

Pollution Risks Accompanied with Economic Integration of ASEAN Countries and the Fragmentation of Production Processes



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AEC Blueprint

Strategic Approach	Core Elements
A. Towards a Single Market and Production Base	A1. Free Flows of Goods A2. Free Flow of Services A3. Free Flows of Investment A4. Free Flow of Capital A5. Free Flows of Skilled Labor A6. Priority Integration Sector A7. Food, Agriculture and Forestry
B. Towards a High Competitive Economic Region	B1. Competitive policy B3. Intellectual Property Rights B4. Infrastructure Development B5. Taxation B6. E-Commerce
C. Towards a Region of Equitable Economic Development	C1. SME Development C2. Initiative for ASEAN Integration (IAI)
D. Towards Full Integration into the Global Economy	D1. Coherent Approach Towards External Economic Relations and Enhanced Participation in Global Supply Networks

(出所) Association of Southeast Asian Nations [ASEAN]. (2008) *ASEAN Economic Community Blueprint*, ASEAN.

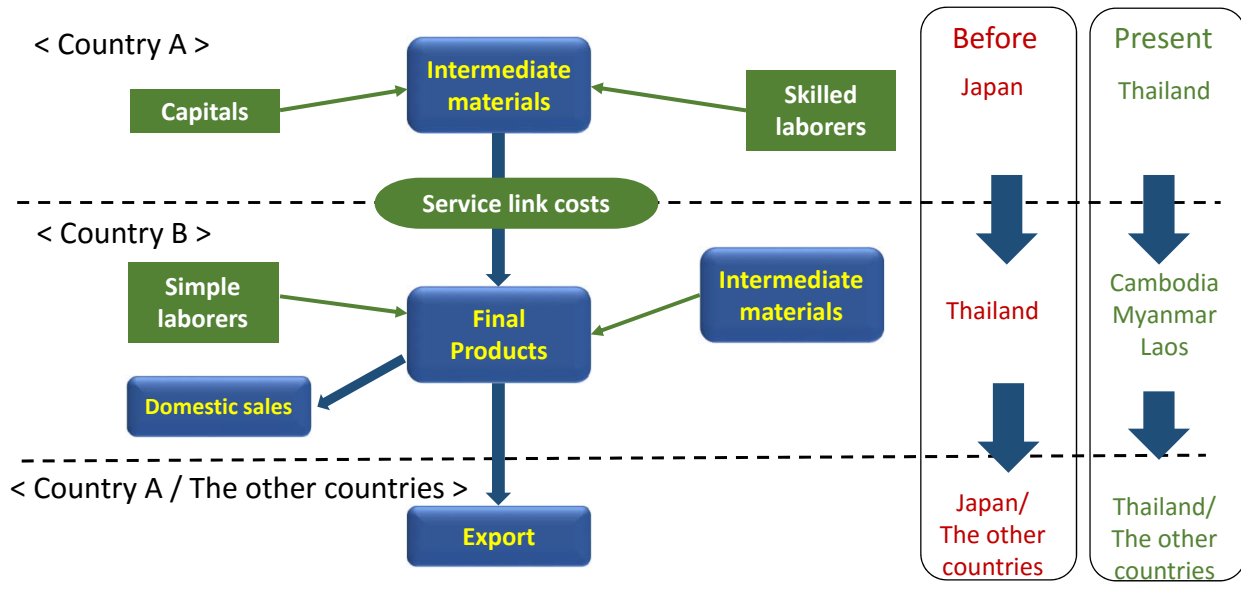
ASEAN is a loose framework comparing with other economies
 ASCC does not explicitly address pollution problem

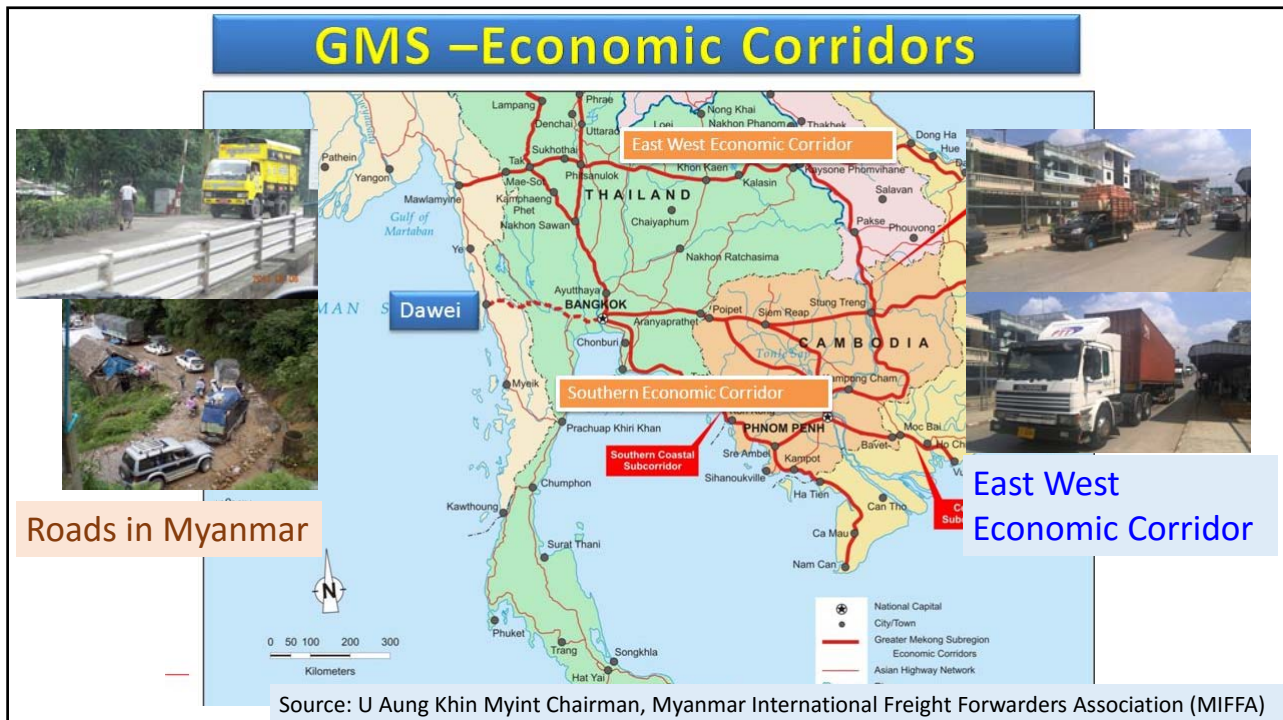
D. Ensuring Environmental Sustainability

- D.1. Addressing global environmental issues
- D.2. Managing and preventing transboundary environmental pollution
- D.3. Promoting sustainable development through environmental education and public participation
- D.4. Promoting Environmentally Sound Technology (EST)
- D.5. Promoting quality living standards in ASEAN cities/urban areas
- D.6. Harmonizing environmental policies and databases
- D.7. Promoting the sustainable use of coastal marine environment
- D.8. Promoting Sustainable Management of Natural Resources and Biodiversity
- D.9. Promoting Sustainability of Freshwater Resource
- D.10. Responding to Climate Change and addressing its impacts
- D.11. Promoting Sustainable Forest Management (SFM)



Fragmentation of the production processes in ASEAN





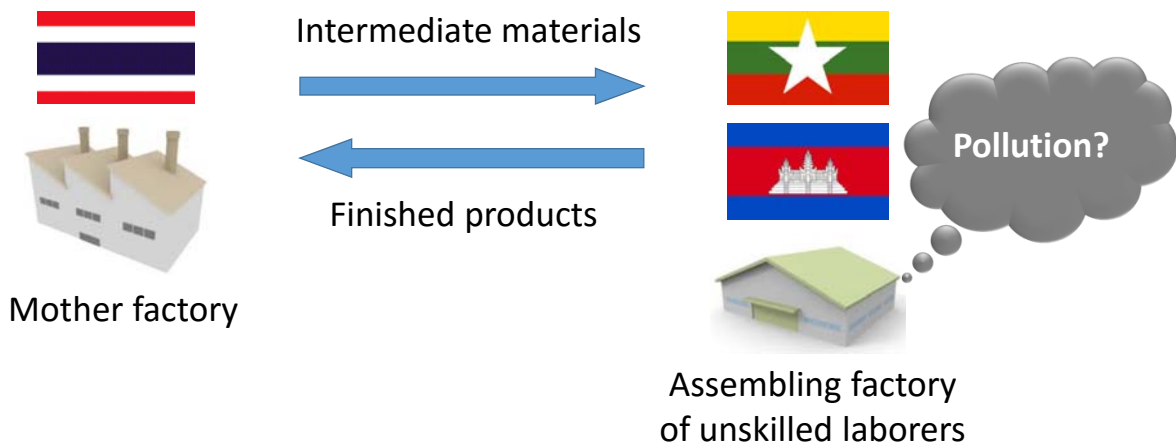
Thai Minimum Wage Policy enacted in 2013

Table 1. Minimum Wage by Area in Thailand (2011-2012)

No.	Number of Areas	Names of Areas	Zone	Minimum Wage per day (Baht)		
				2011	2012	2013
	1	Phuket	2	221	300	300
1	6	Bangkok, Nakhon Pathom, Nontha Buri, Pathum Thani, Prakan, Samut Sakhon	Samut 1	215	300	300
2	1	Chonburi	2	196	273	300
3	2	Cha Choeng Sao, Sara Buri	2	193	269	300
4	1	Ayutthaya	2	190	265	300
5	1	Rayong	2	189	264	300
6	1	Bung Kan	3	186	259	300
7	1	Ranong	3	185	258	300
8	1	Krabi	3	184	257	300
9	2	Nakhon Ratchasima, Prachin Buri	3	183	255	300
10	1	Lop Buri	3	182	254	300

(Source) Prepared by authors from Ministry of Labor in Thailand, 2013

FDI from Thailand to Myanmar or Cambodia



Pollution Control Laws in India

- Water (Prevention and Control) Act, 1974
- Air (Prevention and Control of Pollution) Act, 1981.
- Environment Protection Act, 1986
 - Environmental Impact Assessment
 - Municipal Solid Wastes (Management and Handling) Rules, 2000



Pollution control measures at industrial areas in India

Industrial area	Bawal	Neemurana	Greater Noida	Sri City	Mahindta	Hajira
State	Haryana	Rajasthan	Utter Pradesh	Andhra Pradesh	Tamil Nada	Gujarat
Water Supply	●	●		●	●	●
Underground water		●	●		●	
Regulations	●	●	●	●	●	●
Waste water treatment facility	●				●	●
Dumping at site						
Regulations	●	●				
Waste treatment facility					●	
Dumping at site				●	●	
Intermediate treatment facility						
Final Disposal Area						
Regulations						

Waste water treatment facility of a Japanese factory in the greater Noida Industrial area



This industrial area has neither a wastewater treatment nor a waste management central processing facility, so all factories are required to treat their waste water within their own factories.

It is not certain that all factories are adequately establish and operate such facilities.

Environmental laws in Cambodia

- Law on Environment Protection and Natural Resource Management, 1996
 - Sub-Decree on Management of Solid Waste, Water Pollution Control, and EIA Process, 1999
 - Sub-Decree on Control of Air Pollution and Noise Disturbance, 2000



Pollution control measures at industrial areas in Cambodia

Industrial area	Phnom Penh	Sihanoukville Port	Sihanoukville	Koh Kong	Poipet
Location	Phnom Penh City	230km (Phnom Penh)	210km (Phnom Penh)	Thai Border	Thai Border
Establishment	2006	2009	2006	2006	2005
Fund	Japanese and Cambodian	Japanese ODA	Chinese	Cambodian	Cambodian
Scale (ha)	360	70	1,113	355	385
Water supply	Water purification	Underground water	To be developed	Water supply	Water supply
Water Treatment	Central	Central	To be developed	Nil	Nil
Rent per m ² (USD)	55	65	28	20	33

Central water treatment facility in Phnom Penh Industrial Area



Environmental Laws in Myanmar

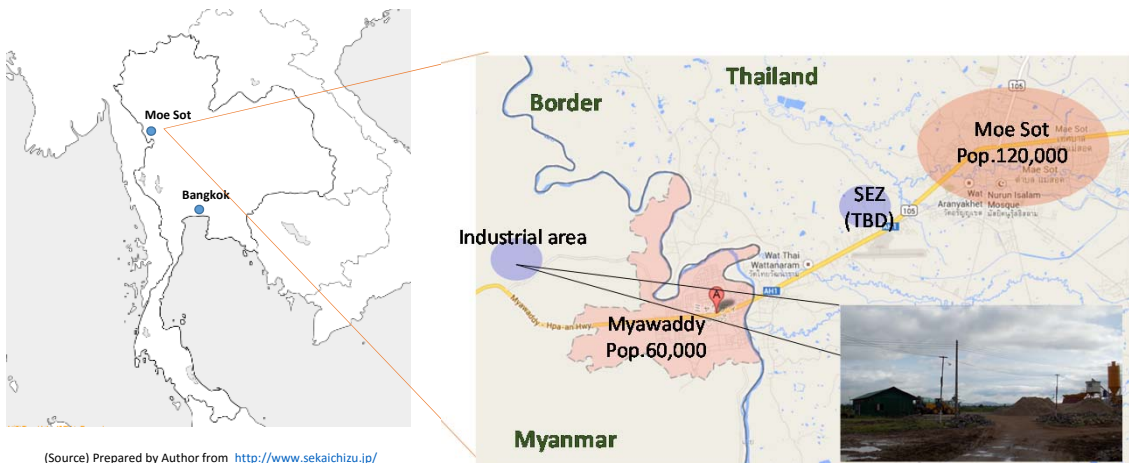
- Environmental Conservation Law, 2012
 - No law stipulating regulation has been developed.



Pollution control measures at industrial areas in Myanmar

Industrial area	Mingaladon	Myawaddy	Dagon Seikkan	South Dagon	Hlain Thar Yar
Location	Yangon City	Thai border	Near Yangon	Near Yangon	Near Yangon
Establishment	1996	2014	1997	1996	1995
Fund	Japanese and Myanmar	Kayin state	Ministry of Industry	Ministry of Industry	Ministry of Industry
Scale (ha)	89.8	50	489	86	567
Water supply	Underground water				
Water Treatment	Central treatment	Nil	Nil	Nil	Nil
Rent per m ² (USD)	58		36	41	67

Myawaddy Industrial Area



A Garment factory in Moe Sot

All workers are Burmese and legally or illegally employed.



Maquiladora in Mexico

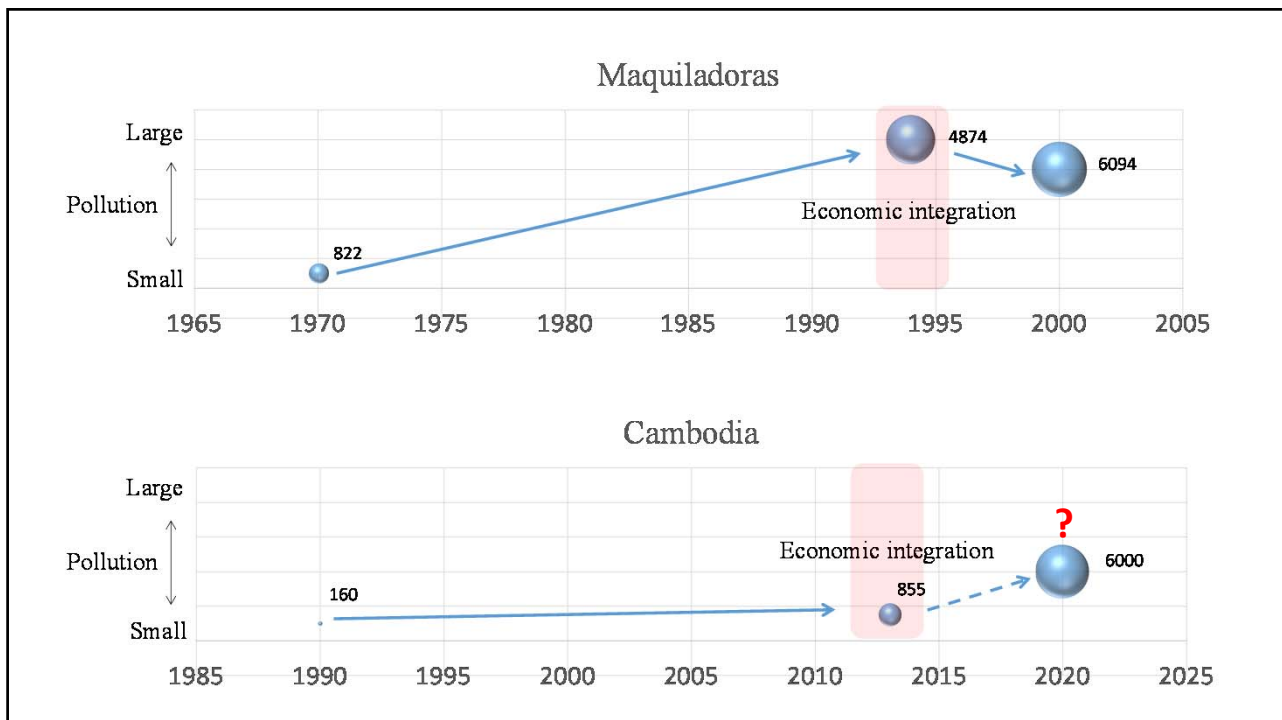
- Originated as a part of the Mexican government's 1965 Border Industrialization Program.
- Factories designated as Maquiladoras were exempted tariff.
- Typically, maquiladoras are foreign-owned, controlled or subcontracted manufacturing plants that process or assemble imported components for export.
- Industrial pollution became serious in the 1990s.



<http://kids.britannica.com/>

North American Agreement on Environmental Cooperation

- Developed in response to a concern of environmental groups.
- Came into effect in 1994 as a side-treaty of the NAFTA.
- Prohibits “the race to the bottom.”
- **Commission for Environmental Cooperation** was established. Any person or non-governmental organization can file a submission asserting that a Party to the Agreement is failing to effectively enforce its environmental law.
- It has successfully reduced pollution problems.



Will pollution problems occur in Cambodia and Myanmar?

- So far, environmental impact of FDI is still insignificant as most of the factories are garment or assembling factories.
- Polluting factories will likely be established if infrastructures including electricity supply are developed.
- AFTA does not explicitly address environmental management.
- No influential country in ASEAN such as the US in NAFTA.
- Support form International organizations or developed countries might be necessary.

