



Transboundary movement and recycling of hazardous wastes and secondhand EEE

-Overview of current situation of Asian countries-

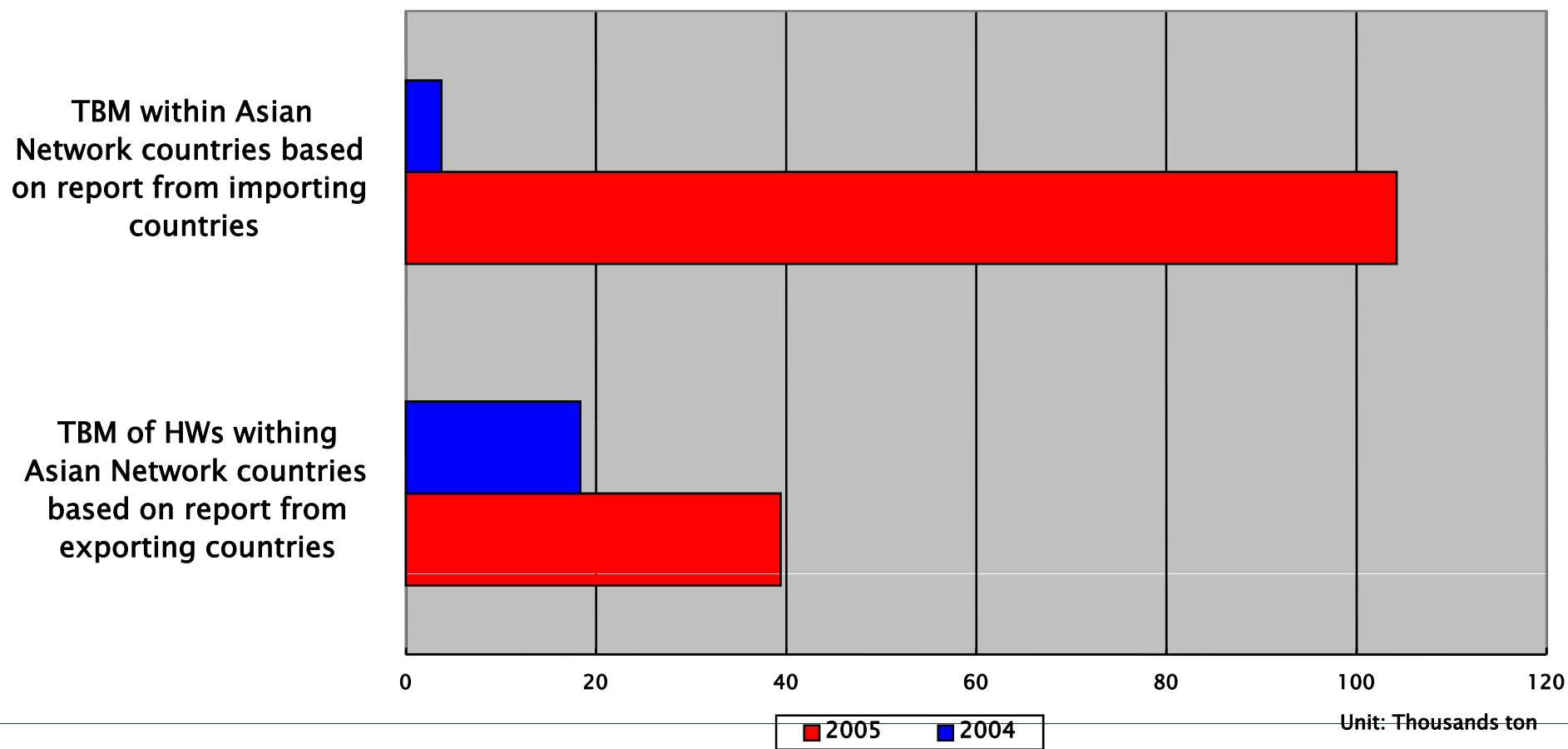
The Secretariat of Asian Network

Outline of Presentation

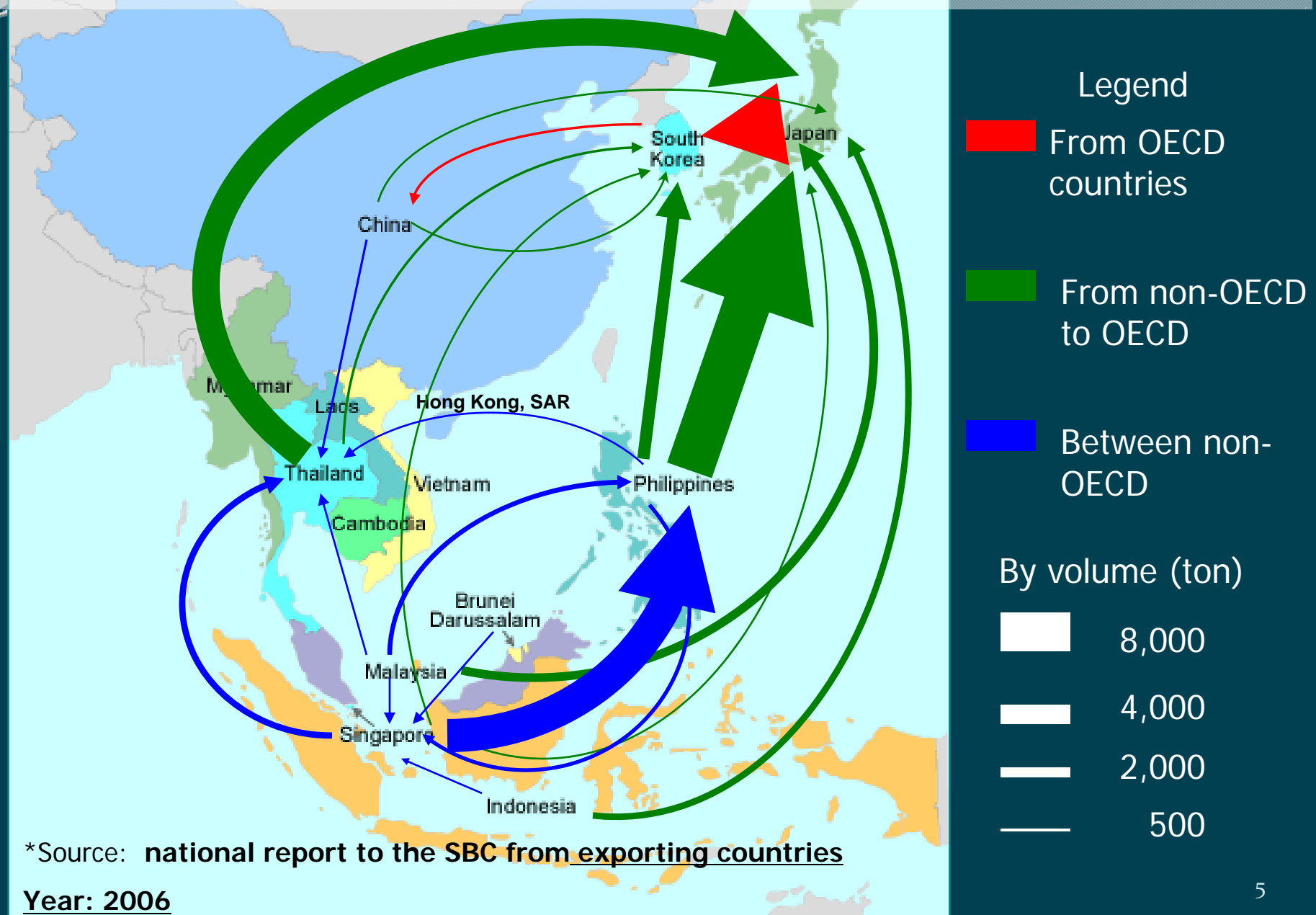
- Transboundary movement of hazardous wastes under the Basel Convention among Asian countries.
- Transboundary movement of secondhand EEE among Asian countries.
- Current situation of recycling in Asian countries

Transboundary movement of hazardous wastes under the Basel Convention among Asian countries.

TBM of hazardous wastes under control of the Basel Convention within Asian network countries



TBM of hazardous wastes under control of the Basel Convention within Asian network countries



Hazardous Waste Import by Asian Countries (2005, ton)

Import Export	Japan	South Korea	Philippine	Malaysia	Singapore
Japan		64000		*241872	
S. Korea					
China	1191	100			
Hong Kong	242				
Taiwan		900			
Philippine	1248	4450			
Thailand	460	480	870		135
Malaysia	1683				26
Singapore	477	7000	10000	64774	
Indonesia	91				
Others	23	91500	18720		

Note: *: Blast Furnace Slag, which is not regarded as Hazardous Waste in Japan, and which is excluded from Hazardous Waste in Malaysia since 2006.

Hazardous Waste Import by EU Countries (2005, ton)

Import Export	Belgium	Germany	France	Italy	Netherlands
Austria	1053	281807	18511	73292	
Belgium		207995	201397	70018	137743
Switzerland	5232	140923	300315	288105	26303
Germany	236396		111359	383315	102940
France	186173	114818	29210	215569	42410
G Britain	5306	56595	14340	123	5136
Ireland	10778	214419	810	30	3463
Italy	2923	646707	17115		248
Luxembourg	14493	84114	192995		1245
Netherlands	320637	621532	33296	300005	
Total	805643	2569800	928649	1334860	331133

Transboundary movement of secondhand EEE among Asian countries.

TBM of secondhand EEE among Asian countries

- Trade data of EEE is obtained from custom statistics available from World Trade Atlas. Data used are 2006 and only based on export statistics.
- Information for price of brand-new and secondhand EEE in local markets in member countries are collected by local consultants.
- Export data which average unit price (USD/unit) exceeds local market price of secondhand EEE are considered as non-secondhand trade and excluded.

TBM of Secondhand EEE in Asia

-case of used color TV sets:852812-



Legend

█ From OECD countries

█ From Non-OECD countries

* only trade exceeding 100,000 is reflected.

By number of unit (thousand)

█ 5,000

█ 1,000

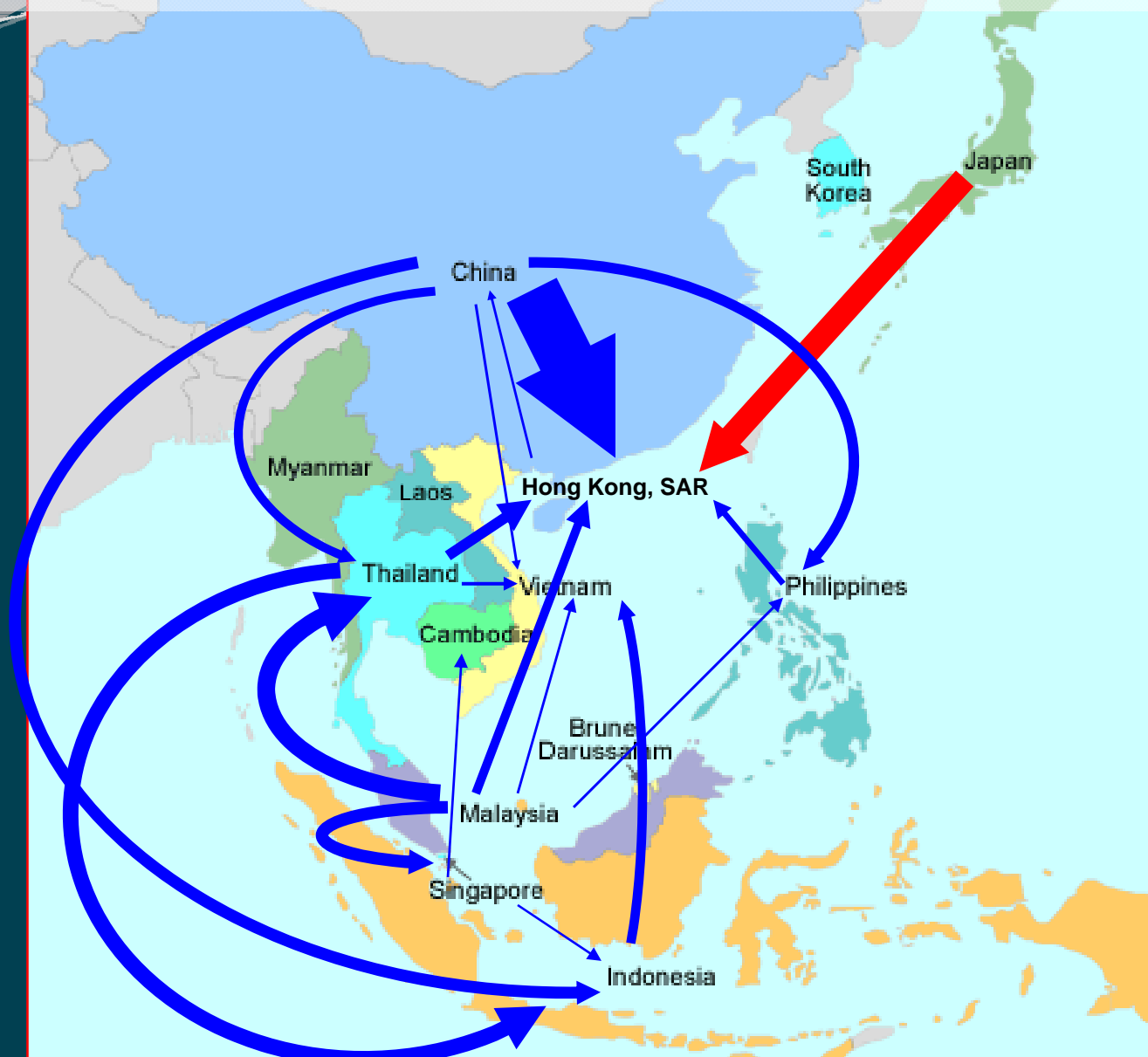
█ 500

█ 100

*Based on export statistics of member countries available from WTA

TBM of secondhand EEE in Asia

-case of used Air Conditioner sets:841510



Legend

█ From OECD countries

█ From Non-OECD countries

* only trade exceeding 20,000 is reflected.

By number of unit (thousand)

█ 1,000

█ 200

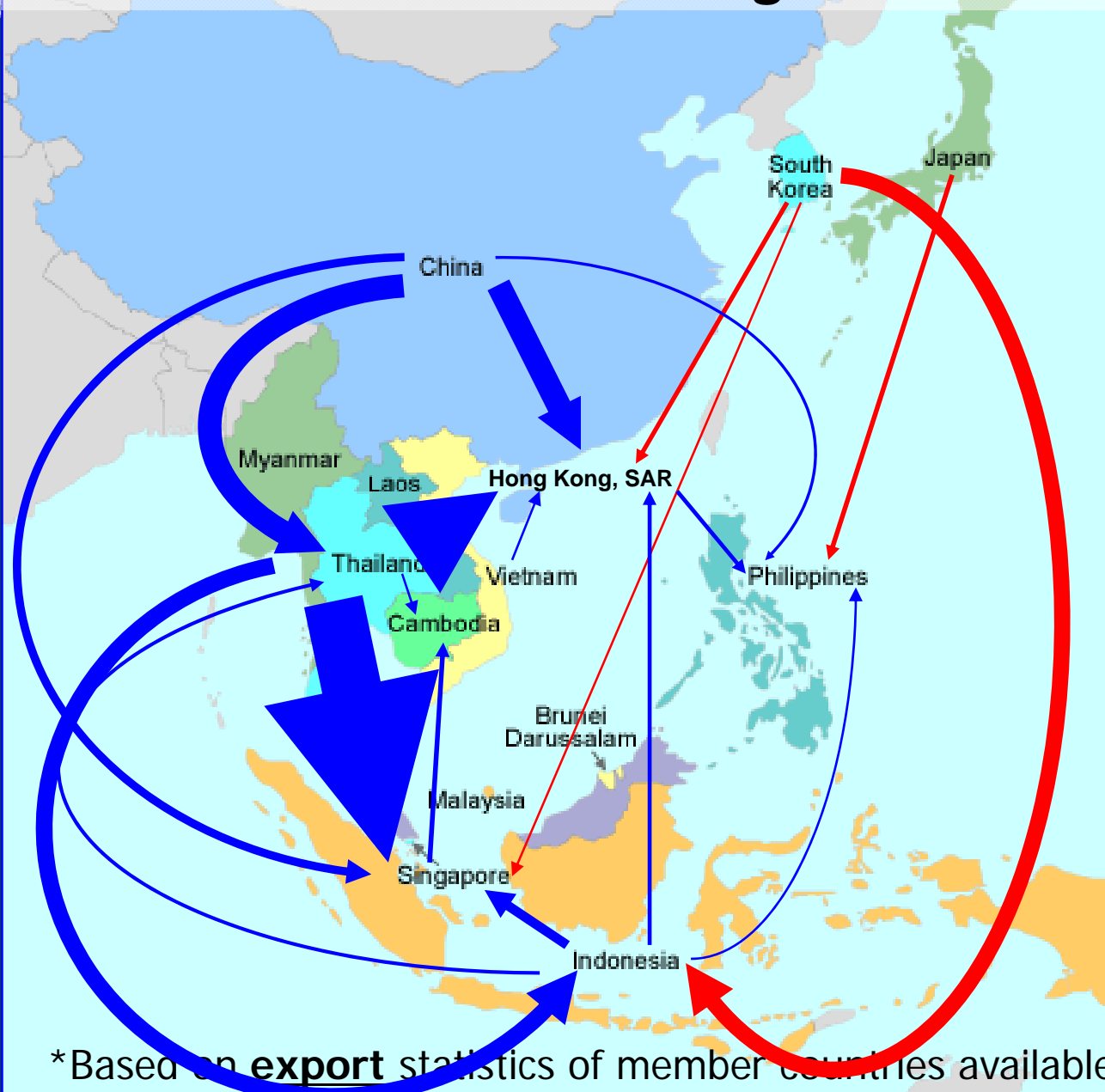
█ 100

█ 20

*Based on export statistics of member countries available from WTA

TBM of secondhand EEE in Asia

-case of used Refrigerator sets:841810



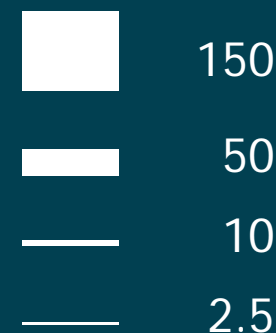
Legend

█ From OECD countries

█ From Non-OECD countries

* only trade exceeding 2,500 is reflected.

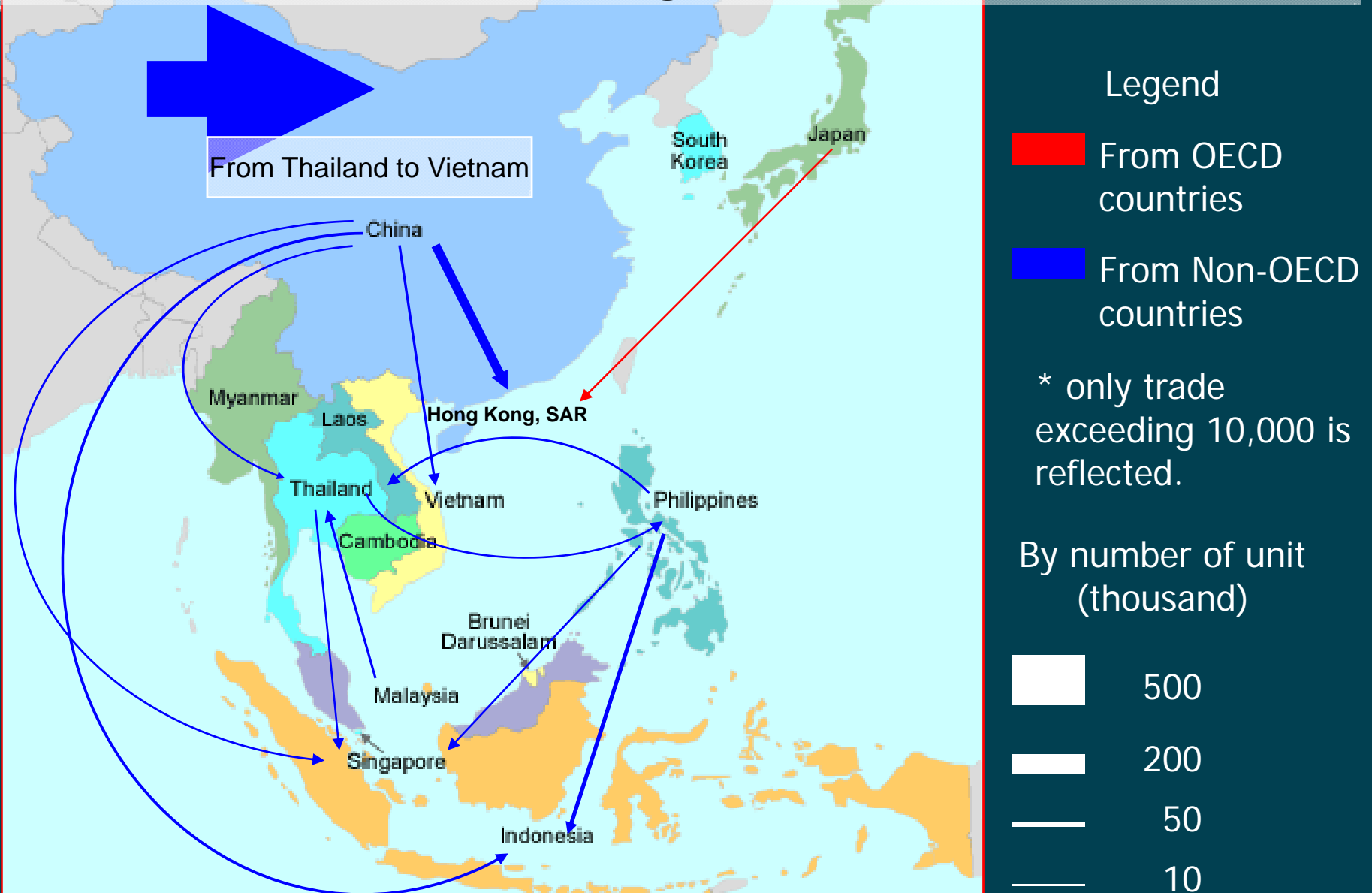
By number of unit
(thousand)



*Based on **export** statistics of member countries available from WTA

TBM of secondhand EEE in Asia

-case of used Washing Machine sets:845011



*Based on **export** statistics of member countries available from WTA

TBM of secondhand EEE in Asia

-case of used Desktop PC sets:847141



Legend

█ From OECD countries

█ From Non-OECD countries

* only trade exceeding 25,000 is reflected.

By number of unit (thousand)

▬ 1,000

▬ 500

▬ 100

▬ 25

*Based on export statistics of member countries available from WTA

TBM of secondhand EEE in Asia

-case of used Laptop PC sets:847130



Legend

█ From OECD countries

█ From Non-OECD countries

* only trade exceeding 100,000 is reflected.

By number of unit (thousand)

█ 1,000

█ 200

█ 100

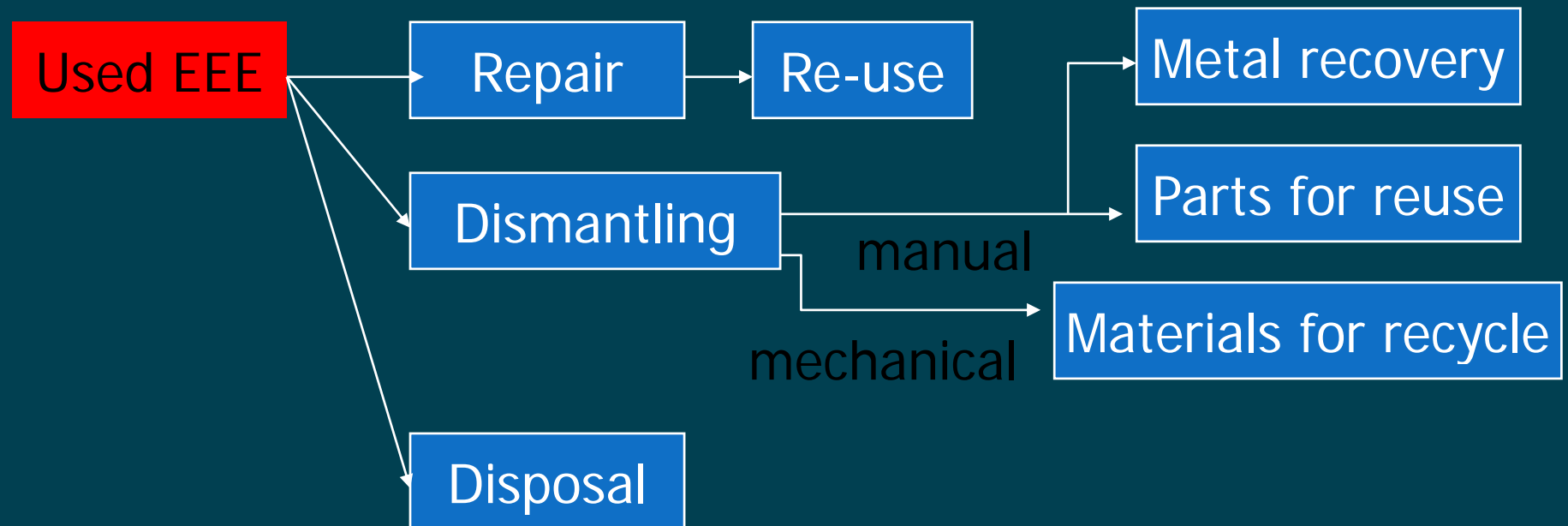
█ 20

*Based on **export** statistics of member countries available from WTA

Current situation of used EEE recycling in Asian countries

In Philippines

- While some used EEE are repaired for direct **reuse** and the parts from used EEE are utilized,
- **Some** recycling activities are conducted not environmentally sound manner.



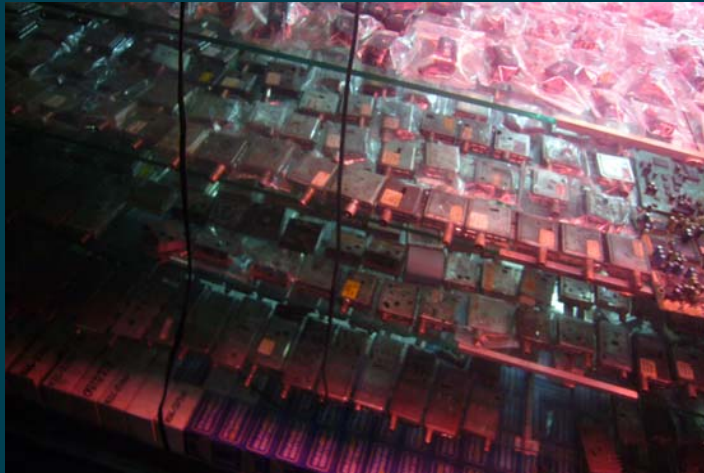
In Philippines

Repair for reuse



In Philippines

Parts taken out of used EEE **manually**



Source: Dr Yoshida, NIES

For reuse

For recycling

Materials taken **mechanically and safely** for recycling



Source: Envirocycle

Glass is taken from used CRT (mostly not repairable) for recycling. Pollution controlled CRT crusher and glass cullets process equipment.

In Philippines

Metal recovered
mechanically



Source: Integrated Recycling Industries

Chemical treatment of PCB through cyanide extraction, stripping and passing through an electrolysis line. Copper and gold are recovered.

In Philippines

Artisanal metal recovered



Used printed circuit board



Cyanide



Acid stained hands

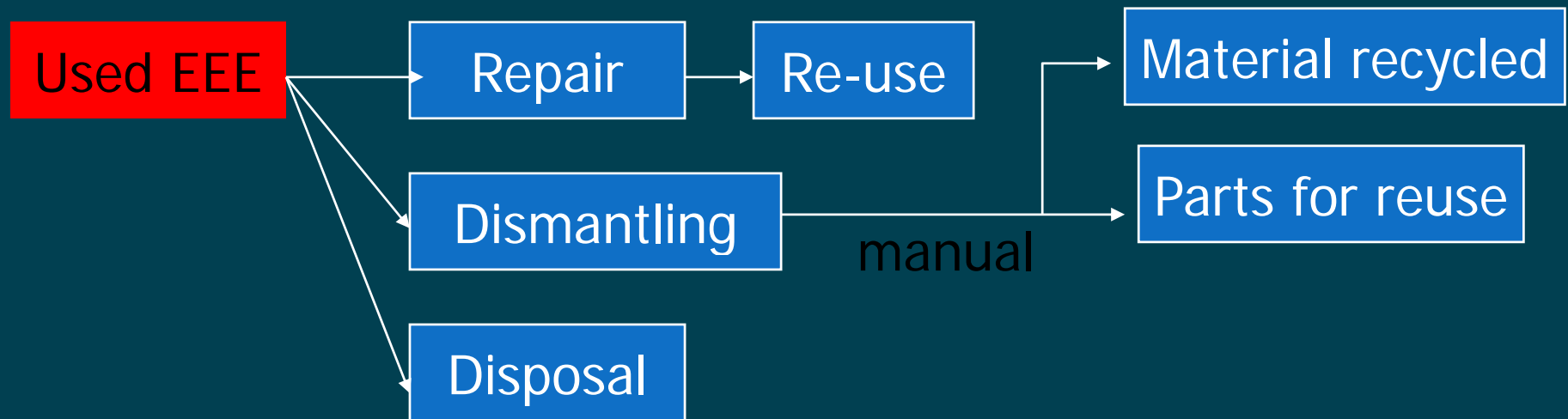


Gold refining

Cyanide and nitric acid used to cleanse PCB and to melt the copper for extracting gold. Some health damage caused.

In Vietnam

- While some used EEE are repaired for direct reuse, some recycling activities are conducted not environmentally sound manner.
- Illegal import is presumed to be **some** source for used EEE recycled.



In Vietnam



Repair for reuse

In Vietnam

Parts taken out of used
EEE manually



Summary of presentation

- TBM of hazardous waste under the Basel Convention in Asian Network countries is not frequent as compared with other region, but increasing.
- However, with reference to customs statistics of each country, not only developed countries, but also developing countries now exports a huge volume of secondhand EEEs. The market of secondhand EEE in the region is expanding.
- System for repair, refurbishment, and recycle of secondhand EEE can be now observed in many developing countries in the region. However, in some cases, wastes are not recycled in an environmentally sound manner.
- Better implementation of the Basel convention as well as establishment of sound recycling system are very important to address E-waste problems in Asian countries.

Thank you
Terima kasih

If you have any question or opinion, please contact;

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