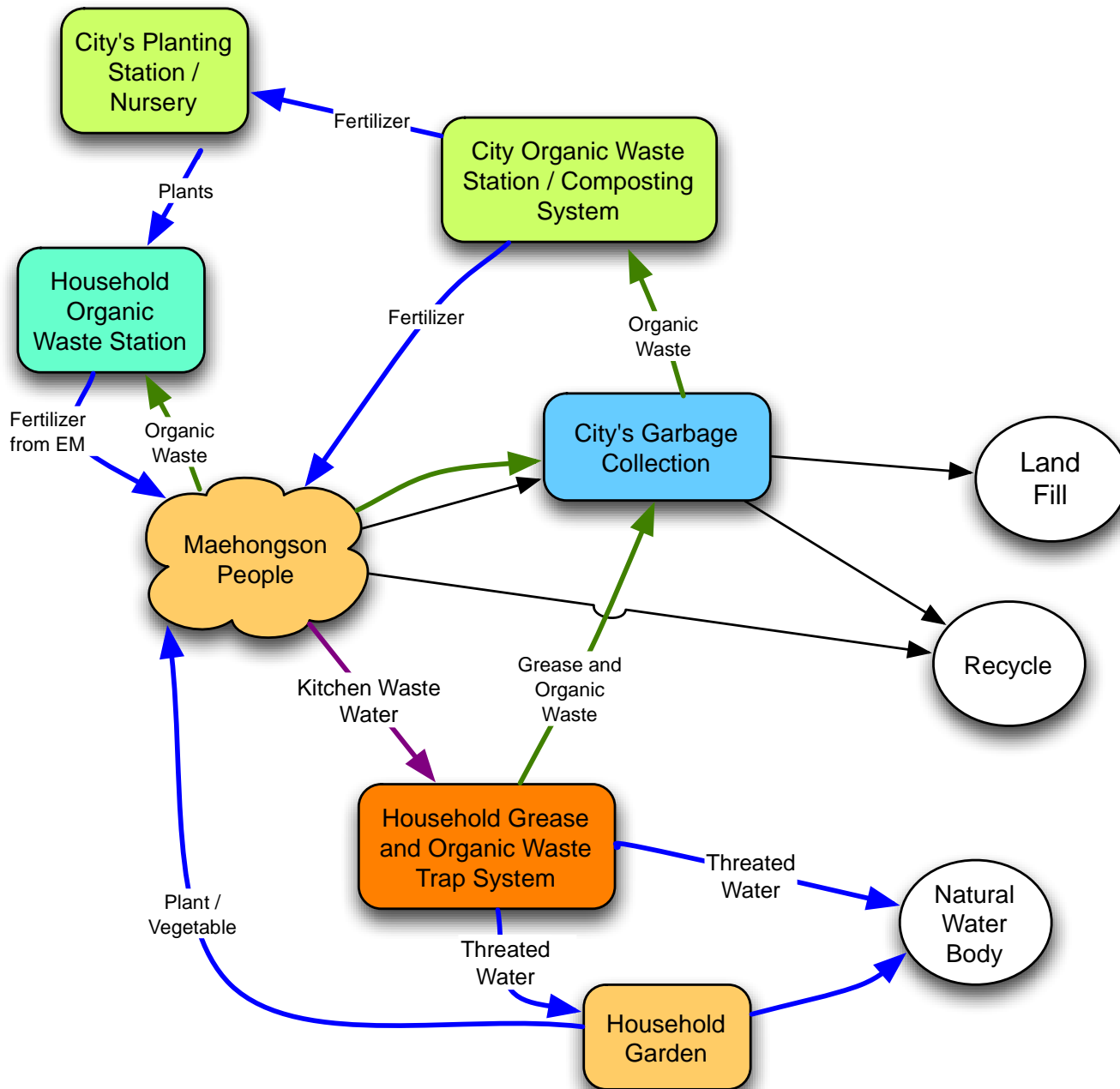
Strategy

Community Based Natural resources
and Environment Sustainable Conservation

Public participation building on
natural resources and environment
conservation and preservation

The public participation
on city environment
management project

Implementation





Background Water & Sanitation

PPP for environmental management towards the sustainable development

Polluter pays

Precautionary

Public participation



Household Grease Trap Installation Project

- Raising public awareness in natural resources and environment management
- Polluter will responsible for their pollute
- Targets: Household, Establishment, Education Unit

Household Grease trap Installation Project

Pre-project

- Partnership Finding
- Appropriate Technology Application
- Innovation
- Technician Consultant

The Royal Project, DEQP

Training

- Community Approach
- Waste water situation and treatment
- Installation
- Maintenance & care
- Beneficial

Voluntary

- supported for only the tanks but willing & have to pay for the connection devices
- Learning by doing : Self-maintenance & care
- Knowledge & Technology Transferring

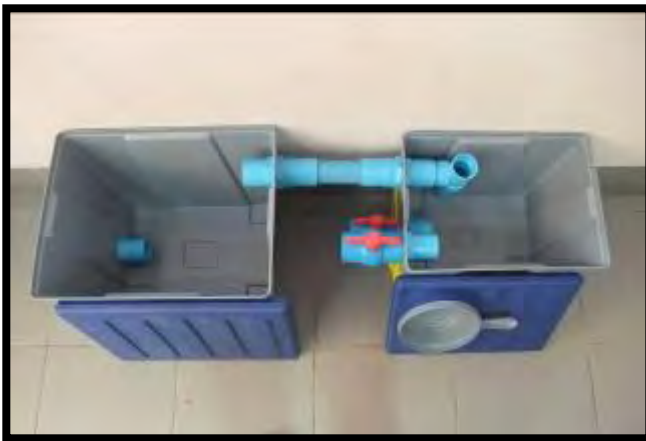
Expansion

- Household Learning Center
- Community Communication

Grease tap installation & operation mechanism

1st tank → a grease & oil trap

2nd tank → a natural filter



1st tank; 1st Step



The food scraps & waste from household wastewater will trap by the top sieve of the tank. The food scraps & waste should remove from the tank everyday for the bad smell from the fermentation & blocked sieve prevention.

Grease tap installation & operation mechanism

1st tank; 2nd step



Grease & oil will separate from the household wastewater to the water surface. Then, only separated household wastewater will flow through the 1st connection device to the 2nd tank; natural filter.

Grease tap installation & operation mechanism

1st tank; 3rd step

Grease & oil removable will done by release it through the 2nd connection device or scoop it at least 1 time per week.

Moreover, it should be done once noticed that the grease & oil contaminated in the 2nd tank. The removable grease & oil will reusable for composting



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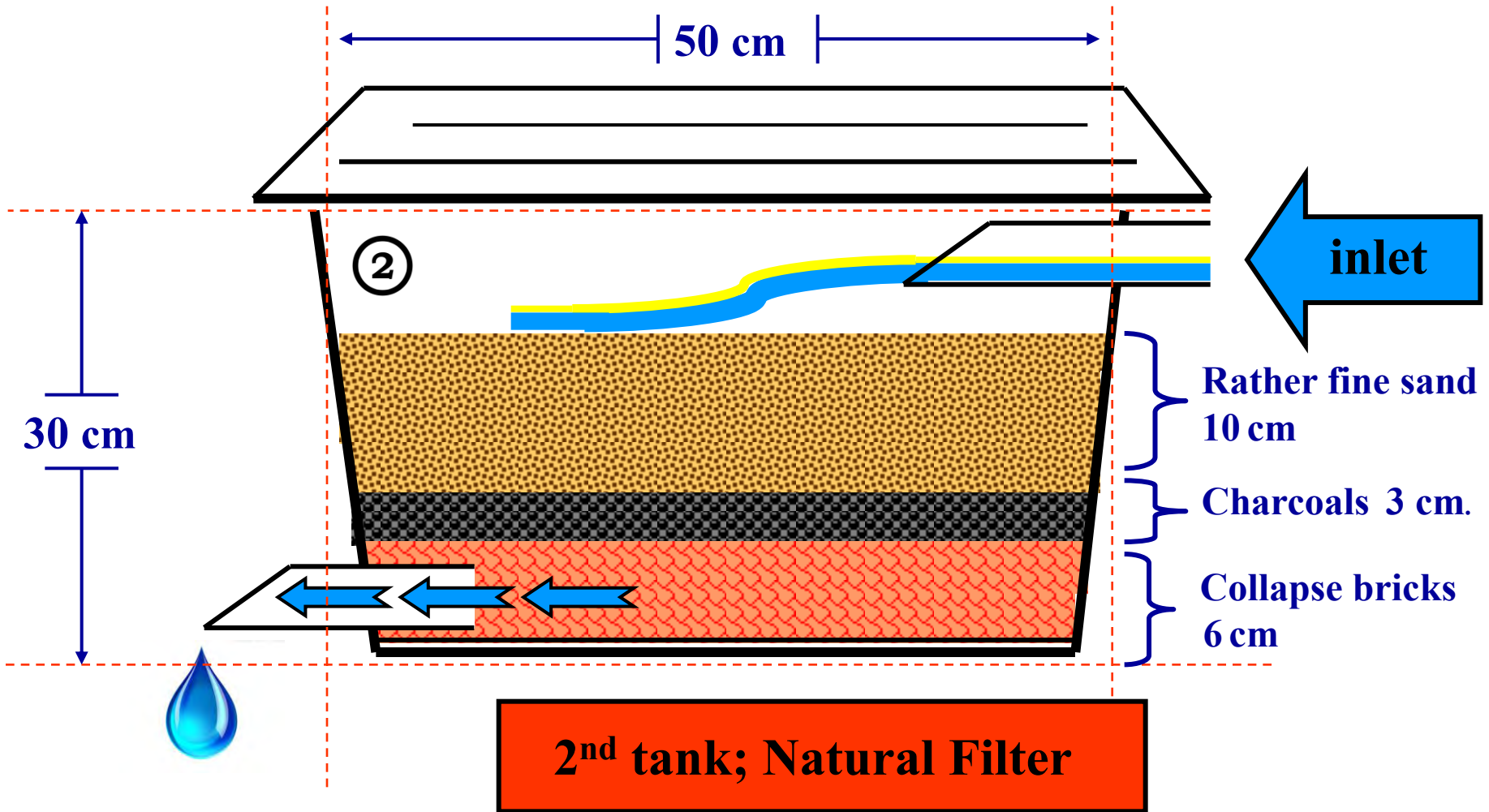
2nd tank; natural filter tank

The natural filter is based on the purified water principle. It's composed of

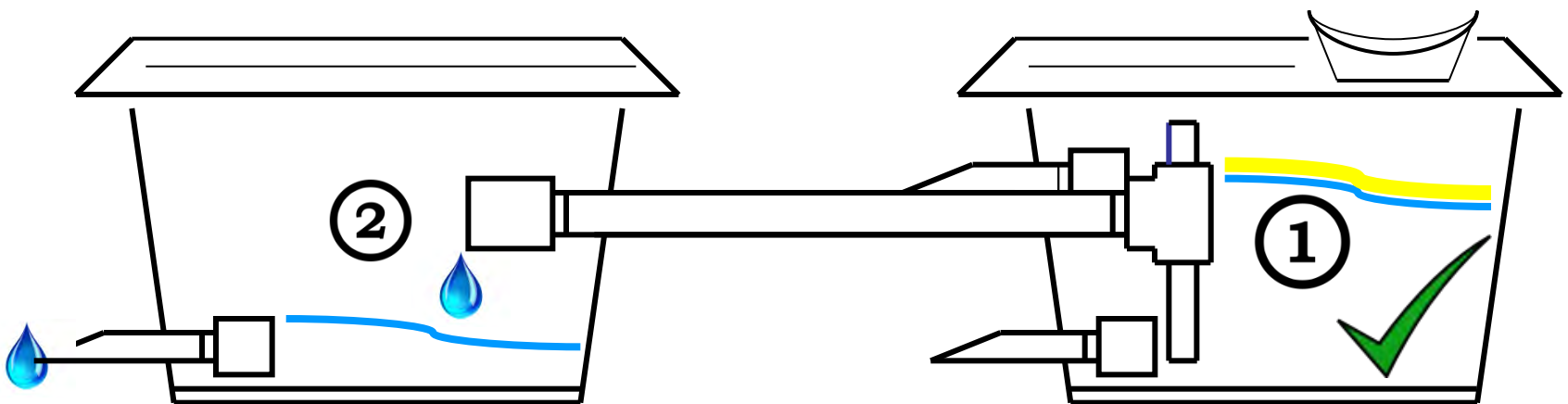
- a) rather fine sand for suspended dregs filterable & organic decomposition,
- b) charcoal for bad smell absorbent &
- c) collapsed brick.

The treated wastewater will flow through the bottom connection device to the public drainage.

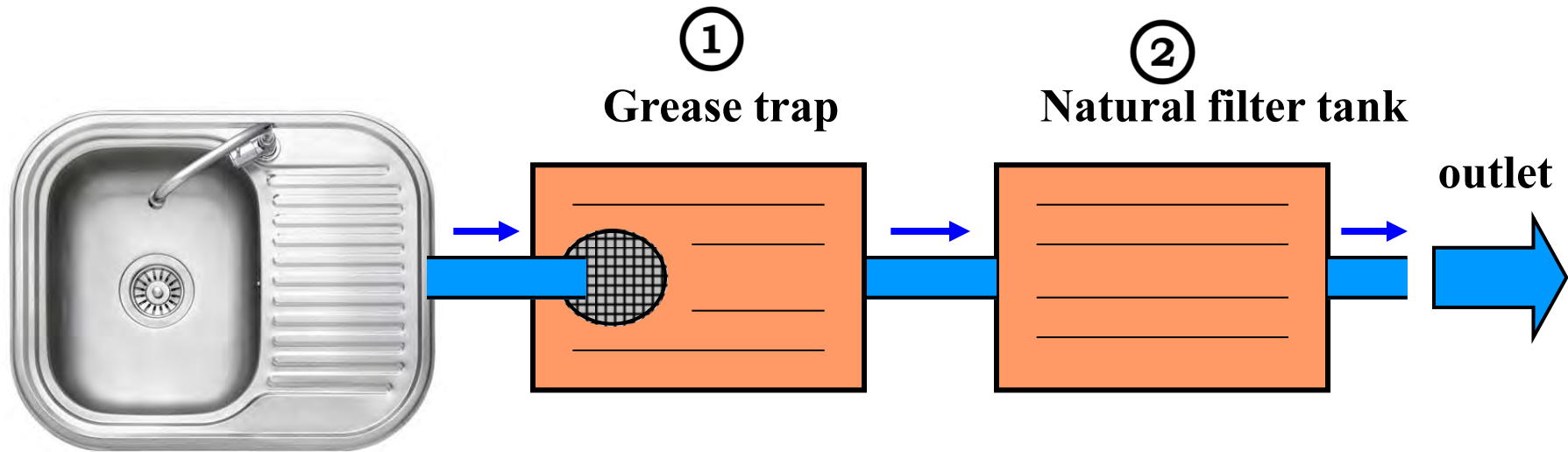




Local recourses & equipments application



Grease trap installation; household installation



Install it at the place nearby the wastewater outlet & easy for maintenance & care.

a) Connect from the wastewater sources through the top sieve of the grease trap tank.

b) Connect from the 1st tank; grease trap tank through the top of the 2nd tank; natural filter & the bottom outlet.



Grease Trap Installation

Output & Outcome

Social

- Best Practice
- Leadership Changes in envi.
- Community learning center and Trainer
- Community knowledge transfer
- Better quality of life
- Strongly community in envi. management

Economic

- Increasing the probability to envi. sustainable city; tourism attraction
- city & landscape decoration from reusable waste to composting
- distribute the composting to the usage of household & community
- local resources & equipment application for envi. management

Environment

- Increasing public awareness & public participation in envi. management
- Innovation for appropriate technology application
- Better waste water quality

• Grease and Oil

Composting by the MHS municipality

Distribute back to household & community

Flower & ornamental planting in MHS municipality's nursery

Landscape & city decoration

MAE HONG SON MODEL FOR SUSTAINABLE CITY

Sustainable City Concept



The clarifying policy

Participation building on natural resources & environment conservation & preservation



Driving Mechanism

Strongly Social capital

- Nam Meang Council (Traditional meeting)
- Local community



Public relation

- Visiting • Campaign
- Public awareness building
- Local mass media

Economic tool

- **Community Envi. Fund**

Development partnership finding

- Technical support • Innovation
- Appropriate technology application

Capacity building & local community strengthening

- Training • Learning center
- Knowledge sharing • Site Visit
- Pilot project
- Tradition activities

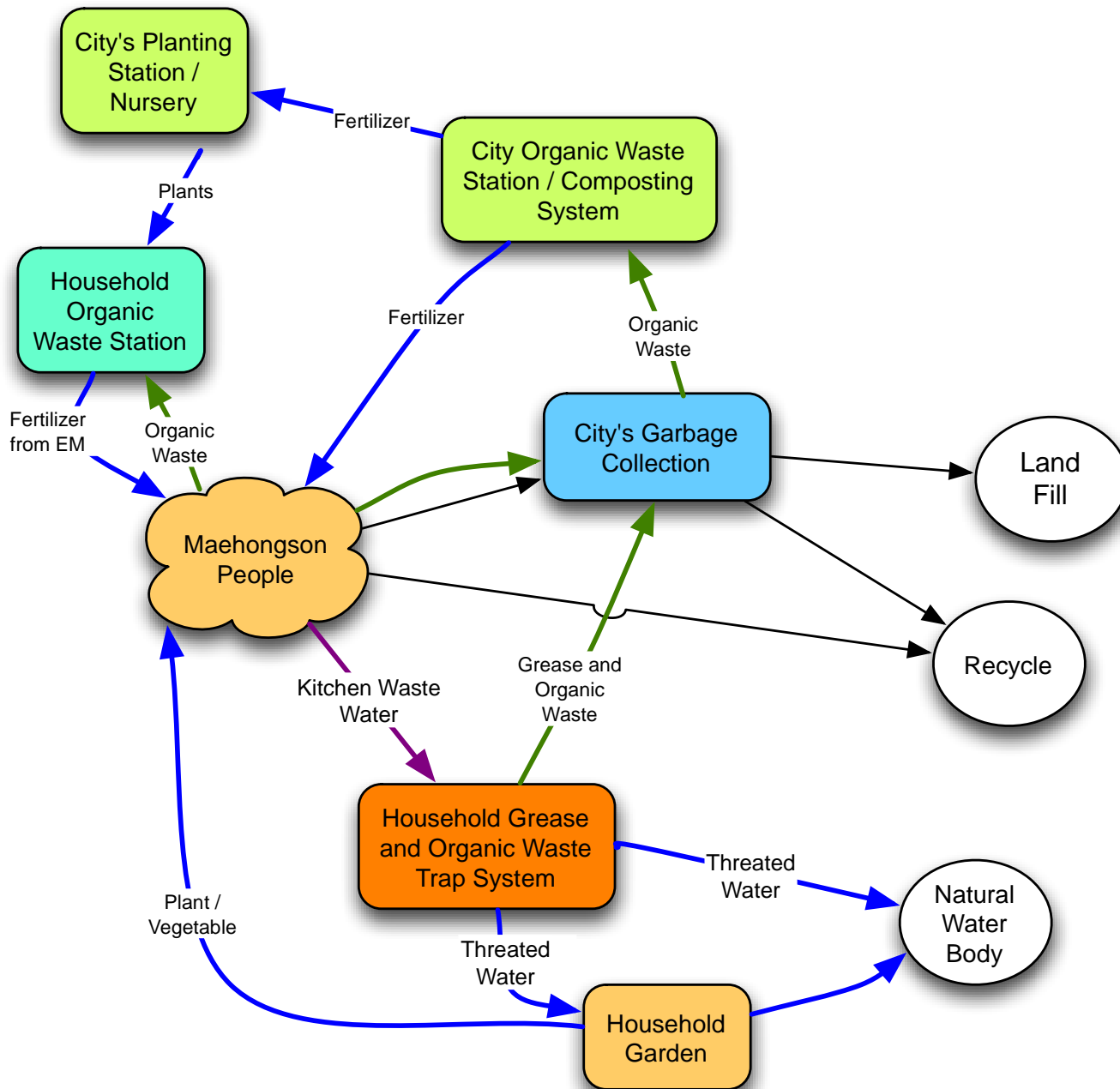


Output & outcome

- Best practice
- Leadership changes in envi.
- Community Learning Center & Trainer



Project expansion & technology transfer



Challenges and Barriers

- Take up much spaces for installation;

Try to apply for the various site installation; horizontal, vertical, parallel.

- Need the maintenance and care on regular basis for clogging fat prevention.
- Need the 1.5-2 inch diameter for the connection devices for drainage problem prevention.
- Inappropriate for the big scale enterprise.
- Need more next generation participation.

Adjust the project activities schedule match up the next generation participation available time.

- Unclearly communication and information transfer.

Thank you for your attention

Kob Khun Krub

