

Towards the Visualization of Environmental Load Reduction Effect by 3R Initiatives
- Report on the development of a visualization tool for 3R initiatives -
(FY2011 - FY2013)
Summary

As an index of progress on the 2nd Fundamental Plan for Establishing a Sound Material-Cycle Society (2008), we set approximately awareness of the importance of reducing waste among 90% of the population, and actual action by 50% of the population for the reduction of waste by FY2015. In Chapter 5, Section 2 of the 3rd Fundamental Plan for Establishing a Sound Material-Cycle Society (2013), we stated the importance of describing and providing details about the 3R Initiatives and their effectiveness in an easy-to-understand way to promote participation among individual consumers as well as retailers and other business operators, and the importance of promoting the easy utilization of 3R Initiative achievements for sales promotion and environmental reports.

In line with these goals, we developed a Visualization Tool for 3R Initiatives and implemented it from FY2011 to 2013 as an approach to indicating numerical values for the reduction of environmental burden through 3R Initiatives in an easy-to-understand manner for business operators and the consumer public to increase aware about the effectiveness of 3R Initiatives. Below is the outline of the 3-year project.

1) Development of the primary unit for 3R initiatives

Out of 71 3R Initiatives implemented at supermarkets and other retail businesses, 31 initiatives that can be quantified have been chosen to develop the primary unit to calculate the effectiveness of the reduction of environmental burden through 3R Initiatives (natural resource use, waste generation, final waste, and CO₂ emissions).

2) Development of the Visualization Tool for 3R Initiatives

We have developed and introduced a simple tool that allows retailers to calculate environmental burden reduction based on the primary unit for 3R Initiatives utilizing EXCEL VBA. We have also developed an application that allows retailers to calculate reduction by simply entering 3R Initiatives in html and upload them to the Re-Style site on the Ministry of the Environment website.

3) Verification programs

With the cooperation of retailers, manufacturers and others, we quantified environmental burden reduction by 3R Initiatives with the Visualization Tool to show consumers, and implemented 3-year verification programs to understand changes in consumer behaviors and awareness.

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