

Suggested Core Set of 3R Policy Indicators for Monitoring Implementation of the Ha Noi 3R Declaration (2013–2023)

On behalf of Asia Resource Circulation Policy Research Group



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Funded by Ministry of the Environment of



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Background

- 2012: Launch of the **working group of 3R policy indicators** of Asia Resource Circulation Research Group in close **collaboration with UNCRD** to support **Regional 3R Forum** in Asia and the Pacific.
- March 2013: Provided **background paper** and **8 factsheets** for 3R policy indicators for the 4th Regional 3R Forum
- The 4th Regional 3R Forum **requested to work on core set of 3R policy indicators**.
- **2 working group meetings** to discuss core set of 3R policy indicators in December 2013 and January 2014.



Asia Resource Circulation Policy Research Group

- **An expert network to facilitate 3R policy research** in close collaboration with Regional 3R Forum in AP.
- **Experts from 8 Organizations:** IGES, IDE–JETRO, NIES of Japan, University of Malaya, Asian Institute of Technology, Bandung Institute of Technology, and UNCRD. The initiative is funded by Ministry of the Environment of Japan.
- **Three WGs:** 1) **3R Policy Indicator**, 2) **Policy Research on Promoting Environmentally Sound Recycling Industries and Mechanisms**, and 3) **REDUCTION policy**
- **Four working group meetings** (Bangkok: Dec. 2012, Tokyo: Feb. 2013, Phitstanulok: Dec. 2013, Surabaya: Jan. 2014)



POSSIBLE INDICATORS FOR 3RS IN MUNICIPAL SOLID WASTE

1. Total MSW Generated and Disposed and MSW Generation Per Capita (by Weight) (Primary Indicator)

- Reasons and advantages:
 - Good starting point.
 - This indicator would **enhance governmental planning and decision-making capacity** in MSW management.
 - This indicator **can visualize trend in MSW** management.
- Related Goals in Hanoi 3R Declaration:
 - *Goal 1: Significant reduction in the quantity of municipal solid waste generated.*

2. Overall recycling rate and target (%), Recycling rate of individual components of MSW (Primary Indicator)

- Reasons and advantages:
 - Recycling rate is one of the representative indicators of 3R policy performance
 - Many countries in Asia have incorporated it into national 3R targets.
 - Can show how recycling activities can contribute to reduce waste going to final disposal sites.
- Related Goals in Hanoi 3R Declaration:
 - *Goal 3: Significant increase in recycling rate of recyclables*



POSSIBLE INDICATORS FOR 3RS IN INDUSTRIAL SECTOR

3. Amount of Hazardous Waste Generated and Disposed in Environmentally Sound Manner

- Reasons and advantages:
 - For proper management of hazardous waste a country need to standardize the hazardous waste classification and to establish a comprehensive inventory.
 - Proper management of hazardous waste can ensure legal recycling activities.
 - This indicator can indicate a country's capacity in hazardous waste management.
- Related Goals in Hanoi 3R Declaration:
 - *Goal 3: Significant increase in recycling rate of recyclables*

4. Indicators based on macro-level material flows (Secondary Indicator)

- **Reasons and advantages:**
 - This indicator can show image of industrial structure and material balance of the country.
 - It can show material footprint of the country.
 - For most of countries, CSIRO and UNEP Asia-Pacific Material Flows online database provides estimates of national-total domestic extraction, domestic material consumption and physical trade balance with indicators related to resource efficiency.
- **Related Goals in Hanoi 3R Declaration:**
 - *Goal 5: Encourage the private sector to increase resource efficiency and productivity*
 - *Goal 17: Improve resource efficiency and resource productivity by greening jobs nation-wide in all economic and development sectors.*



POSSIBLE INDICATORS FOR 3RS IN RURAL AREAS

5. Amount of agricultural biomass generation (Primary Indicator)

- **Reasons and advantages:**
 - The indicator can help to identify amount of unused agricultural biomass and may help to identify proper intervention point .
 - This would bring about a number of co-benefits, including GHG emission reduction, energy security, poverty reduction, sustainable livelihoods etc.
 - With this indicator, one can calculate GHG emission reduction potential from biomass utilization.
- **Related Goals in Hanoi 3R Declaration:**

Goal 11: Promote full scale use of agricultural biomass waste and livestock waste through reuse and/or recycle measures



POSSIBLE INDICATORS FOR 3RS OF NEW AND EMERGING WASTES

6. Marine & Coastal Plastic Waste Quantity

- **Reasons and advantages:**
 - The indicator can help to recognize the seriousness of environmental and ecological challenges associated with marine debris and coastal wastes.
 - Significant actions to reduce marine and coastal plastic wastes can contribute to cleaner beaches, resource conservation for tourism, conserving biodiversity, and identifications of potential sources of wastes.
- **Related Goals in Hanoi 3R Declaration:**
 - *Goal 12: Strengthen regional, national, and local efforts to address the issue of waste, in particular plastics in the marine and coastal environment.*
 - *Goal 13: Protect public health and ecosystems, including freshwater and marine resources by eliminating illegal*

7. Amount of E-waste Generation, Disposal and Recycling. Existence of policies and guidelines for E-waste management

- **Reasons and advantages:**
 - E-Waste is an emerging issue which affects environmental pollution seriously.
 - With this indicator, health and safety of stakeholders could be monitored. Recycling of e-waste could be regulated to avoid illegal and environmentally unsound activities.
 - Existence of policies and guidance for e-waste management would be more practical indicator for some countries.
- **Related Goals in Hanoi 3R Declaration:**
 - *Goal 13: Ensure environmentally sound management of e-waste*

8. Existence of policies, guidelines, and regulations based on the principle of extended producer responsibility (EPR)

- **Reasons and advantages:**
 - Many countries in the region, including Japan, Republic of Korea, PR China, and India, have introduced EPR-based legislation.
 - This indicator can be used to monitor to what extent EPR is reflected in national recycling policies in encouraging stakeholders to share responsibilities of collecting, recycling, and disposal of recyclable wastes.
 - Sharing information on good practices, challenges and lessons on policy implementation would constitute a useful tool to promote effective policy implementation..
- **Related Goals in Hanoi 3R Declaration:**
 - *Goal 15 Progressive implementation of EPR*



POSSIBLE INDICATORS FOR 3RS FOR CROSS- CUTTING ISSUES

9. GHG Emission from Waste Sector

- **Reasons and advantages:**

- Improving waste management and promotion of the 3Rs has climate co-benefits.
- Climate change continues to be the one of top priorities in international environmental agenda.
- Attract increasingly available climate-related funding.
- Increase capacity of local government on estimation and reporting of GHG and climate benefit

- **Related Goals in Hanoi 3R Declaration:**

- *Goal 18 Maximize co-benefits from waste management technologies for local air, water, oceans, and soil pollution and global climate change*

Conclusion

- We took practical approach to identify basic indicators to identify trends in waste management and the 3Rs in Asia and the Pacific.
- We believe these indicators are related to some of priorities or well-discussed issues in the region.
- Of course, there are many challenges related to data availability or difference in definition of terminology among countries.

Conclusion

- Nevertheless, we believe that for these indicators there are available data in many of countries or target or policy has been set as a priority in each country.
- These possible indicators are not full set of indicators to be implemented in full-fledge manner from the starting point but rather we recommend step-wise approach from each country's priority area.

3R POLICY INDICATOR FACTSHEETS REPORT

- We developed a discussion report containing background material and 11 factsheets for 3R policy indicators which covers further clarification and discussions related to the suggested core set of indicators.