

Institute for Global Environmental Strategies

Possibility of Introducing Recycling Certification in Developing Asia

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1. Background of research and aim



<International Trend in Certification>

<International Standards>

- IEC62635, IEC62650

<EU>

- WEEELABEX
- (CENELEC)

<US>

- Responsible Recycle
- e-Stewardship

<Asia>

- No specific guidelines or certification

- Trend in Basel-related Process:
- ESM Framework is under development.

<Promotion of Recycling Business by JPN>

<Environmental Economy Development Vision (MOEJ)>

International Promotion of Recycling Businesses

- Contribution to env. protection and resource circulation
- Development of JPN rnv. industries
- Contribution to JPN resource strategy

Related International Collaboration:

- National 3R Strategy Development, Support in policy development, policy dialogue
- Regional 3R Forum in Asia

<Issues>

Environmentally Sound Recycling in Asia



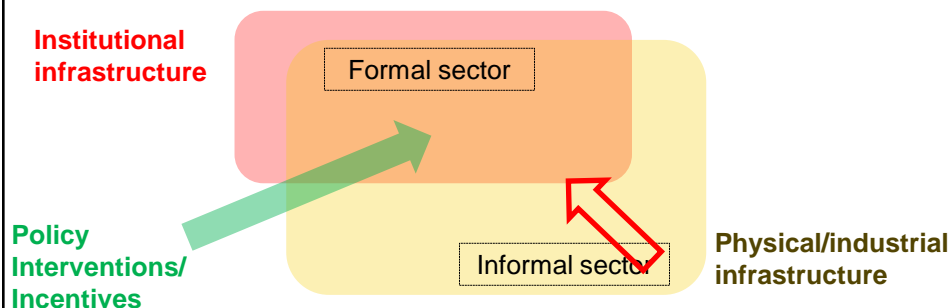
Gap between technologies available in JPN industries and recycling mechanisms of Asia

Recycling Certification?


- The **recycling certification system** proposed by the research is a system that **aims to easily identify businesses that properly manage and treat resources in recycling markets, with national governments, third party certification bodies or trading companies issuing certification for qualified recycling businesses, and making information public.**
- It includes certification by affiliated industry groups (second-party certification) and third-party certification that uses standardized specifications.
- The recyclable resources targeted in this research include waste electric and electronic products.

2. Importance of fostering responsible recycling in developing Asia

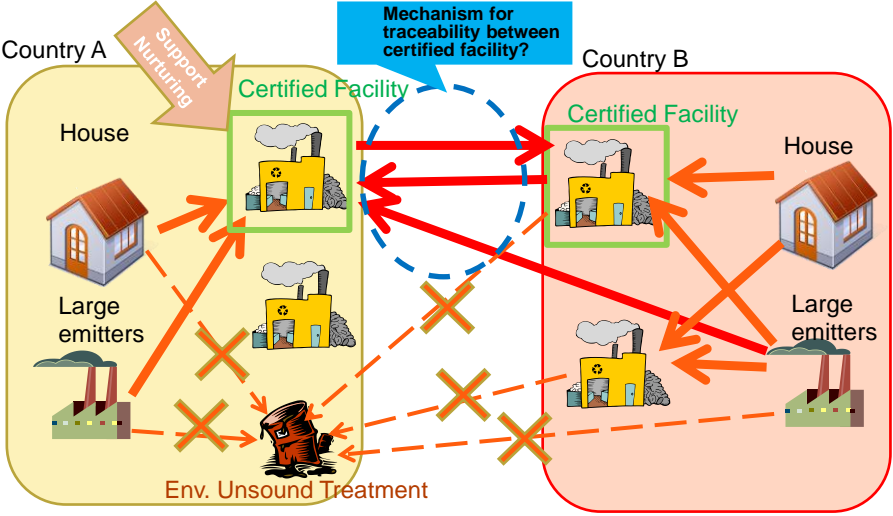
- It is necessary to work together with both institutional infrastructures (recycling policy) and industrial infrastructures (recycling facilities) in order to build sound resource circulation.



3. Image of improvement in international resource circulation through certification scheme




International Certification Scheme would be able to identify ESM facilities and could help to direct support and nurturing to these facilities. At the same time, it would help to remove unnecessary barriers for trade between certified facilities.



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4. View Point of International Certification



Existence at each domestic level

Not yet clear

Objectives	Environmental Health/ Labor Safety Management	To nurture "good" recyclers	To encourage proper transaction and trade of recyclables
Encourage sound /good business conducts	•Environmental Management System	•Acknowledgement/commendation of "good" business conducts	•Priority distribution of recyclables to "good" recyclers •Smoother transaction to good recyclers
Cutting off unsound/bad business conducts	•Permits and licenses for operation •Labor safety standards •Environmental regulation	•International Minimum Guideline •Monitoring, guarantee, informational feedback of proper recycling	•Observance to Basel Rule •International guideline for sound recycling technology

Need to generate incentives for certification by combining with related policies

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5. Result of comparison of licensing and permits schemes for recycling businesses



• Objectives :

- By conducting a comparative analysis on standards for approval and permit of recycling business operation, the research tried to identify challenges and the minimum standard for recycling certifications.

Countries/region researched:

- RoK, Taiwan, China, Indonesia, Thailand, Philippines, Viet Nam, Malaysia, Japan (9 countries and regions)

• Items for the survey:

- Comparative analysis of licensing scheme for recyclers of WEEE management
- Legislations related to WEEE management, existence of guideline for recycling and waste management, incentive mechanisms for certified recyclers to get recyclables, and situation of recycling and treatment.

Comparative table of licensing/permits scheme for recyclers



	Korea	Taiwan	China	Indonesia	Thailand	Philippine	Viet Nam	Malaysia	Japan
Legislation	○	○	○	× (Hazard)	× (Hazard)	× (Hazard)	× (Hazard)	× (Hazard)	○
Collect	H/B (Low)	○ (Medium)	○ (Low)	× (Informal)	× (Informal)	× (Informal)	× (Informal)	× (Informal)	○ (Medium)
	Ind.	○	△	△	△	△	×	△	○
License Std.	○	○	○	△ (Hazard)	△ (Hazard)	△ (Hazard)	△ (Hazard)	△ (Hazard)	○
Licensed recyclers	○	○	△ Diverse in compliance	△ Scrap dealer = manufacturer	△ Formal :30	△ Scrap dealer = manufacturer	× Licensed: Few	Partial:117 Full:13 Final treat:1	○
Inspection	○	○	△	×	×	×	×	○	○
Guideline	○	×	×	×	×	×	×	×	○
Traceability	○	○	×	△ (Hazard)	△ (Hazard)	△ (Hazard)	△ (Hazard)	△ (Hazard)	○
Monitoring	△	○	×	×	×	×	×	×	○
Incentive mechanism	Mandatory recycling rate (penalty)	Subsidy on certified recyclers	Subsidy on licensed recyclers	—	—	—	—	—	—

6. Countries without WEEE Legislations



1. On legislations and policies

- WEEE is **managed as a part of hazardous and special wastes** (proper waste management)
- Vague approach for management in terms of differences in source (house and business facilities)
- Most countries are **trying to develop** WEEE recycling policy.

2. Licensing and permits from environmental and labor safety aspects

- Environmental and labor safety **standards for treating hazardous wastes** (If there is no specific standards for WEEE management)
- Obligatory submission of EIA result (Indonesia, Viet Nam and Malaysia)
- Supervision to licensed facilities and regular renewal of license
- However, **limited number** of facilities actually **get license**.

3. Management for proper transaction of materials

- Manifest systems exist in some cases
- **E-scrap from production processes** tend to be **treated by licensed facilities**.
- **E-waste from household** tend to be **sent to junkshops** and then to informal recyclers.
- Malaysia: Reporting accepting amount, treatment amount and residues to DOE every three months and inspections twice a year.

4. Incentive mechanisms to trade recyclables within formal mechanism

- **Award system** for environmentally sound businesses (some countries such as Indonesia)
- Clearer **responsibility for emitters** (Philippines)
- Metal scrap recyclers tend to be considered as manufacturers and not as recyclers
- Many cases without treatment facilities

7. Countries with WEEE Management System



1. On legislation and policies

- Establishment of recycling systems based on the aspect of **environmentally sound management and resource recovery**

2. Licensing and permits from environmental and labor safety aspects

- **Specific standards for WEEE treatment** (specific parts and components)
- China: **Quality** of recycling facilities **vary**.

3. Management for proper transaction of materials

- Application of monitoring system of proper treatment and recycling only for the collected items under legislation
- **Limited collection under the system** and cannot manage the flow going out from the system

4. Incentive mechanisms to trade recyclables within formal mechanism

- Taiwan: Subsidies from Resource Management Fund (Fund is managed under EPR mechanism) of Central Government
⇒ Combination of **“Incentive mechanism for proper transaction of materials”** and **“Support for good recyclers”**
- RoK: Setting **obligatory amount of collection and recycling**. When the obligatory amount could not be achieved, penalty will be given.
- China: **Subsidy** to make the formal collection, recycling and treatment competitive.

8. Existing International Recycling Certifications



	Establishment of standards/ certification	Target countries and certified facilities	Certifying organizations
R2 (EPA)	October 2008	US (178), Canada (5), Mexico (2), UK (5), India (1), China (1), Singapore (1), Malaysia (1)	Third party certification Self certification is also allowed
e-Stewards (BAN)	July 2009 (Version 1.0) Spring 2012 (Version 2.0 2012)	OECD countries Currently USA(30 companies are certified, 19 applying), Mexico(1 applying)	Third party certification
RQP	October 27, 2010	Canada	Recycler Qualification Office (second party certification)
WEEELABEX	May 2011	EU Countries	WEEEFORUM (currently second party certification)
CSST	Draft, March 2012	Australia, New Zealand	Not decided
ERP	ERP established in 2002	30% of recyclers are registered from 12 European countries(ex:30 out of 150 companies in France are registered).	ERP (second party certification)

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9. Characteristics of Existing Recycling Certification Schemes



- ◆ **Environmental Health and Safety Management System(EHSMS)**
= **Environmental Management System+ Labor Health and Safety**
 - R2, e-Stewards, RQP emphasizes labor health and safety in addition to EMS.
- ◆ **Certification of recycling facilities or recycling chains**
 - WEEELABEX and CSST prepared certification for different functionality of recycling including collection, transportation and treatment. e-Stewards is also trying to expand to collection and refinery functions.
- ◆ **Incentives for certification**
 - Voluntary: Higher standard to show quality
 - Economic: Competitiveness, demands from customers
 - Legal: Demands for e-waste recyclers to be certified (EPA requires e-waste recyclers to take R2 or e-stewards)
 - However, there is no linkages with financial supports
- ◆ **Expansion towards International Certification**
 - R2 and e-stewards can be applied by OECD countries.
 - Preparation of integration of WEEELABEX and CENELEC standard.

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10. Considerations for introducing recycling certifications

◆ To secure reliability in recycling chains, it is necessary to establish Chain of Custody System

- Difficult to secure proper downstream management
=> CRT export to China in July 2011; Intercon Solutions lost certification
- From certification of “points (facility)” to certification of “chain”



- Need to strengthen management of mass balance and traceability through information management on amount, management of important entry points, and training for workers

11. Points for Consideration

1. Purpose

We identify the purposes of recycling certification as follows: 1) **Environmental/Health/ Labor Safety Management**, 2) **To Nature Good Recyclers**, and 3) **To Encourage Proper Transaction and Trade of Recyclables**.

Existing domestic permits and license scheme or international certification scheme respond to purpose 1) but not so much to **purpose 2)**.

2. Target of certification

Need to consider recycling certification **reflecting different functions (a. collection, sorting and picking, b. storage and trade (including dismantling), and c. resource recovery process)** of recycling chains.

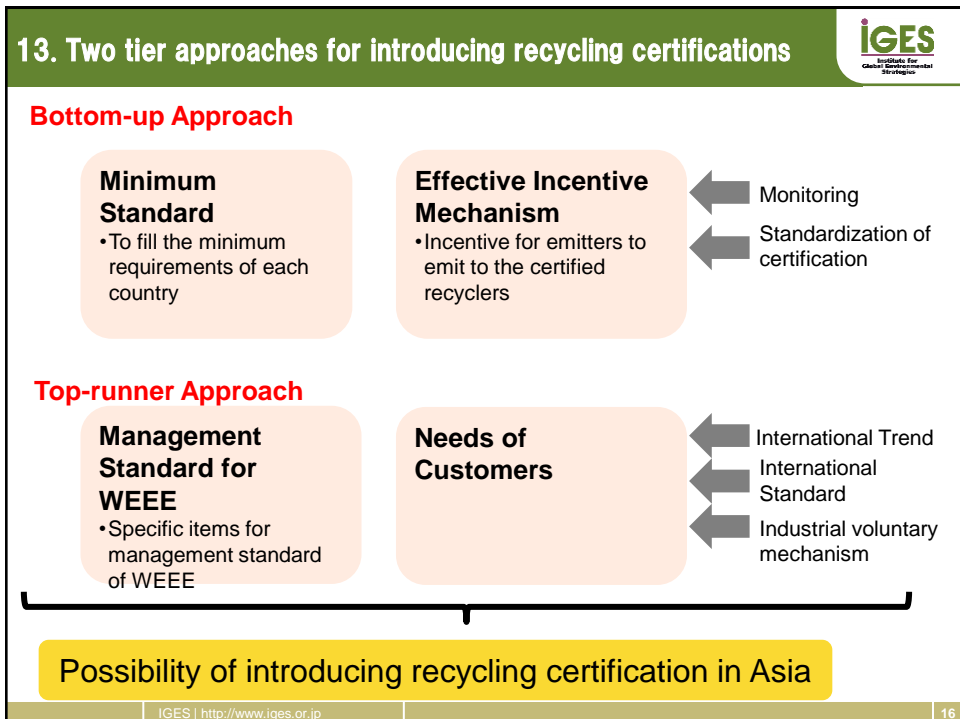
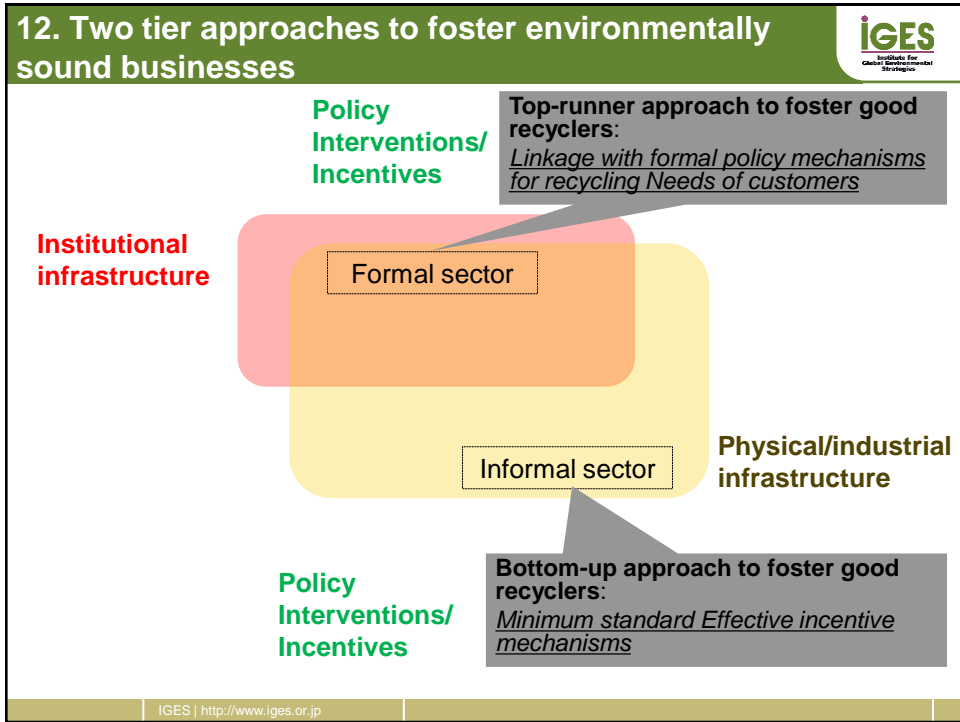
In addition, emitters plays a significant role. Thus, **emitters should be part of system**.

3. Developing countries

Considering recycling in developing countries, we need to take the following into consideration; 1) **capacity development of existing recyclers**, 2) **matching of emitters and recyclers**, and 3) **differences in geographic, policy and business conditions**.

4. Clues of good recyclers:

- Traceability of trading partners
- Analytical capacity of materials in recyclables
- Introduction of mass balance tool
- Sound management of residues
- Acceptance of recyclables based on its technical and managerial capacity



13. Options for Recycling Certification Effective			
Institutional Infrastructure	Target	Existence of promising recyclers and scrap dealers	Without promising recyclers or scrap dealers
Case 1 Collection Mechanism under EPR-based system	Recyclables from household and businesses	Case 1-1 <ul style="list-style-type: none"> • Prioritized distribution of recyclables to certified recyclers under institutional infrastructure • Utilization of recycling fund based on EPR (support for facilities, support for transportation cost) • Easier process/incentives for accepting recyclables to certified facilities • Establishment of collection mechanisms and support for collection costs 	Case 1-2 "Wish to nurture recyclers under EPR-based system?" Yes => Case 1-1 No => <ul style="list-style-type: none"> • Linking domestic collection system and sound international trade • Incentive for collection and establishment for collection point
		Case 2 Emitters responsibility/PPP	Recyclables from large-scale industrial emitters

14. Summary of Messages	
<ul style="list-style-type: none"> • Considering rapid economic development in emerging economies in Asia, recycling depending on market-based transactions and informal recycling market would face difficulty in those economies. • Need to establish industrial infrastructure in addition to institutional infrastructure (two tier approach: top-down and bottom-up). • International trend to establish ESM framework (Basel-related). Also, there are on-going efforts to establish certification/standards for ESM facilities for WEEE management. • Recycling certification would be useful in combination with other policy instruments to establish industrial infrastructure for recycling. • Key components for good recyclers: <ol style="list-style-type: none"> 1. Traceability of trading partners 2. Analytical capacity of materials in recyclables 3. Introduction of mass balance tool 4. Sound management of residues 5. Acceptance of recyclables based on its technical and managerial capacity • Combination with EPR mechanisms (for household generated WEEE) and strong penalty for emitters with PPP principle (for large scale emitter of e-scrap) would be useful approaches to nurture good recyclers. 	
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