

# *The Path to Type III Program and Toward Continual Improvement*

June 12, 2002, Johannesburg




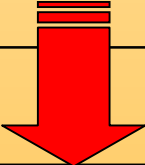
Japan Environmental Management  
Association for Industry(JEMAI)

*Chie Nakaniwa*

# *Overview of Today's Presentation*

1. Our history  
“How to build consensus among diverse stakeholders for starting Type III program”
2. Brief view of ECO-LEAF program
3. Toward future improvement and expanding international cooperation

# History of Launching Type III

YEAR	domestic	overseas
1997	First pilot program plan	SC1/WG1/TC Seed document for WD
1998	exploratory committee technical committee	ISO/TC207 at San Francisco
1999	1 <sup>st</sup> trial  2 <sup>nd</sup> trial  Evaluation 	market survey advisory committee
2000		ISO/TC207 at Soul 1 <sup>st</sup> GEDnet
2001		TR14025 issued ISO/TC207 at Stockholm 2 <sup>nd</sup> GEDnet
2002		3 <sup>rd</sup> GEDnet ISO/TC207 at QauraLumpul 4 <sup>th</sup> and 5 <sup>th</sup> GEDnet
2002	Kickoff ECO-LEAF 	6 <sup>th</sup> GEDnet
2003		TR14025 expired

# *How to Build Consensus of Stakeholders(1)*

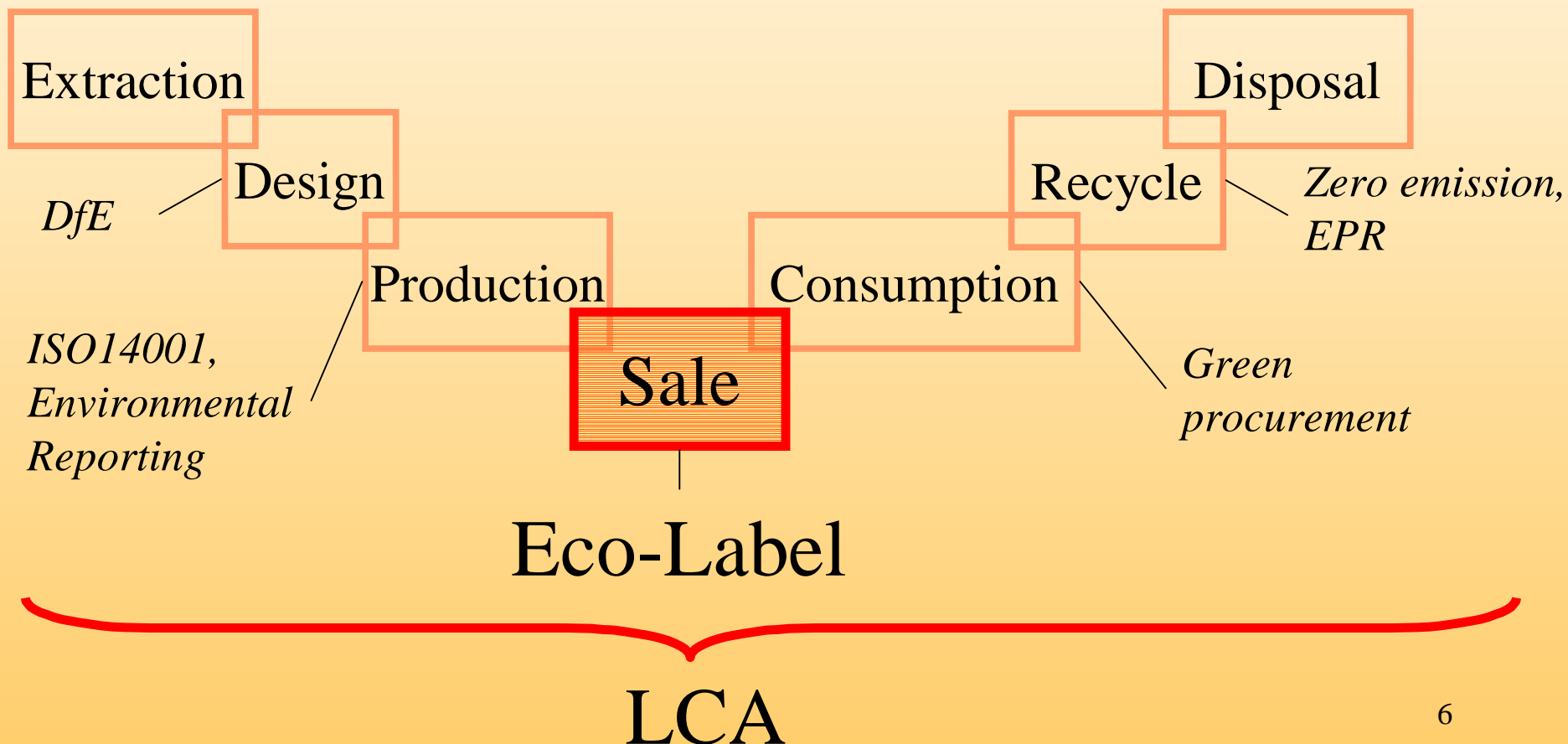
- ✓ Dialogue with industry associations and stakeholders about technical aspects:
  - 1) Focusing requirements on environmental aspects of a product
  - 2) Providing essential information to industries
  - 3) Prioritizing scientific and technical evidence which are critical to the environment (scientifically defensible, measurable outcomes)

# *How to Get Consensus of Stakeholders(2)*

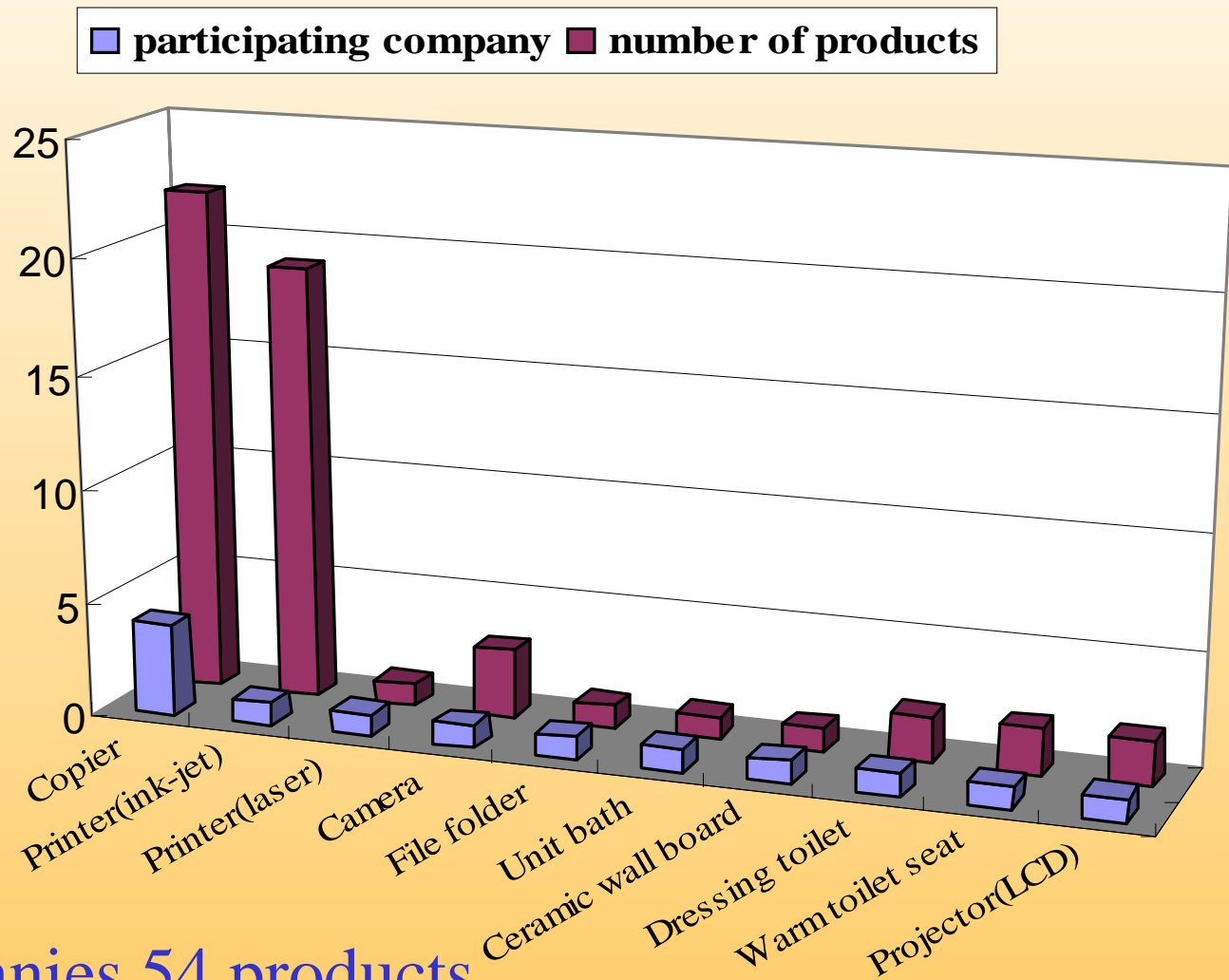
- ✓ Dialogue with industry associations and stakeholders about administrative aspects:
  - 1) Involving all stakeholders in the process of program development (objectives, criteria)
  - 2) Encouraging industry's initiative to improve their products
  - 3) Minimizing industry's administrative and financial burden by obtaining subsidy
  - 4) Recognizing surge of market demands and global trends for environmental information

# *Factors That Drive Type III Acceptance*

Society is ready to have common attributes.

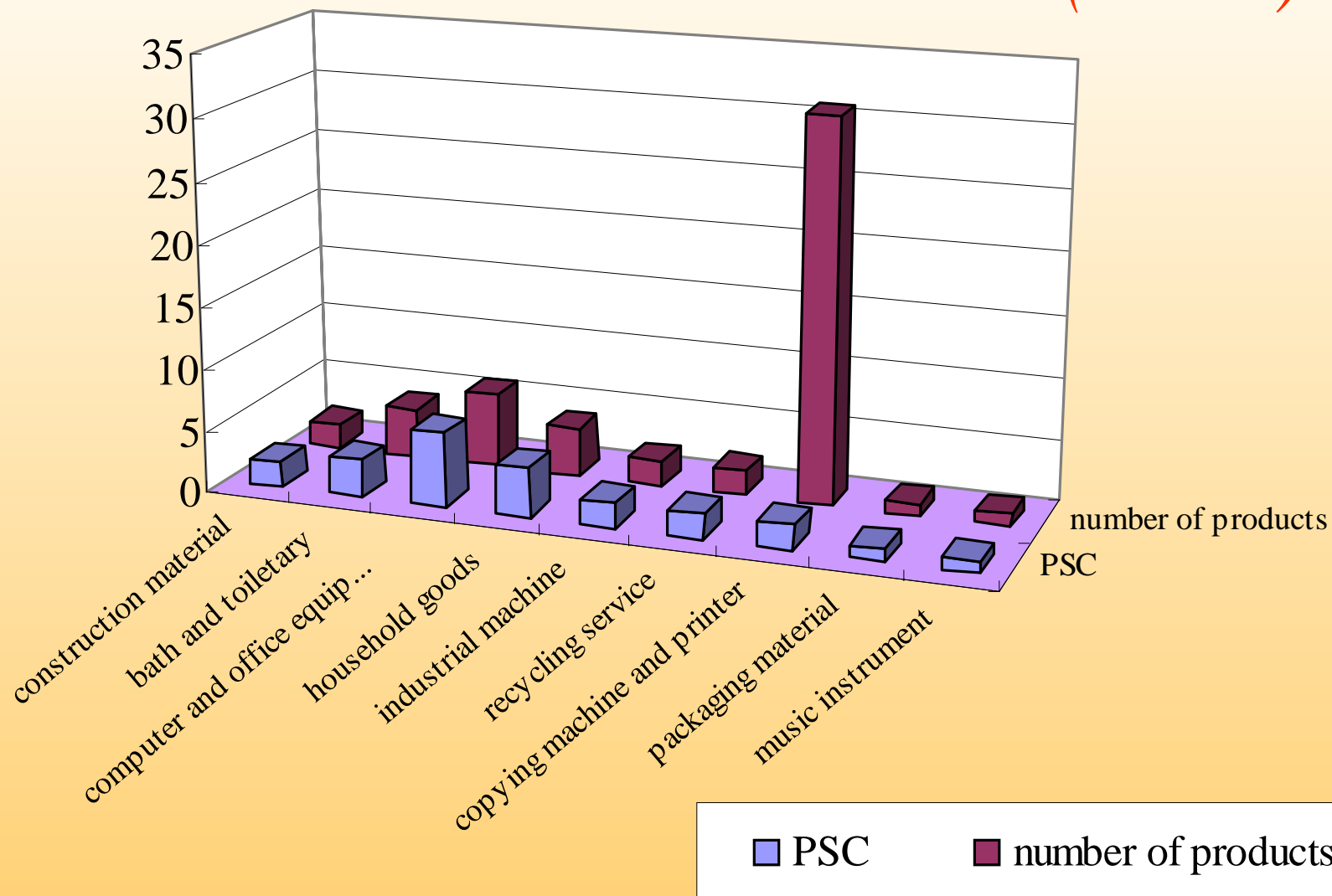


# Covered Products-Trial Period(ver.1)



13 companies 54 products

# Covered Products -Trial Period(ver.2)



23 Product categories 29 companies 53 products 8

# *What We Have Learned From Those Trial Series*

1. There were still rooms for efficiency in terms of cost and certification process
2. There were still claims about “being explicit” on label
3. Program accessibility should be taken into account for small and medium-sized companies

# *Efforts To Make Organized Better*

ECO-LEAF was elaborated;

- To be cost efficient in accordance with altering procedure, while retaining credibility
  - Data Collection System Certification (System Certification) invented
- To give stakeholders the explicit description
  - Declaration part, reporting format, PSC(PSR) revised
- To cover both big and small medium-sized companies
  - Data Verification system revised

# *Development of Type III Label Program at JEMAI*

- JEMAI launched the program : Sept. 1998
- The 1st trial : June 1999 ~ May 2000
- The 2nd trial : Sept. 2000 ~ June 2001
- Evaluation of the 2nd trial : July 2001 ~ Sept. 2001
- Transition period : Oct. 2001 ~ March 2002

**Kickoff of the formal implementation: April 2002**

**JEMAI always welcomes proposals for new products.**

# *ECO-LEAF Program*

## Its Structure and Contents

# *“ECO-LEAF” Structures*

1. Indicative part  
a logo that informs the users of “product environmental declaration”  
-affixed to the product
2. Core part  
a data sheet set containing quantitative data based on the LCA method  
-accessible via the internet

# Sample of ECO-LEAF Logo Part

## 製品環境宣言


Product Environmental Aspect Declaration



# Sitios 7140

<http://www.konica.co.jp/>

For further information, please contact:  
Environment & Safety Department  
Konica Corporation  
Tel: +81-(0)-42-589-8166  
Fax: +81-(0)-42-589-8071  
E-mail: eco-support@konica.co.jp



Multi-tray finisher is an optional.

Copy speed: 40-sheets/minute (A4)  
Maximum copy paper: A3  
Duplex copying: Standard equipment of Non-stack ADU  
Document feeding: Equipped with ADF having document automatic reversing function

- The amount of CO<sub>2</sub> emission in a life cycle from “production” to “disposal/recycling” is 880kg.
- The amount of power consumption in “consumption” stage is 1,800kWh under the condition of an average way to use (for five years).
- The total amount of energy used is 20,190MJ. Some 91% of the total amount are consumed in “consumption” stage.
- Some 99% of mineral resources such as iron and others used in the product are recycled.

※Please refer to the following three sheets for the detail of the Declaration.



製品環境宣言/PEAD  
No. 00003  
2001.05.09

この製品の定量的環境情報は下記のURLで公開しています。

<http://www.jemai.or.jp>

# 製品環境情報

## Product Environmental Aspects Declaration



### A section Product Category

#### B section

Producers,  
Contact address

#### C section

Product name,  
Function/ Specification

#### D section

Photo, illustration  
of a product,

#### E section

Description :environmental impact  
\*global warming, acidification,  
energy consumption  
Information :Life Cycle Stage

*“ECO-LEAF” Core Part  
Product Environmental Information  
Data Sheet (PEIDS)*

- The composition
  - Energy Consumption
  - Inventory Analysis Part
  - Impact Assessment Part
- The description of each life cycle stage
  - manufacturing, distribution, usage and disposal

# Plotting PEIDS

## Format of PEIDS

	manufacturing	distribution	usage	disposal	total
Energy consumption					
Inventory analysis	<b>Natural resource(mineral resource) Environmental emission (air, water, soil)</b>				
Impact assessment	<b>Global warming, Acidification, Ozone layer depletion</b>				

Access to [www.jemai.or.jp](http://www.jemai.or.jp)

# Sample of PEIDS(1)

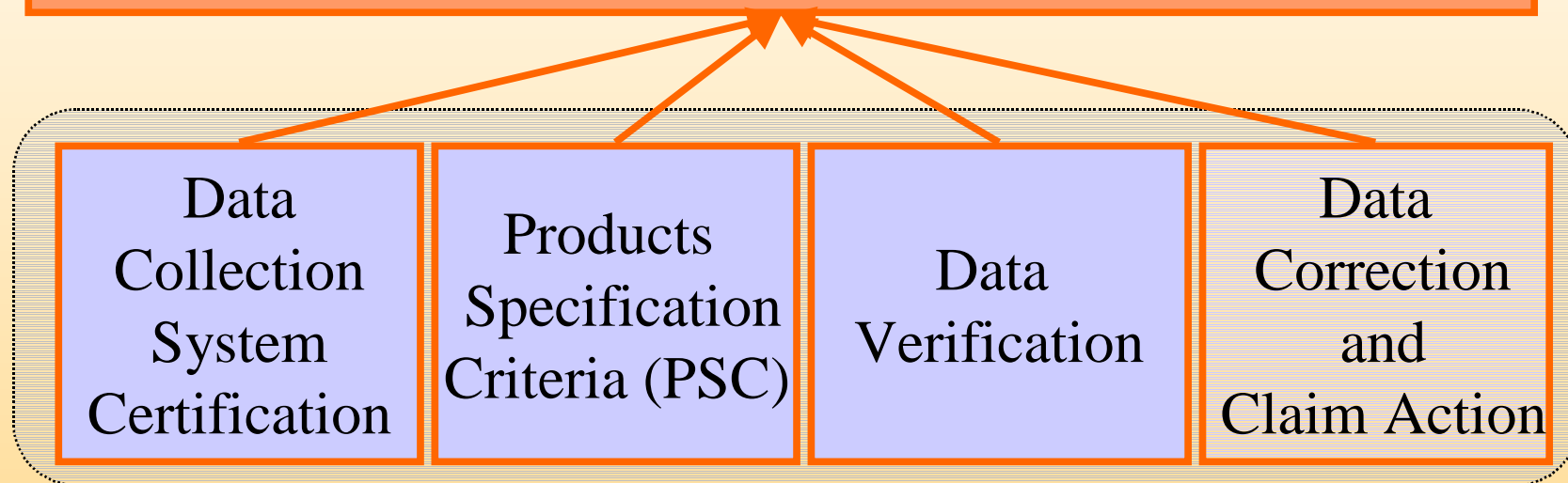
Input/Output items		Life Cycle Stage	Unit	Production		Distribution	Use	Disposal	
				Raw materials	Product				
Consumption energy			MJ						
			Mcal						
Inventory Analysis	Consumption impact	Energy resources	Coal	kg					
			Crude oil	kg					
			Natural Gas	kg					
			Uranium ore	mg					
		Natural resources	Mineral resources	Crude oil	kg				
				Iron ore	kg				
				Copper ore	kg				
				Bauxite	kg				
				Nickele ore	kg				
				Chromium ore	kg				
				Manganese ore	kg				
				Calcium fluoride	kg				
				Limestone	kg				
				Rock salt	kg				
				Silica sand	kg				
				Renewable resources	Lumber	kg			
Water	kg								

# Sample of PEIDS(2)

Input/Output items		Life Cycle Stage	Unit	Production		Distribution	Use	Disposal	
				Raw materials	Product				
Environmental emission impact	Into atmosphere	CO2	kg						
		SOx	kg						
		NOx	kg						
		N2O	kg						
		CH4	kg						
		CO	kg						
	Into water	BOD	kg						
		COD	kg						
		TN	kg						
		TP	kg						
	Into soil	Solid waste (dry type)	kg						
		Sludge(wet type)	kg						
Impact Assessment	Consumption impact	Energy resources(crude oil)	kg						
		Mineral resources(iron ore)	kg						
	Environmental emissions impact	Into atmosphere	Global warming(CO <sub>2</sub> basis)	kg					
			Acidification(SO <sub>2</sub> basis)	kg					
			Ozonelayer depletion	kg					
Into water		Eutrophication(phosphate)	kg						
Into soil									

# *Scheme for JEMAI “ECO-LEAF”*

## **Type III Environmental Declaration Registration/Release**



**ISO TR14025 (Type III) /ISO 14040 (LCA Study)**

Involved parties	JEMAI (Certifier)	JEMAI, applier, & interested parties	Registered person (Verifier)	JEMAI, applier, & stakeholders
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# *What Is Data Collection System Certification?*

Data Collection System certification is

to confirm the data gathering process

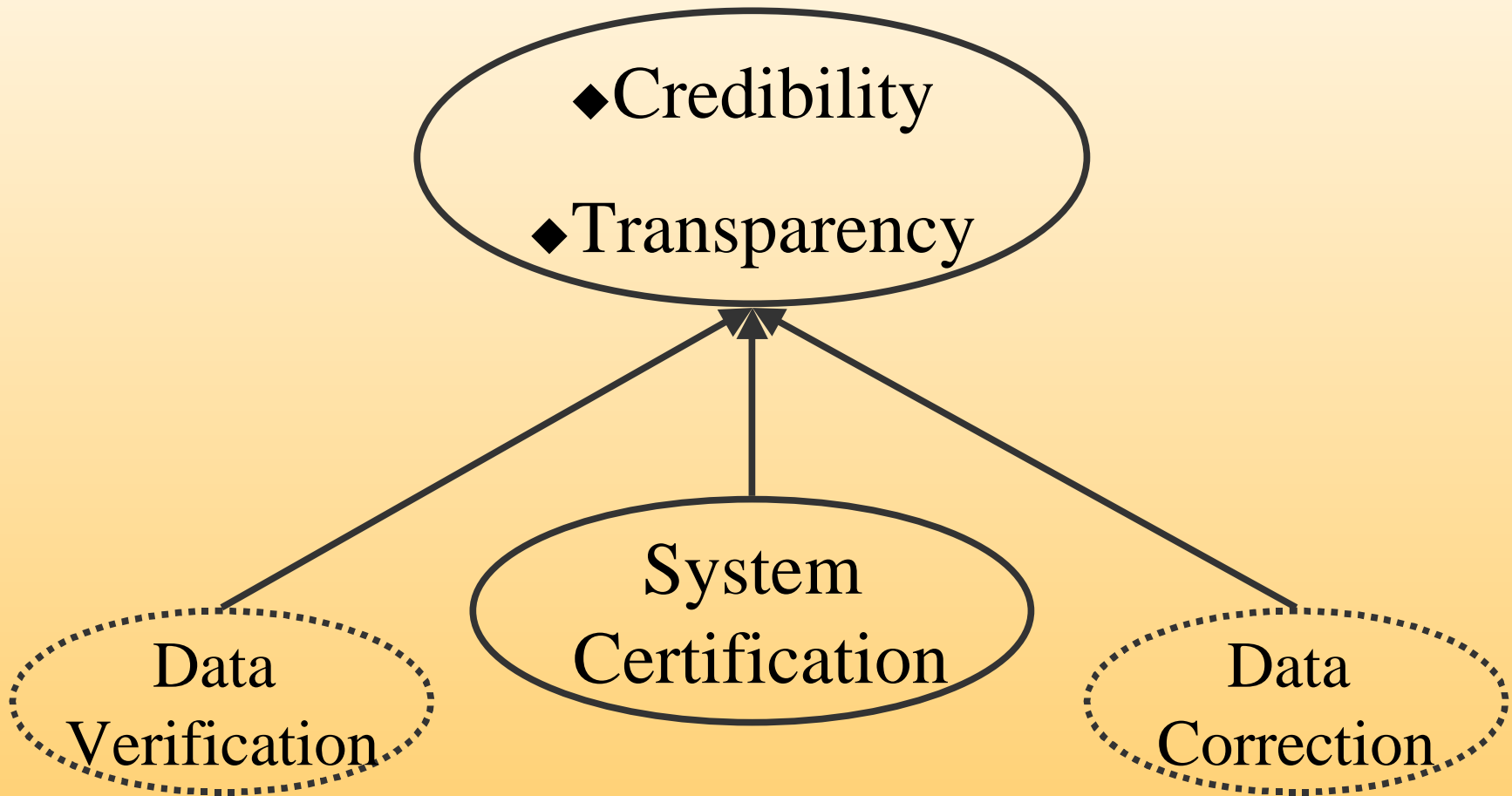
- regarding data quality, data availability, etc.

*Data Collection System certification procedure:*

*- contributes to ensure that data on type III label are reliable*

*- can serve the purpose of promoting environmental friendly commerce*

# *Objectives of Data Collection System Certification*

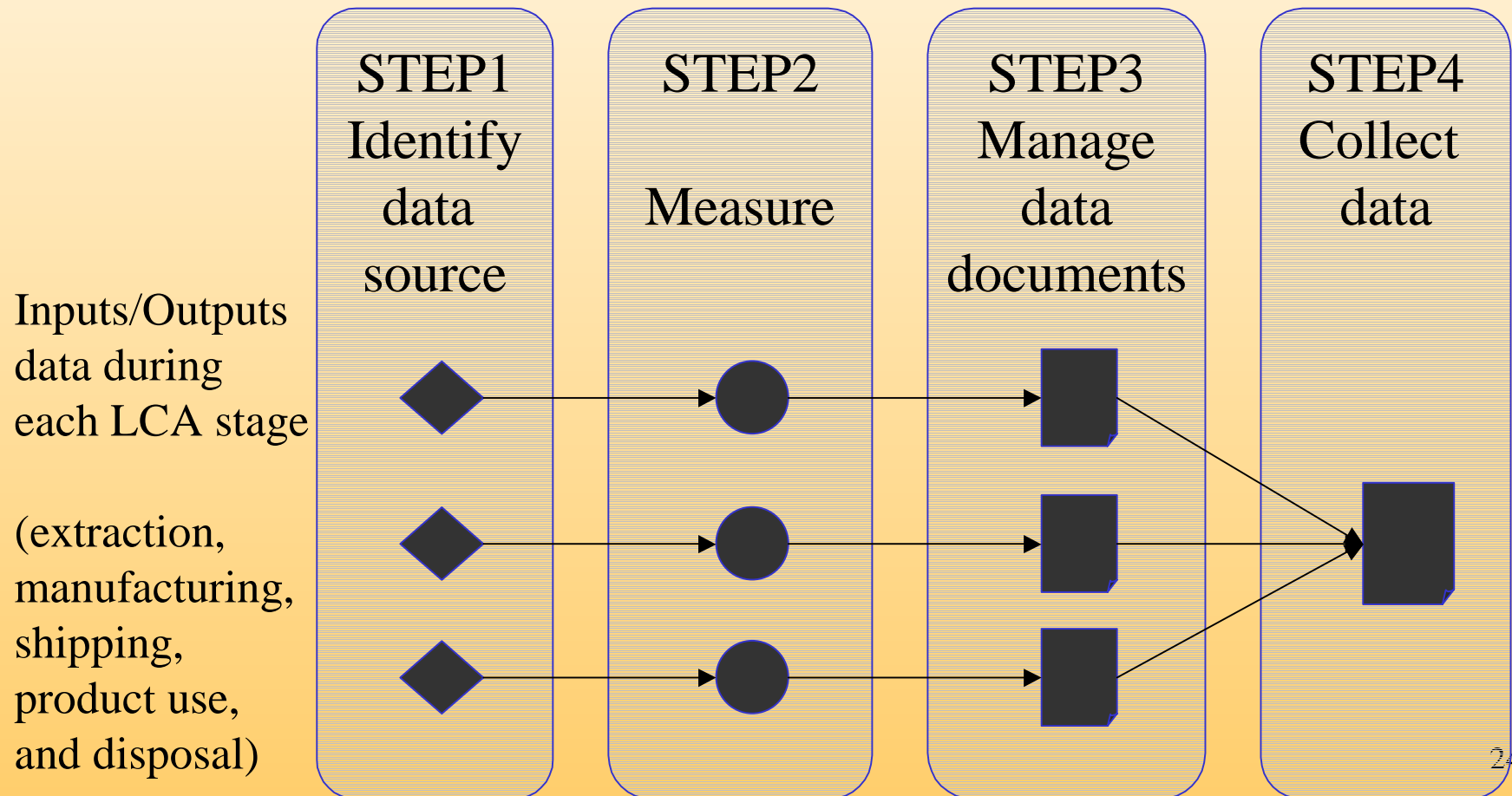


# *Why Do We Have Data Collection System Certification?*

- ◆ To deal with the conflicts of the confidentiality and credibility of data
  - system certification allows internal, but independent verifiers to assess data based on the certified system*
- ◆ Cost effective
- ◆ Prompt and efficient handling
- ◆ To inform users data quality and reliability

# System Certification Flow

*Certifiers confirm if the company holds an organized system for data collection and utilizes the system efficiently.*



# *What System JEMAI Certifies?*

1. The procedure to define data source of a product and its representativeness
2. The procedure to measure, record, compile, and handle data

-Valid for three years

## *What Kind of System Is Certified?(1)*

1. The procedure to define data source of a product and its representativeness
  - a) -System of defining product information and process information (raw material, parts unit, and technology coverage)
  - b) -System of collecting input/output data during each life cycle stage (the precision, completeness, and representativeness of the data)

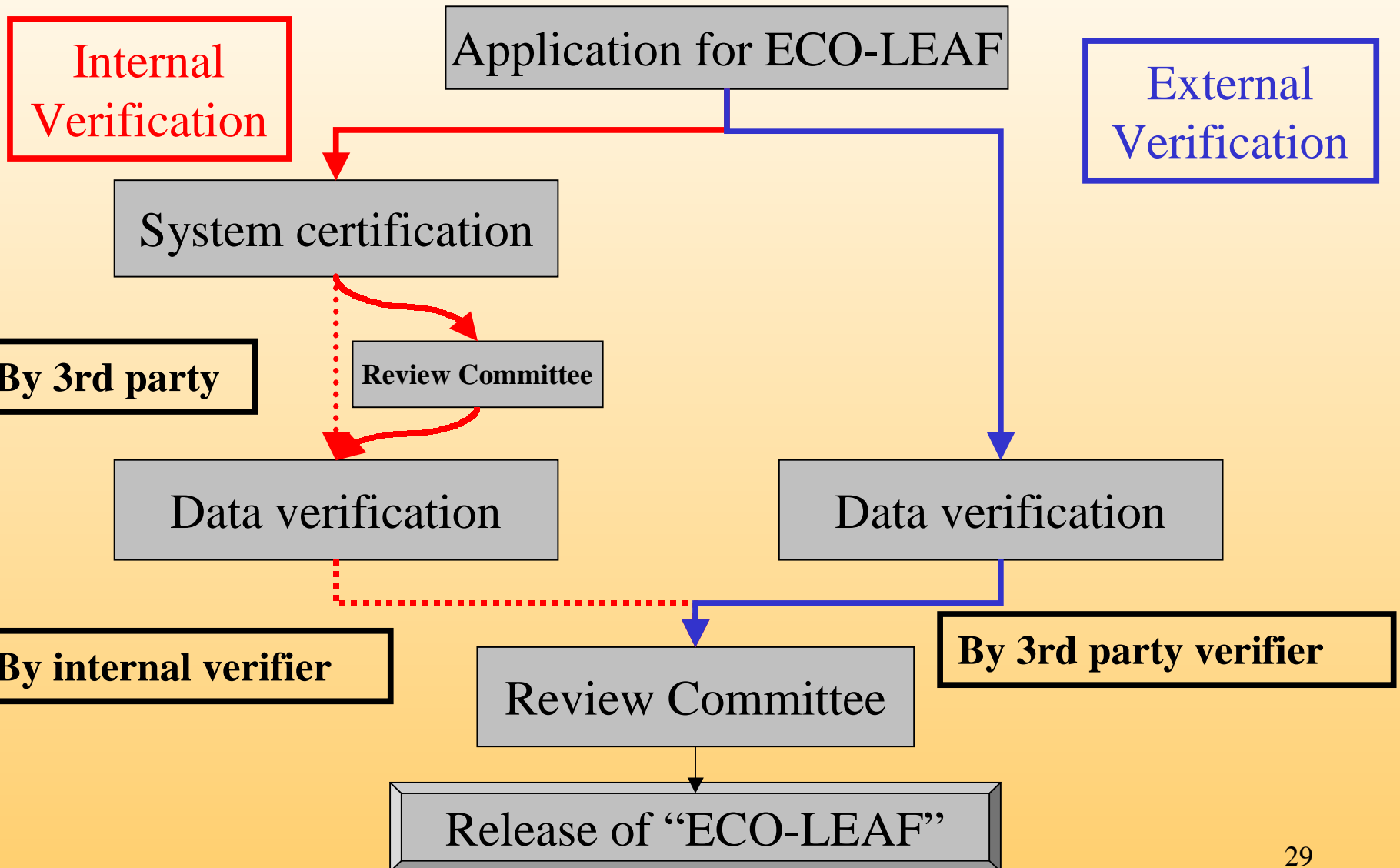
## *What Kind of System Is Certified?(2)*

2. The procedure to measure, record, compile, and handle data
  - c) -Methods of handling data (the compilation and quantification of inputs and outputs)
  - d) -Process to verify product data
  - e) -Process to modify product data
  - f) -Process to issue ECO-LEAF label

# *Self Verification*

- JEMAI adopts data “self”-verification.
  - The procedure is likely to be overseen too much by 3<sup>rd</sup> party verifier.
- To mitigate this, JEMAI takes “self-verification” so that the program goes efficiently.
- JEMAI requires internal verifier to act as stringent referee. Now JEMAI starts to offer training of internal verifiers
- Data self-verification should be carried out together with data collection system certification procedure.

# Two Approaches of ECO-LEAF Certification



# *Expanding International Cooperation*

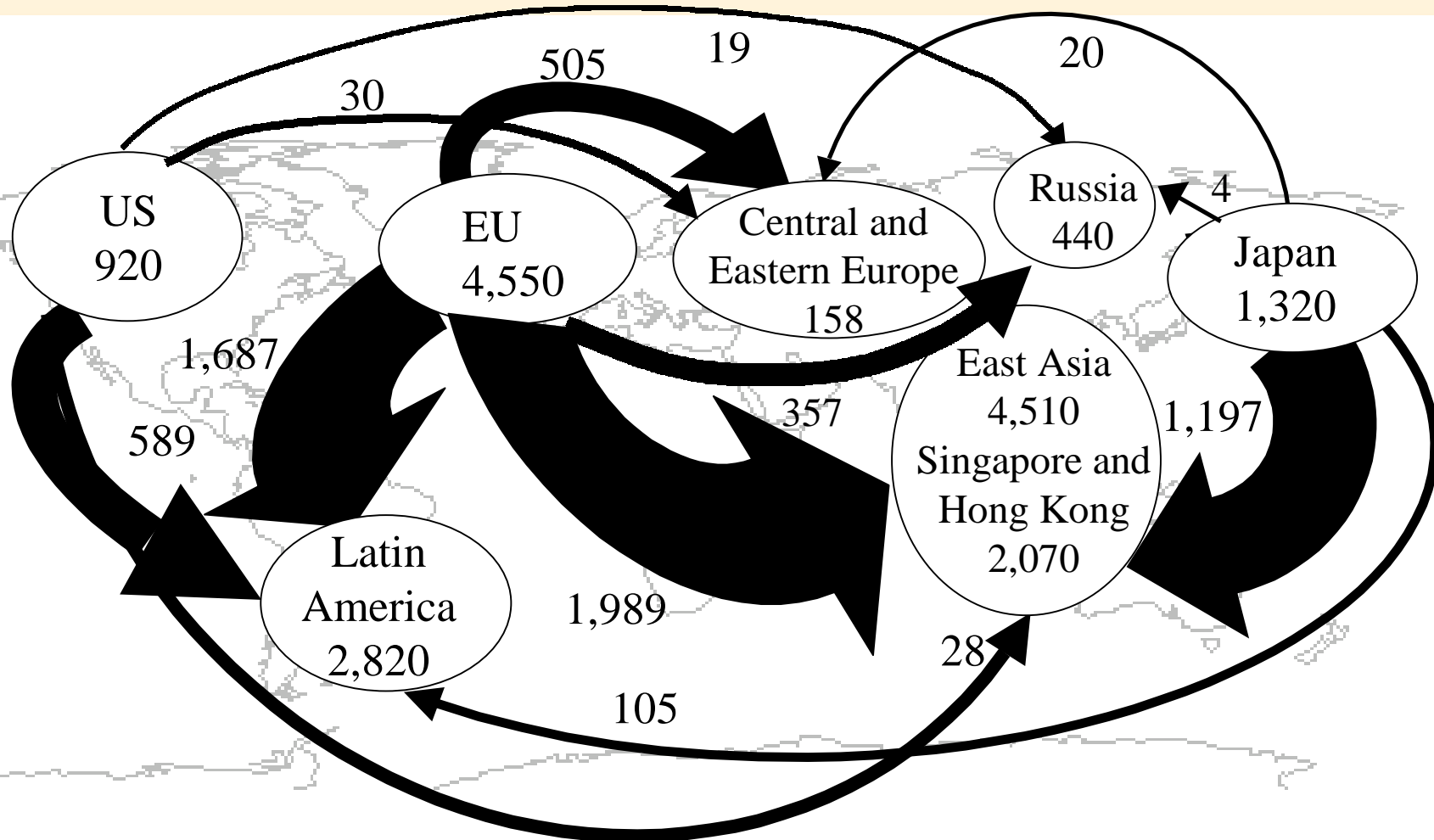
Sharing Value of Type III Labeling  
Scheme With Other Countries

# *Increasing Demand of Environmental Information*

- Environmental information could be successful keys not only for environmental management but also for business strategy.
- Without bilateral initiative, damage to both practicing countries and non-practicing countries.

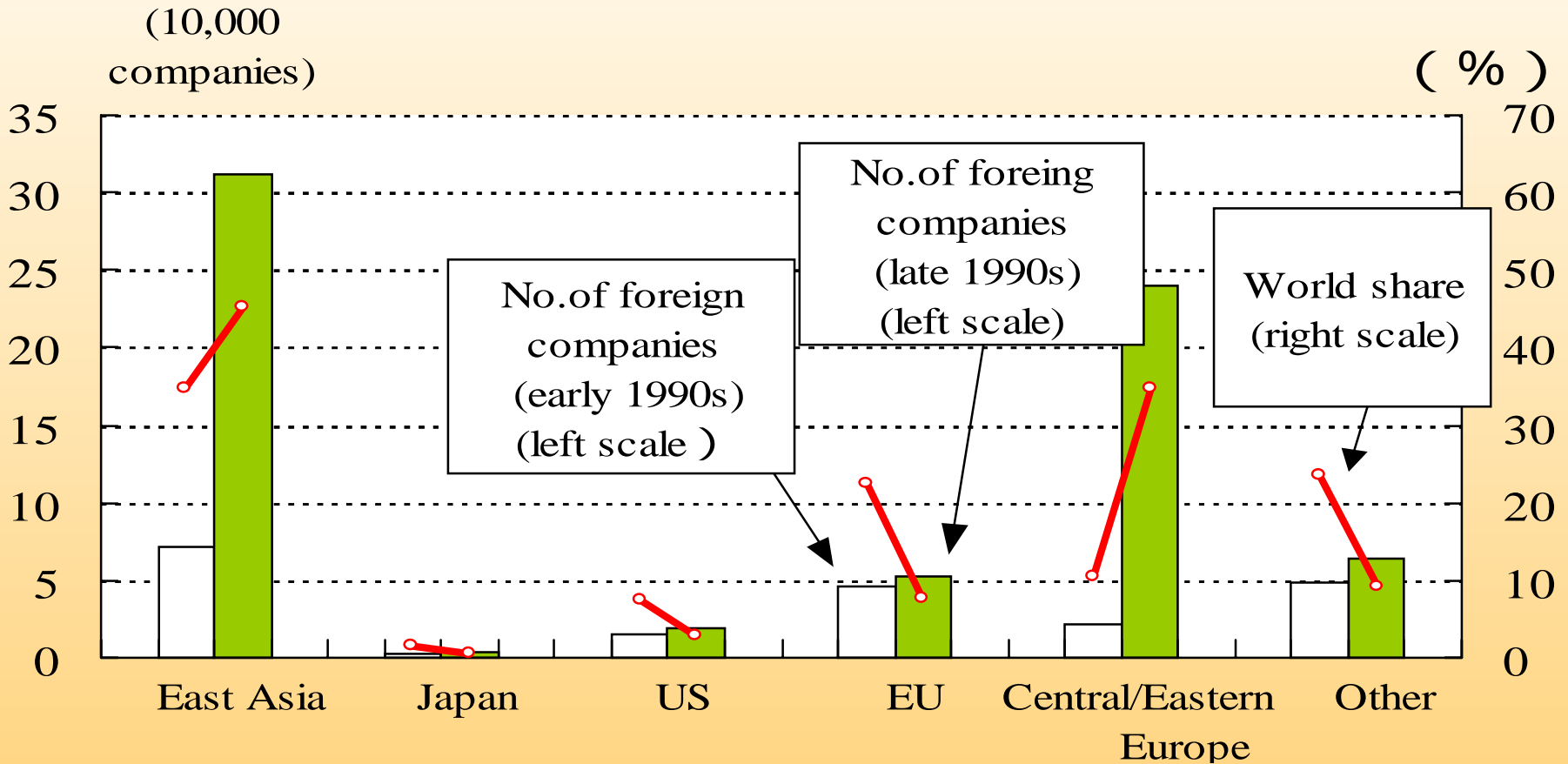
# *We realize globalization and market influence, evidence shows us...*

**Bank financing for developing countries by BIS-reporting banks(Japan, US, EU)**



(1998; US\$100 million)

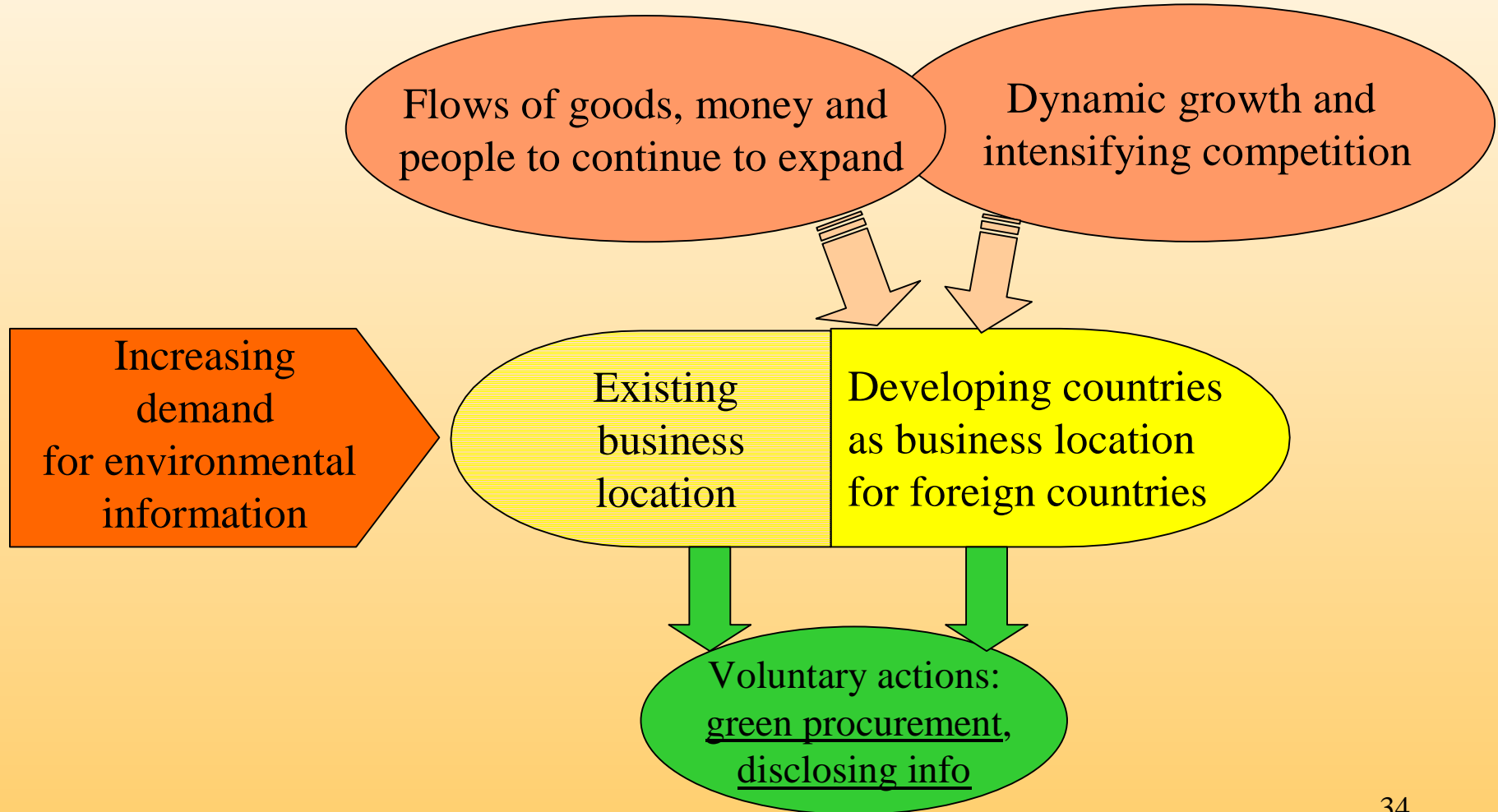
# Trends in Number of Foreign Companies by Country/Region and in World Share



*Note: Foreign companies are as defined by each particular country*

*Source: WIR(UNCTAD)*

# Changing in Industry Structure and Trade Patterns



Feb.2002 Workshop With Asian Countries Tells Us

## *Challenge to Promote Type III*

- Lack of financial support
- Lack of LCA skills, experts, and data
- No incentive to set out Type III
  - no green procurement policy, no market pressure*
- Few demands for environmental information
  - Type I spread, the knowledge of environmental awareness, no consumer-interest*

# *Environmental Related Budgets*

	Per Capita GNP (US\$)	Per Capita Environment-related Budget(US\$)
China	3,291	8.45
India	2,149	0.10
Indonesia	2,439	0.02
Malaysia	7,963	0.94
Thailand	5,599	2.16
Vietnam	1,690	0.38
Japan	24,041	48.45
US	30,600	27.69

Source: FY2001 Budget for global environmental protection (Environmental Agency of the Japanese government), Summary of the 2001 Budget (EPA), Hearing conducted by Green Aid Plan by personnel with environmental policy authorities, World Development Report (World Bank), Monthly Bulletin of Statistics (UN)

# *Recent Environmental Policy Trend*

- However, environmental policy has been shifting gradually from the direct regulation to a combination of voluntary actions by industries and use of market mechanism. Developing countries seem to pursue the same course, slowly.

# *What Could We Support Them?*

Today's discussion subjects of our workshop!

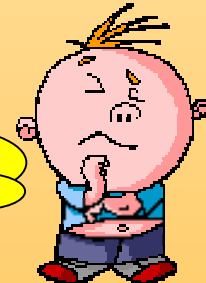
-Our Plan-

Capacity building

:Spring-Summer of 2002

Offering Education through training

: Fall-Winter of 2002



# *Toward Future Improvement*

Continual improvement

## *Future Activities*

### *-Expand Beyond Successive Efforts*

- To expand product categories go upstream; social infrastructure
- From “Business to Business” to “Business to Consumer”, increasing accountability and explicitness
- To make synergy effect with other environmental management tool (green procurement and others)
- To increase and upgrade LCI data for generic data (tying up with LCA national public data base), and join international cooperative action

# *Summary and Conclusion*

- Type III eco label is an effective tool to provide environmental information of a product.
- ECO-LEAF program offered by JEMAI has many potential applications, covering demands of business counterparts.
- The developing countries should also take the opportunity to support Type III eco label by realizing a global trend.
- International standardized document is needed. Ideal goal will be carried out by bilateral initiative both practicing countries and non-practicing countries.

*The info of ECO-LEAF is available on*

[http://www.jemai.or.jp/ecolabel/eng\\_ecl/e\\_ecl.htm](http://www.jemai.or.jp/ecolabel/eng_ecl/e_ecl.htm)