

## Greetings

This year is the final year of the project "Partnership Project of among Universities and Government" which has so far working on. Since the links with cooperative universities overseas were very weak when this project was adopted in 2010, we did not have any determined idea to develop the project. However, through over and over visiting overseas and having discussion with partners, it was found that the city in Asian and Pacific Ocean had big expectations for the Japan.

Almost all of Asian metropolitan cities in developing countries have same solid waste problems derived from the increase amount of waste generation. For example, there is a problem that people in some part of the city do not obtain the collection service. The reason is that the waste collection capacity can not keep up to the amount of generated waste due to concentration of population in urban areas.

Moreover, final disposal site in urban area is closed earlier than the schedule due to increased amount of waste, thus having the problem that the new final disposal land must be sought in far-flung suburbs, in addition, having the cost increasing problem that is led by waste transportation inefficiency due to long-distance transportation between the city and landfill site with traffic congestion in the city. In recent years, being introduced with the concept of 3R from Japan and other developed countries, also receiving a budget from international cooperation agencies, many developing countries are looking for a new solid waste management(SWM) system. The importance is to find the waste management that is the most appropriate for the country. Japan should apply the policies and processing technologies, which have been developed against the background of Japan's waste problems, to meet the needs of developing countries.

Through discussions with local government officials and faculties of cooperative universities in this project, it was cleared that they have knowledge and information of Sound Material-Cycle Society and 3R concept but do not have the applicability based on experiences to utilize concretely the knowledge for the solid waste problem. For the city, the selection of waste management is a big issue because it is a large scale project which affects the future. They're looking for a partner who will cooperate in the evaluation of whether new decision of SWM is the best way on the base of the current one. In the recent years, supported by Ministry of Environment and Ministry of Economy, Trade and Industry Japanese, companies come to perform feasibility studies of solid waste disposal for the target Asian metropolises, however, the request especially to university is to provide reference material which is available for decision making at primary stage. For example, it is knowledge what kind of 3R should be introduced politically and technologically to improve the current SWM with low cost and without great change in it. From this reason, the concept that the partnership

among universities and governments cooperatively tackles the same environmental problem was accepted without any objection due to merit laying heads together and taking idea out from Japan. Many universities and governments in Asian and Pacific countries have supported our partnership projects for three years. As a partner of the Japanese government, Okayama city provided us a lot of cooperation such as responding to overseas visitors and giving lectures in seminars abroad.

The three year of the project period is too short to complete individual researches, however, fruitful intermediate results started to come out: a research on development of applicable technology for biomass has spread to collaborative researchers between universities (Vietnam), not only university researchers but also waste treatment enterprise managers collaborated with our project (Vietnam, Indonesia, Taiwan, Guam, and Palau), collaborative seminars which many government offices joined were held in Asian and Pacific countries (Indonesia, Palau, Vietnam, and Malaysia)

. Also, for the purposes of introducing overseas the wisdom of NGO or environmental-conscious citizen's groups of Japan and of introducing Japanese activities to aggressive community groups overseas conversely, a citizens' event "Gather! Eco Life & Technology for Citizens" was able to be held annually. For three years consecutively in February, a brief meeting was held in Okayama University in order to report research progress and to exchange experience among project members.

FY 2012 is the final year of this project, the results of three-year exchange experiences and research activities were put together in this report. Last but not least, we express our deeply gratitude for collaborative partners of universities and governments in Asian and Pacific countries, officials in the International or Environmental Bureau of Okayama City, and steering members of this project in Okayama University.

March 31, 2013



Ken Yoshikawa,  
Director, PhD, Professor  
Waste Management Research Center  
Okayama University



Takeshi Fujiwara,  
Deputy director, PhD, Professor