

Conclusion

Michikazu Kojima

In this report, we review Japan's efforts in promoting the 3Rs from the viewpoint of lessons for developing countries. Japan's experience can be summarized from the following five dimensions: policy areas, policy tools, process of formulating policies, social and economic background, and limitations of the Japanese experience.

(1) Policy areas

The 3Rs need a range of efforts in several policy areas. Appropriate management systems for recyclable wastes vary. Japan has five specific recycling laws for home appliances, packaging and containers, construction materials, food waste and automobiles, which have recycling systems of different designs (see Introduction and Chapters 5 and 6). Source separation and the corresponding collection system is another policy area (see Chapter 1). Measures to improve pollution control in the recycling industry are important for developing countries, because current pollution from recycling industries such as lead recycling and ship dismantling are severe (see Chapters 2 and 3). Some of the policy measures applied in Japan may be useful to some developing countries. What kind of measures will be useful depends on the problems faced by each developing country, and their social and economic circumstances. It should be noted that direct transfer of Japan's recycling system to developing countries may not work well, because the nature of the problems in individual developing countries and their social backgrounds are different from Japan.

(2) Policy tools

Several policy tools are used in Japan to promote the 3Rs. Although it may be difficult for developing countries to introduce exactly the same policy, such as the regulations on automobile recycling in Japan, it is possible to apply some policy tools such as registration (see for example, Chapter 1), subsidies, putting the responsibility on stakeholders (see for example, Chapters 2, 5 and 6) and measures to strengthen the linkages between stakeholders (see Chapter 4). Developing countries should select appropriate policy tools based on an evaluation of the current situation.

Although it is not clearly mentioned in each chapter, statistics are a key evaluation tool in each policy area. At the macro level, the resource efficiency, resource utilization rate and the volume of waste dumped into landfill are macro level policy evaluation

tools in Japan. Before these targets are introduced, a system to collect statistics should be established.

(3) Process of formulating the policies

The process of formulating policies provides lessons for developing countries. Socialization of a problem triggered a revolution of policies in Japan (see Chapters 1, 5, 6 and 7). It is also an opportunity to raise awareness. Several studies have been conducted to identify the problems and possible measures to solve them and to formulate appropriate policy. Policy measures are considered by governments and stakeholders based on collected data. These processes themselves have raised awareness among stakeholders.

After laws have been enacted, governments put much effort into requesting cooperation from the public and companies. Enforcement of regulations is also important. But it should be noted that a policy based on a consensus among stakeholders can be implemented by them.

(4) Social and economic background

There are several social and economic backgrounds which make some policies successful. Source separation is successful in small communities, where mutual monitoring works well. The mass media have reported social conflict and environmental impact, which raises public awareness.

In the business sector, relatively speaking Japanese companies put more emphasis on long-term relationships than short-term benefits. Collectors can earn short-term benefits by mixing nonrecyclable waste with recyclable waste. But this kind of cheating may destroy the whole recycling system in the country. To prevent this, recyclers should select a consolidator or retailer, and put the responsibility for controlling the quality on them. Some developing countries should learn the fact that recycling systems work well with cooperation among stakeholders.

As mentioned before, the social and economic background should be carefully investigated before the system is transferred.

(5) Limitation of the Japanese experience

In the process of formulating policies in Japan, it must be stressed that the proposed policy was scrutinized from the viewpoint of whether it was enforceable or not. A consensus among stakeholders was also important in the process. The outcome of such a process is often not directly derived from principles and theories. It is often difficult, not only for foreigners, but also for Japanese to understand the reasoning behind the structure of the regulations. Such a process prevents drastic changes being made to the recycling system if they directly conflict with vested interests.

Compared with recycling, policies for reusing and reducing waste are still weak in Japan. Volume-based disposal introduced by hundreds of local governments and a volume-based recycling fee for packaging and containers are likely to have positive impacts on reducing waste. The secondhand market for electronics goods and furniture have been revived, although policies for reuse have not been clearly developed. South

Korea and other countries have more ambitious regulations to reduce waste, such as control over the use of disposable goods.

In the 2000s, increased export of recyclable waste has become a new challenge to the 3Rs policy in Japan. It is not only a challenge for Japan, but also a challenge for other countries. As mentioned in this report, in order to formulate appropriate 3Rs policies, it is important to know the current flow of materials and the problems of each stakeholder (see Chapters 5 and 6). Even with international recycling, the first step in creating policies should be a detailed international survey to clarify the situation. The Japanese government should strengthen its collaboration with other countries to reach a common understanding.

In conclusion, it may be difficult to transfer Japan's recycling system directly to developing countries. But it may be useful to transfer the process of formulating the recycling system, such as identifying the problems, using social issues as an opportunity to change the system, various policy tools and efforts to enforce the regulations.