

Breakout Session 2

**Low Carbon Society, Sustainable
Consumption and Production, and
Local Actions**

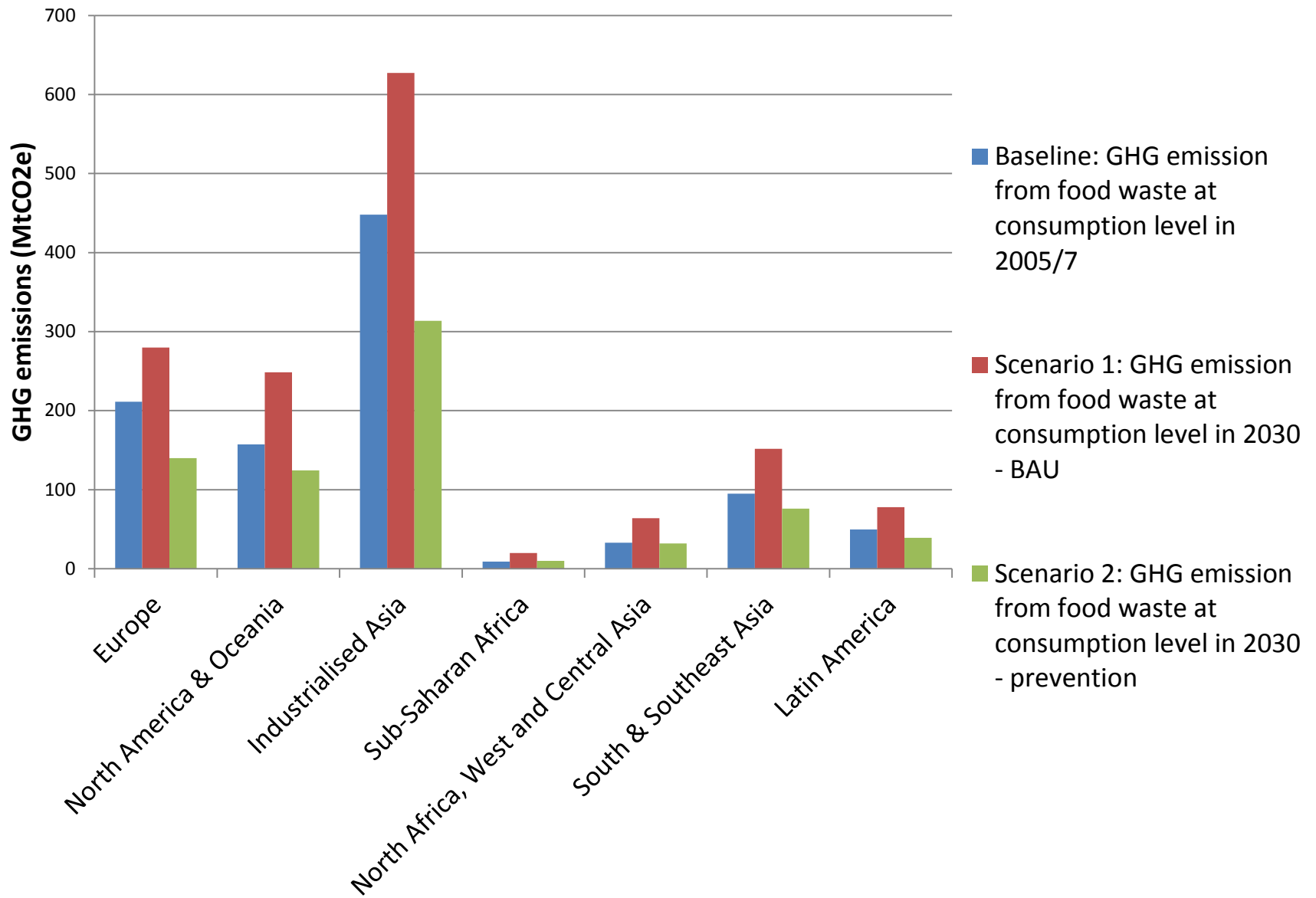
Chair by: Dr. Yasuhiko Hotta, IGES

Rapporteur by: Ms. Cassandra Bong Phun chien
(UTM)

Ms. Oulavanh Sinsamphanh, National
University of Laos, Lao PDR

SCP and Low Carbon Society

- Highlighted **the significant contribution of CO2 emission and GHG from household usage** as compared to the more commonly acknowledged sectors such as from the industrial and transportation sectors.
- **Rapid urbanization in Asia and the Pacific** which brought along higher purchasing power towards more convenience products **will intensify consumption of electricity and energy from household sector**.
- **SCP has become one of the 17 sustainable goals** and has to be facilitated through education, economic incentives and strong policy actions.
- There are three different kinds of approaches to change the consumption behavior; **changing attitude, facilitating certain behaviors by incentives, and providing right infrastructure**.
- Some of the Japanese examples to facilitate such changes are **coolbiz, green purchasing network, uchi-eco shindan (Eco Diagnosis), and the 3R policy promotion**



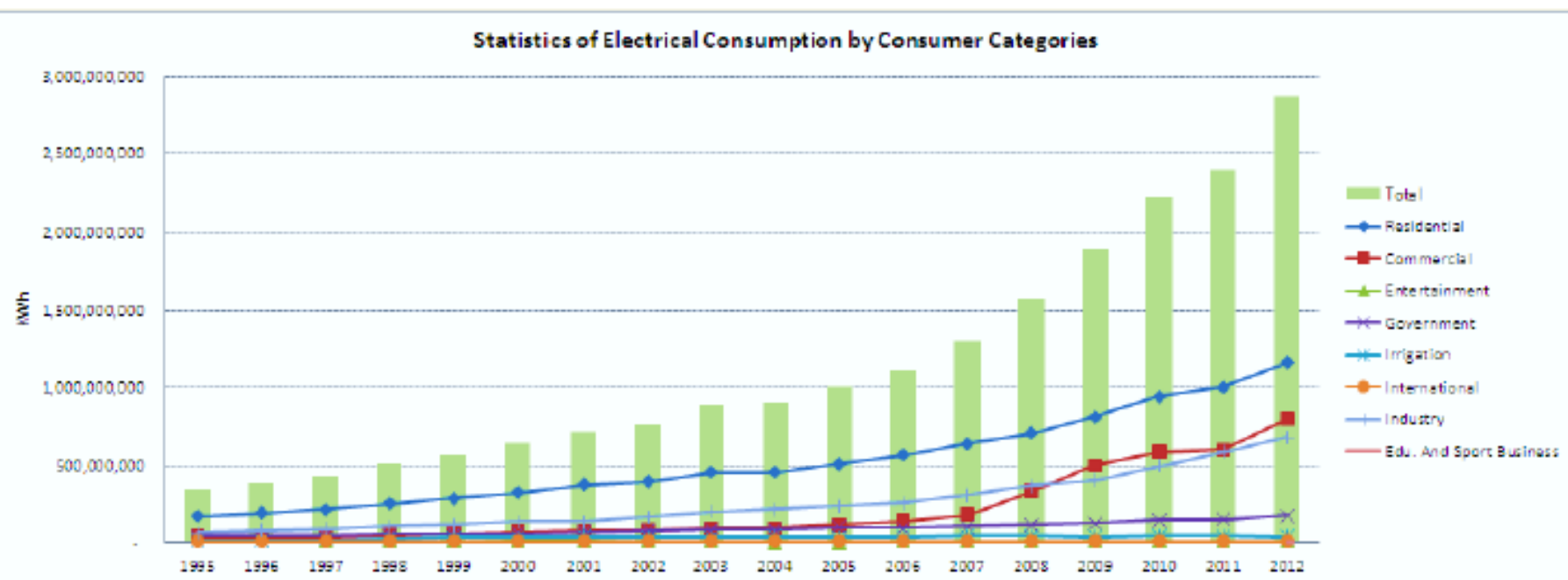
Baseline and projected GHG emission from food waste at household level, by regions

Source: Akenji, Chen and Bengtsson (2014) "Addressing climate change through actions targeting lifestyles"

Increasing Electricity Consumption from Household Sector in Rapidly Urbanizing Asia

- Highlighted patterns of **increasing household electricity consumption** and future estimate utilizing the case of Vientiane, Lao PDR.
- Despite of **challenges of lack of data** often mentioned, **combination of survey and modeling analysis can provide useful information** for decision makers
- This study showed a **40% energy demand** in Lao PDR is from **the household sector** in 2012.
- Introducing **more efficient products such as energy-efficient air-conditioners and lighting equipment** have a large potential in rapidly urbanizing society to reduce GHGs from household compared to BAU scenario.

Significance of the Problems (2)



Source: Electricite Du Laos (EDL), Statistic Year Book 2012

- Residential sector is the most electricity-consuming sector in Lao PDR during the period 1995-2012
- In 2012, the share of electricity consumption of residential sector is accounted for 40% of total demand.

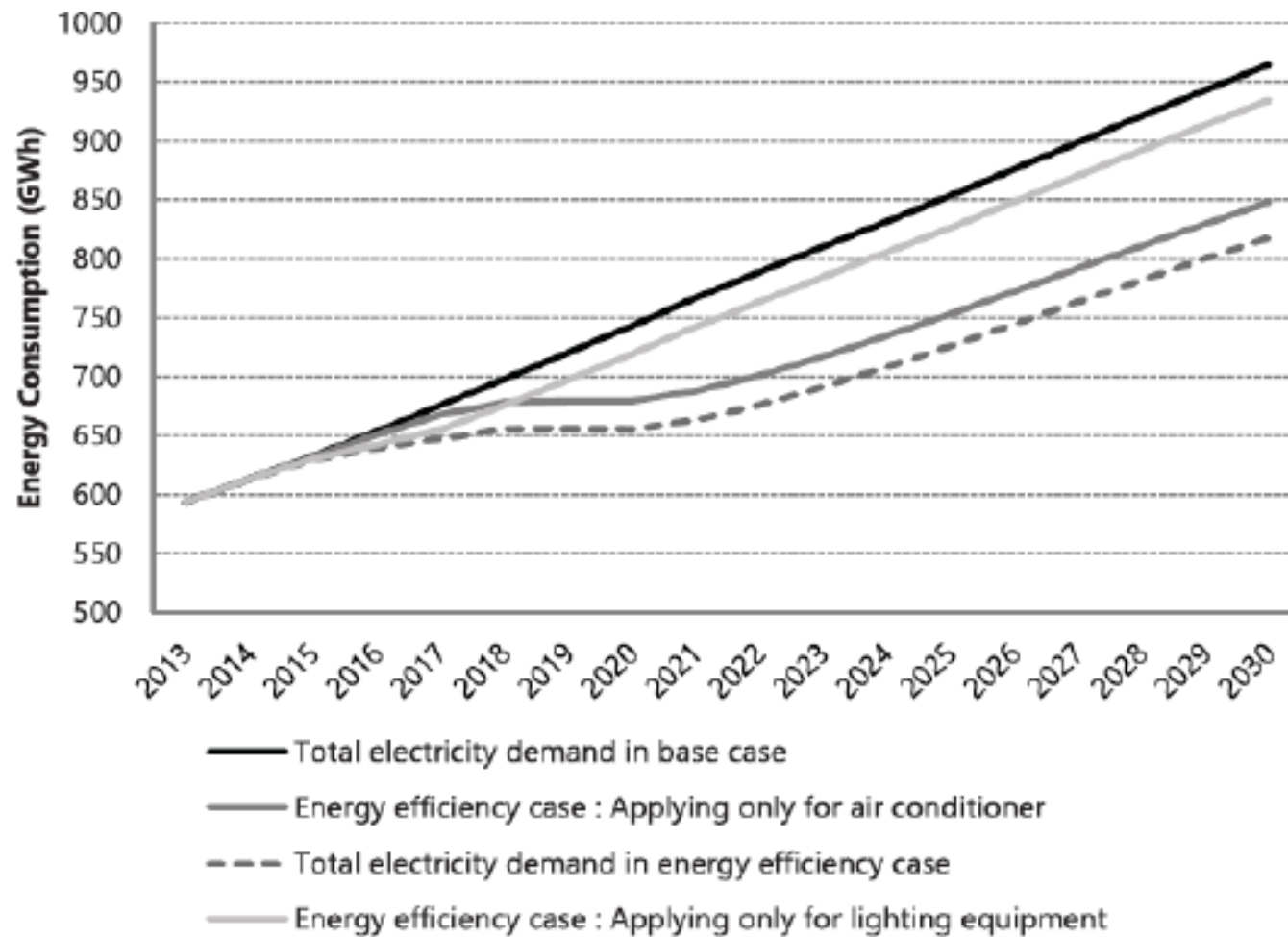


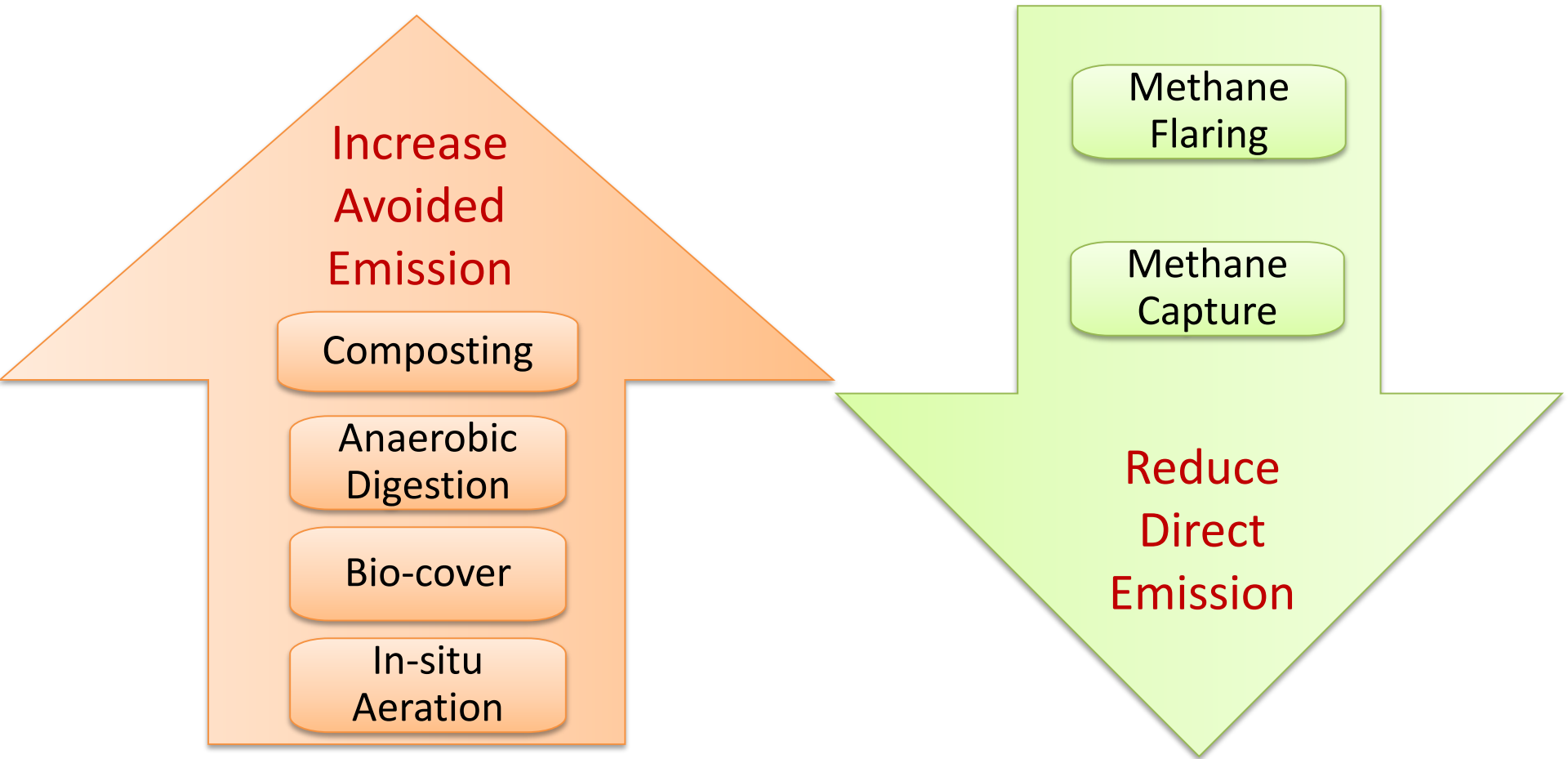
Figure 7. Scenarios of household electricity demand of Vientiane during the period 2013–2030. Source: Author’s own elaboration based on simulation results.

Waste management is also important

- Although **energy-efficient product** are to be introduced, it is **not the end of story**. There are issues related **to waste from replaced products**.
- Conventionally, **linkages of climate issues and waste issues are about organic waste management and material recycling**.
- **In addition to MSW, some types of wasted home appliances and other industrial equipment have impacts in GHG emission**. For example, air-conditioners and refrigerator contains FCs, HCFCs, HFCs, which can significantly contribute to GHG emissions and ozone layer depletion potential and global warming potential.
- Although potential contribution to GHG emissions from these used products are quite high, **proper management of used equipment containing FCs is not considered yet as a priority in many countries**.



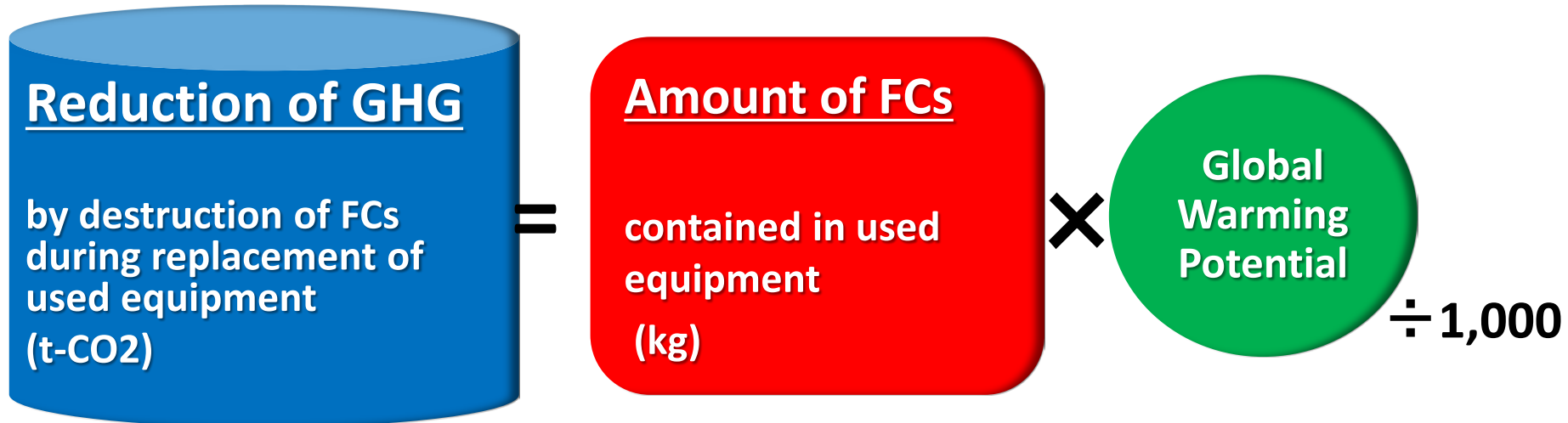
Climate Benefit from Waste Sector



Shifting to recycle/recover options for more climate benefits



Prevention of global warming by FCs management



	CFC	HCFC	HFC	For CO ₂
Ozone Depletion Potential	1 to 0.5	0.5 to 0.005	0	
Global Warming Potential	380 to 8100 (R12=8100)	90 to 1800 (R22=1700)	140 to 11700 (R134=1300)	1

Role of Local Government and Improved Communication with Citizens

- Sapporo city highlighted their efforts to **engage with citizens for energy saving activities and waste reduction activities** as a smarter life style.
- This case strongly suggested that **the role of active green initiative from the local government** and the importance of **effective communication to involve and inculcate the community**.
 - **Visualizing tool of household energy consumption** based on which expert and consumers can interact how to reduce the household energy consumption
 - **Reducing amount of waste** by making new categories of separated collection as well as **informing citizens how to reduce moisture contents of garbage**.
 - Involving **school students** to be involved in energy saving and resource saving activities **during their summer vacation**

Sapporo Smart City Project

Sapporo Smart City Project (2015~)

Logo

◆Concept ~ “From Saving to Enjoying”

The objective is that the City of Sapporo will become a “smart city”, where everyone has a “smart life”, meaning conserving energy smartly, enjoyably and without waste.



Posters of promotion

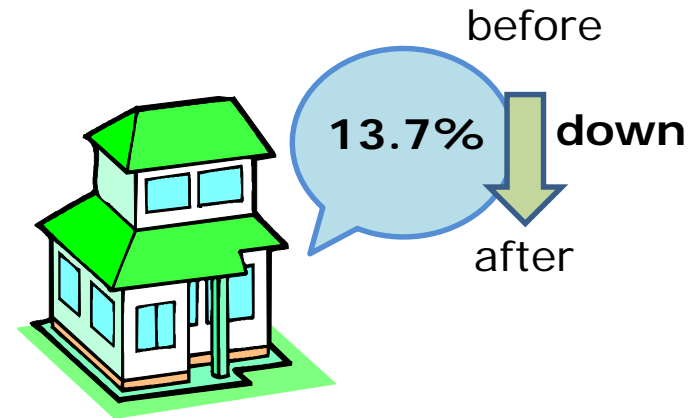


We used Mr. Akimoto, Mayor of Sapporo and Ms. Tanaka, the Japanese popular model living in Sapporo as the messengers to make energy conservation appealing.

the situation of “Uchi-eco Shindan”



Effect of “Uchi-eco Shindan”



- So far, **more than 500 households** have used “Uchi-eco Shindan” (2011-2014FY).
- The average amount of energy reduction through “Uchi-eco Shindan” is estimated **an average of 13.7% per year per a household.**

Thank you!