

FOLENS TRIP: Kitakyushu Eco Town

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**Practical Research on Thermal
Decomposition of Biomass**

Lorn Vicheka

Kitakyushu Eco-Town Project

What is the environmental problem in Japan from 1960's?

It has been created to achieve the goals of Zero Emission Society.



Creating new environmental towns and introducing advanced technologies for recycling.



Practical Research on Thermal Decomposition of Biomass

- What is impacts of food waste?
 - Around “one-third of the edible parts of food wasted globally” representing about 1.3 billion ton per year.
 - In Japan, Such wastes readily decompose, generate odors, illnesses and land filled, especially, liberation of harmful compounds like dioxin, and significant source of methane gas to the global warming.



**Research
Demonstrations
Producing Lactic Acid
from Food Waste**

Sauce of Food Wastes

- Food waste has been collected from each town sectors of Kitakyushu-city about 72t/year including, store, convenient store, hotel, hospital, department and kitchen.
- Benefits of collecting food waste for recycling:
 - Garbage get free
 - Reduce space of landfill
 - Not only benefit for the environment, but also for the best economical efficiency as sustainable bio-based materials.

Processing of Thermal Decomposition of Biomass into Plastic

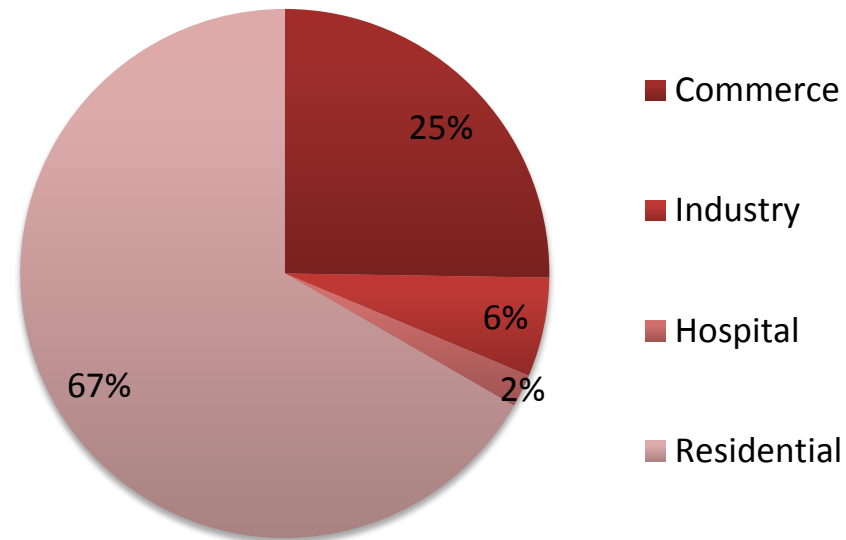


Final Plastic Product



Useful Advantages of Biomass Recycling from Japan to other Countries

- It is a new knowledge and new technology for other countries especially developing countries, like Cambodia.
- Cambodia, with the increasing of populations comes increasing demand for improved sanitation and waste management.
- As nearly 70% of all the waste generated in the city



Cambodian Problems with the Solid Waste



- A favorite haunt for children scavengers
- special dump sites or other treatment facilities for toxic and hazardous waste.
- Very few solid wastes were recycled including food waste (Compost), and managed by NGO or Foreign company.

What can I do?

- The new knowledge, not only recycling food waste into plastic, but also related to other technologies should be applied to the country.
- **How can transfer?**
 - Project proposal to the government and related spheres
 - Extension to friends, colleges...etc.
 - Can also transfer to farmers in a simple method like recycling the food waste into compost, or try to reduce amount of solid waste which are not necessary.



**Thank you very much
for your kind attention!**