

3Rs for Municipal Organic Waste

Asia 3R Conference
Mita Kaigisho, Tokyo Japan
31 November, 2006

Masanobu Ishikawa
Professor
Graduate School of Economics, Kobe University

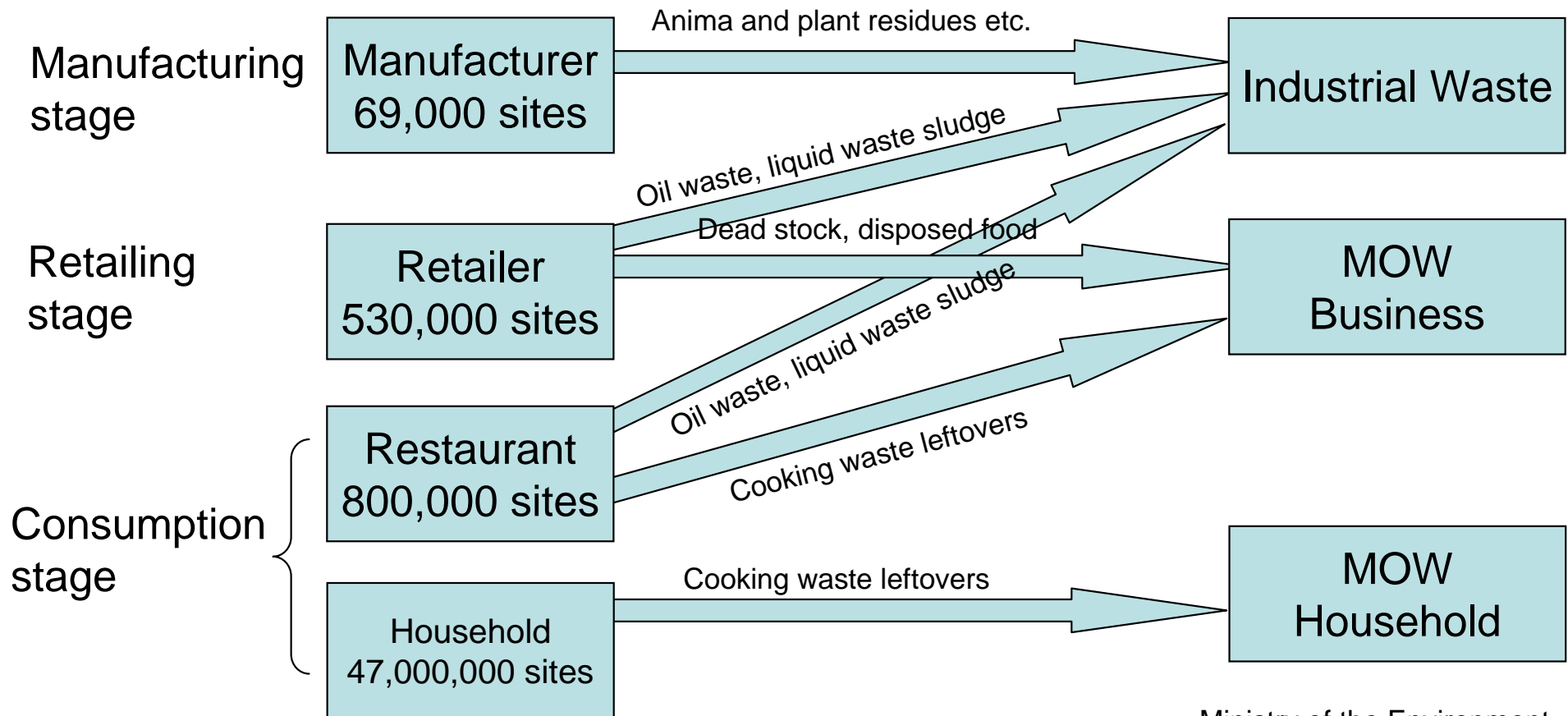
Contents

- Introduction
- Municipal Organic Waste in Japan
- Collection, Processing and Final disposal
- Problems to be overcome for the 3R

Introduction

- Priority of MOW 3R
 - Feed stock
 - Compost
 - Energy
- Characteristics of 3Rs of Municipal Organic Waste (MOW)
 - Links to food safety
 - Perishable
 - Renewable resource/Carbon neutral

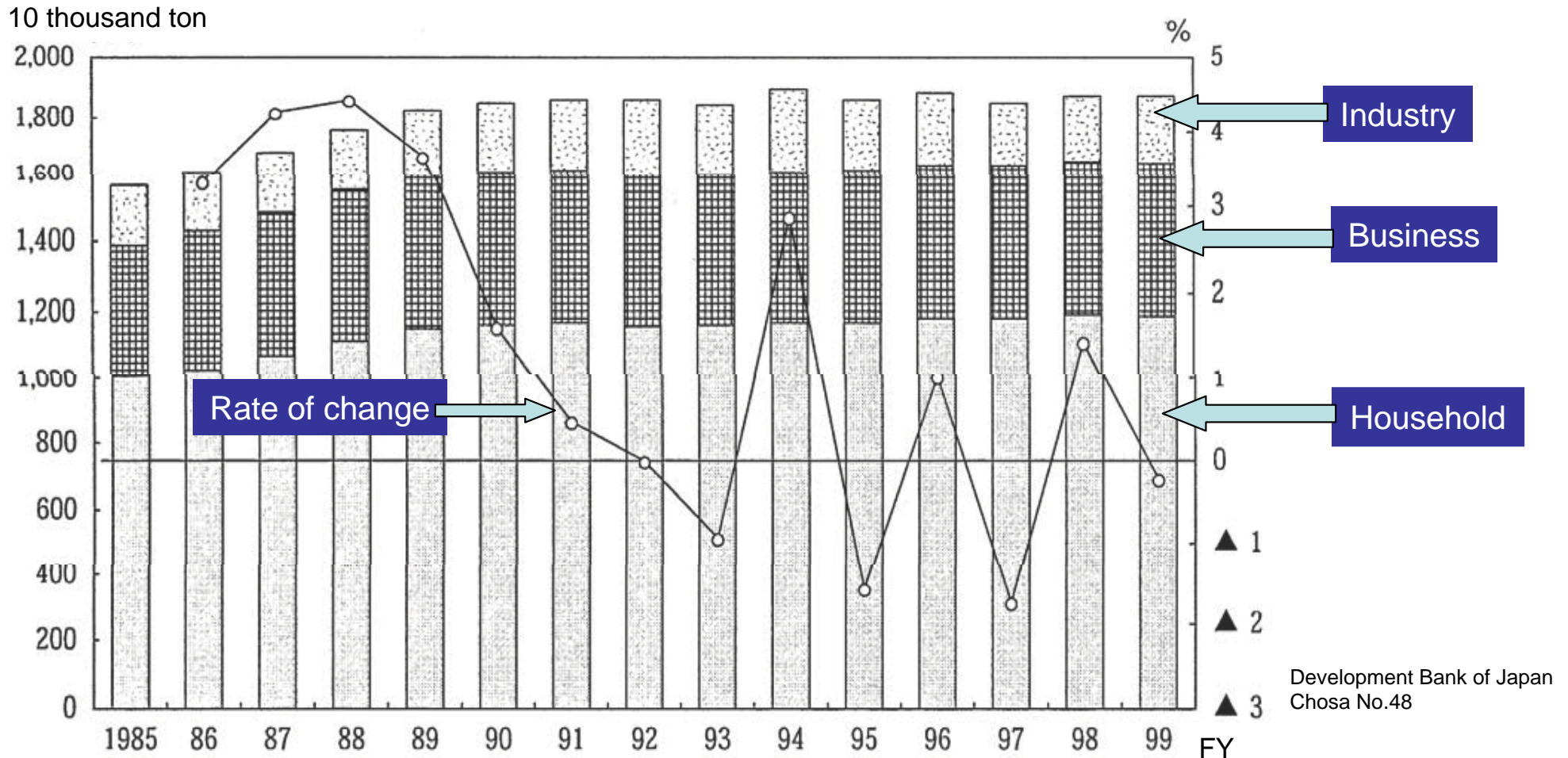
Classification of MOW



Ministry of the Environment

Municipal Organic Waste in Japan

Food related waste: 18 million ton, 60% from Household



Collection, Processing and Final disposal

- Collection is mostly commingled type
- 87% of MOW is incinerated, 4.8% dumped
- 3R activities:
 - 1.8% is converted to feedstuff
 - 2.5% composted
 - 3.0% other materials such as soap or bio-diesel oil
- Most of the 3R activities are from business MOW

Problems to be overcome for the MOW 3R

- General
 - Cost reduction
 - Source separation and separate collection
- Return to food chain case
 - Establishment of credible recycle loop
- Recovery as non food use
 - Finding demand: compost to garden etc.
 - Improve total efficiency: methane, RDF etc.

Establishment of credible recycle loop

- Return to food chain requires extremely high quality control, this can be done either by:
 - well organized business who guarantees to purchase the products, or
 - consumers who guarantee to purchase the products,
 - coupled with credible traceability system.

Recovery as non food use

- Finding demand: compost to garden etc.
 - Because demand is not large, price would be very close to zero, cost reduction is crucial.
- Improve total efficiency: bio-gas, RDF etc
 - Because bio-gas process produces not only biogas, but sludge and high concentration liquid waste, total efficiency is crucial.
 - Like bio-gas, RDF requires appreciable energy input for preprocessing, total efficiency is crucial.

End

Thank you!