

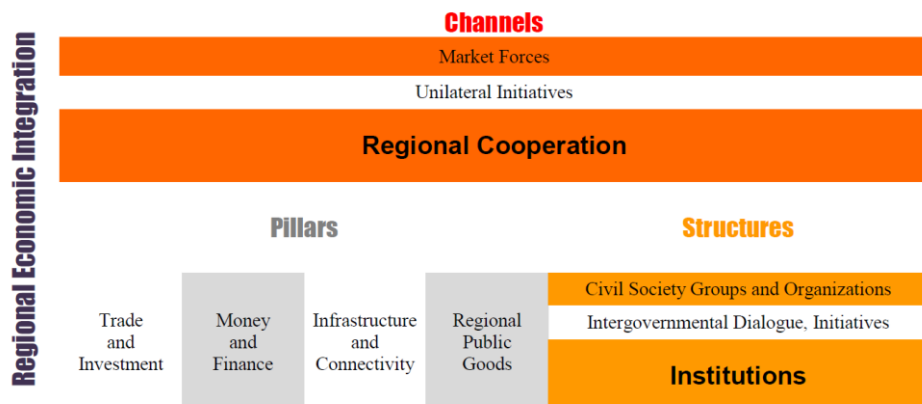
Asian Economic Integration

Unlocking the Potentials of Green Jobs

Venkatachalam Anbumozhi
Asian Development Bank Institute



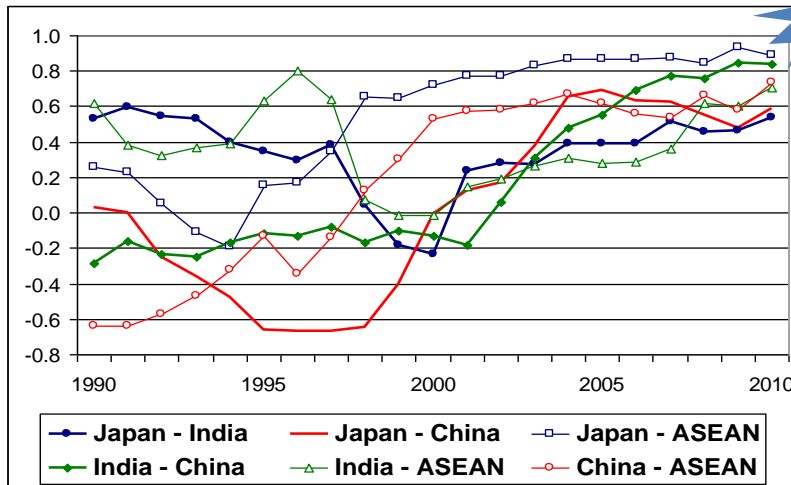
Asia's Economic Integration: Logic Framework



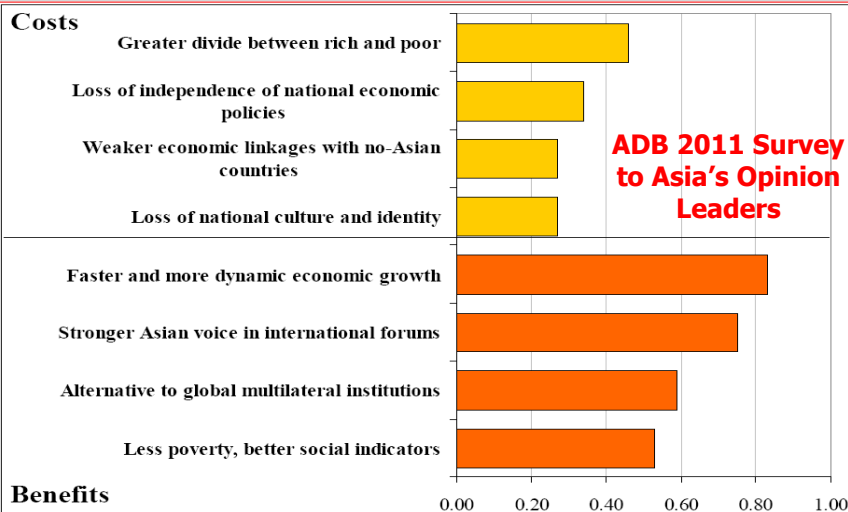
Slide 2

GDP growth rate correlations are rising among ASEAN and Other emerging economies

(10-year moving windows)



Benefits of Integration Outweigh its Costs



Slide 4

Recent Trend of Asia's Economic Integration

- **Distinctive characteristics:** open, multi-speed, multi-track, pragmatic, bottom-up

Trade and Investment

- Production Networks and "Factory Asia"

Money and Finance

- Portfolio investment holdings, Cross-Market Dispersion of Equity Returns

Labor Migration

- Migrant workers' shares

Twin Challenges of Asian Economic Integration

- Widen the benefits across sectors and sub-regions

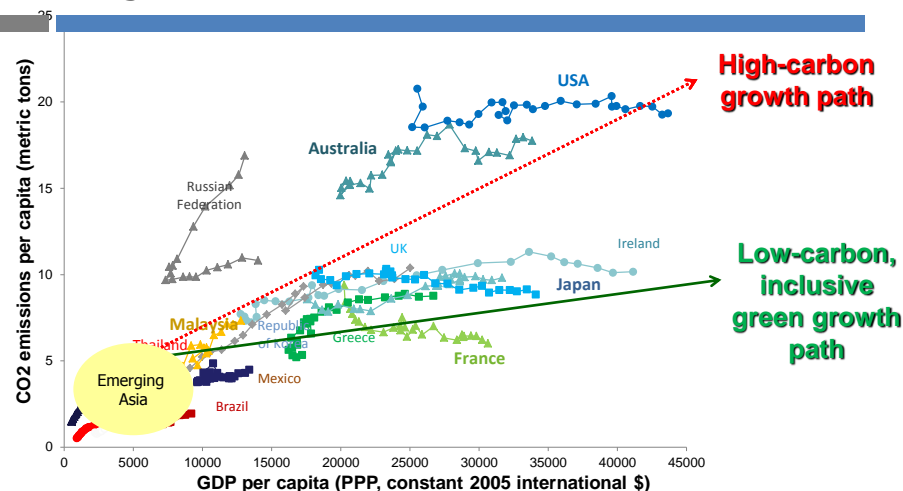


Future Challenge Regional Public Goods

Environment , Climate Change	<ul style="list-style-type: none">• Deforestation, climate change, rising sea levels, air and water pollution, land degradation, loss of biodiversity, coastal management, aquatic resource depletion
Disaster Risk Management	<ul style="list-style-type: none">• Natural calamities: tsunamis, earthquake, volcanic eruptions, flooding, drought; etc.
Health	<ul style="list-style-type: none">• Prevention & management of communicable diseases such as HIV/AIDS, severe acute respiratory syndrome, avian influenza; etc.
Energy	<ul style="list-style-type: none">• Energy sources' diversification (oil, gas, hydropower); impact mitigation of uneven resources distribution across countries
Human and Drug Trafficking	<ul style="list-style-type: none">• Transnational crimes (need to reduce gaps in income and deal with connectivity issues)



Low-carbon green growth is feasible by economic integration and can be made inclusive & value creating



Low-Carbon Green Growth in Asia



Future Challenges

Rising urbanization and green infrastructure

- In 2011, **seven out of 10 most populated cities** in the world are from Asia
- In 2030, **55%** of Asian population will live in cities.
- Infrastructure development has the potential to maximize the gains and minimize the detrimental effects of **urbanization**.

	GDP per capita (PPP, \$) 2003	Population (million) 2005	Urban Population (million) 2005	Proportion Urban (%) 1950	Urban (%) 2005	Estimated Increase in Urban Population (million) 2005-2030	(%) 2005-2030
World	6,453.6	3,172.0	29	49	61	1,772.7	56
Asia	3,917.5	1,562.1	17	40	55	1,102.2	71
Malaysia	9,512	25.3	16.5	20	65	78	10.8
Thailand	7,595	64.1	20.8	17	33	47	14.6
PRC	5,003	1,322.3	536.0	13	41	61	341.8
Philippines	4,321	82.8	51.8	27	63	76	34.8
Sri Lanka	3,778	19.4	4.1	14	21	30	2.4
Indonesia	3,361	225.3	107.9	12	48	68	90.0
India	2,892	1,096.9	315.3	17	29	41	270.8
Viet Nam	2,490	83.6	22.3	12	27	43	24.5
Pakistan	2,097	161.2	56.1	18	35	50	79.3
Cambodia	2,078	14.8	2.9	10	20	37	5.8
Bangladesh	1,770	152.6	38.1	4	25	39	48.4
Lao PDR	1,759	5.9	1.3	7	22	38	2.3

GDP = gross domestic product, Lao PDR = Lao People's Democratic Republic, PPP = purchasing power parity, PRC = People's Republic of China.

Sources: United Nations, World Population Prospects: The 2002 Revision, World Urbanization Prospects: The 2003 Revision; and United Nations Development Programme, Human Development Report 2005

Source: Roberts and Kanaley, 2006



Green Jobs as defined...

Work in agricultural, manufacturing, research, development, administrative and service activities that contribute substantially to preserving or restoring environmental quality. Specifically, but not exclusively, this includes jobs that help to protect eco-systems and biodiversity; reduce energy and materials, and water consumption through high efficiency strategies; decarbonizes the economy; and minimize altogether avoid generation of all forms of waste and pollution

(ILO, UNEP)

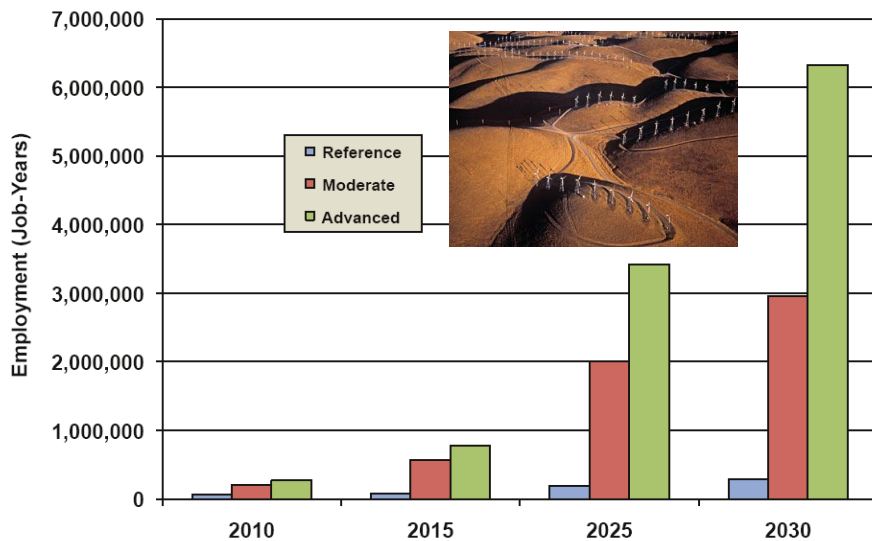


Job Opportunities in a Low Carbon Green Economy

- **Energy Supply**
 - renewable, fuel cells, cogeneration
- **Transport**
 - Fuel efficient vehicles, hybrids, public transit
- **Manufacturing**
 - Pollution control, energy efficiency, cleaner products
- **Building**
 - Retrofitting, energy efficient appliances, zero emissions
- **Agriculture**
 - Water efficiency, organic farming, carbon sequestration
- **Forestry**
 - Avoided deforestation, eco-system services



Wind Power Generation



Source: EPIA and Greenpeace



Waste Resource Management -



Informal sector



Formal sector



About 1.2 million jobs!



Employment shifts in a Low Carbon Green Growth Trajectory

- **Additional jobs** – as in the manufacturing of low carbon and pollution control devices added to the existing production process.
- **Substitution of jobs** – as in shifting from fossil fuels to renewable or from conventional to hybrid cars, waste incineration to recycling
- **Elimination of jobs** – as when landfills are banned and plastic packaging materials are discouraged.



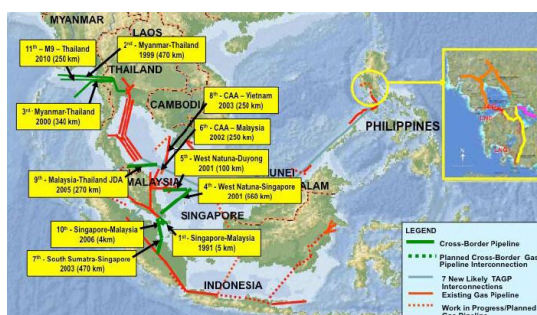
Opportunity - Physical connectivity

ASEAN energy infrastructure projects

Key actions

- Form a model for ASEAN **JV gas pipeline company**.
- Adopt common **technical standards**.
- Adopt **business model**.
- Implement regional **safety / security plan**
- Optimize and operationalise TAGP.
- Feasibility study of extend the **TAGP to BIMP-EAGA**.

Trans-ASEAN Gas Pipeline (TAGP)



(Source) Master Plan on ASEAN Connectivity



Opportunity - Physical connectivity

- Harmonies **legal and regulatory framework** for cross-border interconnection and trade.
- Harmonies **common technical standards** codes.
- Identify **financing** modalities
- **Implement** various modalities.

	Existing	Earliest CO
1) P.Malaysia - Singapore	Existing	
2) Thailand - P.Malaysia	Existing	
<ul style="list-style-type: none"> • Sadoo - Bukit Ketiari • Khlong Ngae - Gurun • Kolok - Rantau Panjang 	Existing	Newly Proposed
3) Sarawak - P. Malaysia	Existing	2015/17
4) P.Malaysia - Sumatra	Existing	2017
5) Batam - Singapore	Existing	2017
6) Sarawak - West Kalimantan	Existing	2017
7) Philippines - Sabah	Existing	2022
8) Sarawak - Sabah - Brunei	Existing	2022
Sarawak - Sabah	Existing	2022
Sabah Brunei	Existing	MOU Signed
Sarawak - Brunei	Existing	2017
9) Thailand - Lao PDR	Existing	
<ul style="list-style-type: none"> • Roi Et - Nakhon Phanom • Udon - Nakhon Phanom • Mae Moh - Nakhon Phanom 	Existing	2000
10) Lao PDR - Vietnam	Existing	2011
11) Thailand - Myanmar	Existing	2011
12) Vietnam - Cambodia	Existing	2011
13) Lao PDR - Cambodia	Existing	2011
14) Thailand - Cambodia	Existing	2011
15) East Sabah - East Kalimantan	Newly Proposed	



- Carbon Markets
- Perverse Subsidies
- Tax Reform
- Targets and Mandates
- Energy Alternatives
- Extended Producer Responsibility
- Eco-mark and Top Runner Programs
- R&D Budget
- International Aid



Opportunities for Job Creation from Green Policies

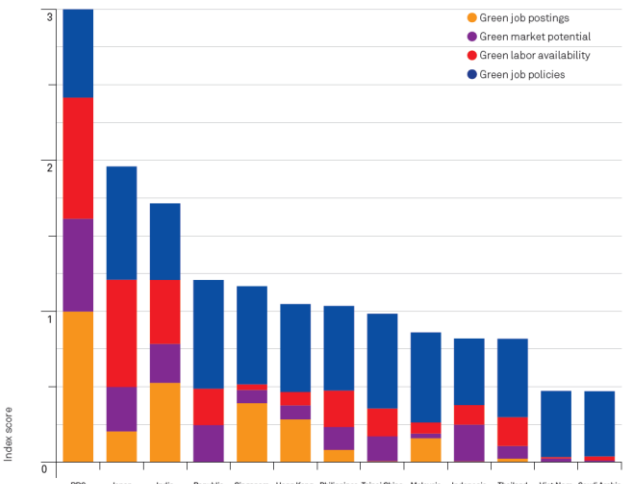
		Green potential	Green job progress to date	Long-term green job potential
Energy	Renewables	Excellent	Good	Excellent
	Carbon capture and storage	Fair	None	Unknown
Industry	Steel	Good	Fair	Fair
	Aluminum	Good	Fair	Fair
	Cement	Fair	Fair	Fair
	Pulp and paper	Good	Fair	Good
	Recycling	Excellent	Good	Excellent
Transportation	Fuel-efficient cars	Fair to Good	Limited	Good
	Mass transit	Excellent	Limited	Excellent
	Rail	Excellent	Negative	Excellent
	Aviation	Limited	Limited	Limited
Buildings	Green buildings	Excellent	Limited	Excellent
	Retrofitting	Excellent	Limited	Excellent
	Lighting	Excellent	Good	Excellent
	Efficient equipment and appliances	Excellent	Fair	Excellent
Agriculture	Small-scale sustainable farming	Excellent	Negative	Excellent
	Organic farming	Excellent	Limited	Good to Excellent
	Environmental services	Good	Limited	Unknown
Forestry	Reforestation/Afforestation	Good	Limited	Good
	Agroforestry	Good to Excellent	Limited	Good to Excellent
	Sustainable forestry management	Excellent	Good	Excellent

Source: ADB-ADBI study team based on UNDP (2008)

Low-Carbon Green Growth in Asia



Preparing the Ground for the Creation of Green Jobs

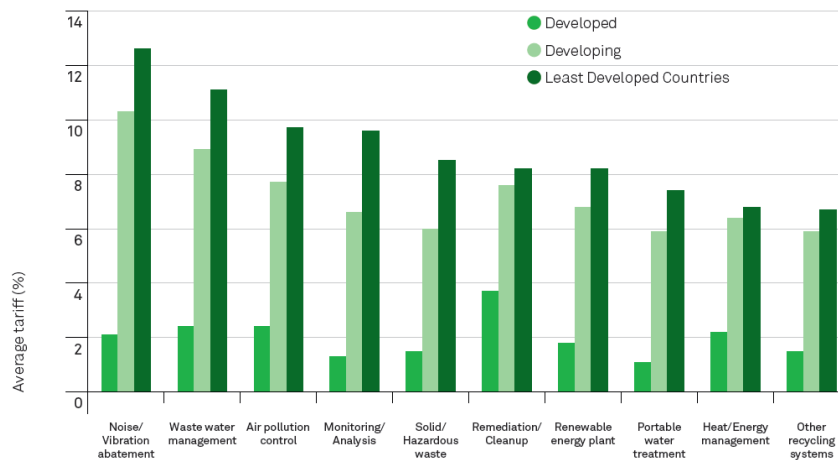


Note: Index scores range from 0 to 4; a higher score means more favorable conditions for green jobs.

Source: Asia Business Council (2009)



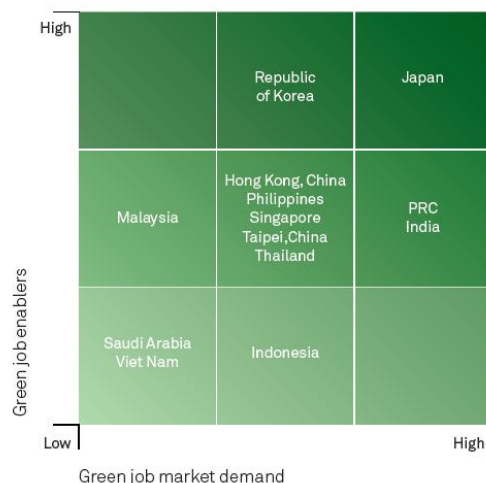
Average Tariff of Low-Carbon Goods and Services Categories



Source: Mikic (2010)



Relative Performance in Readiness for Green Job Creation



Source: Asia Business Council (2011)



Low-Carbon Green Growth in Asia

Japan's Industrial Policies (1970s & beyond)

Free Trade Principle Supported:

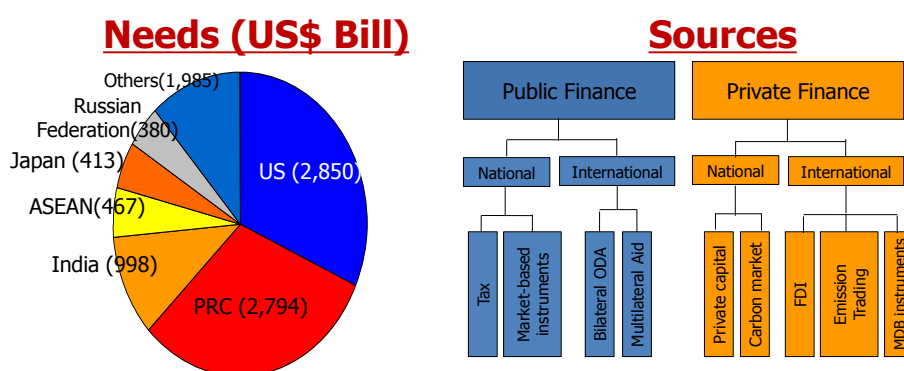
- End of many protectionist policies (IM/EX restrictions lifted)
- Japan: Lower average tariff today than US & EU
- Focus shifted from export promotion to foreign imports
- Promotion of international cooperation

Still, some Industries Targeted:

- R&D: Subsidies for dev of computers (70s)
Subsidies for biotech, electronic devices (80s)



Investment Requirements in a Low-Carbon Green Growth Scenario



Sum of PRC, India, ASEAN accounts for 43% of world total

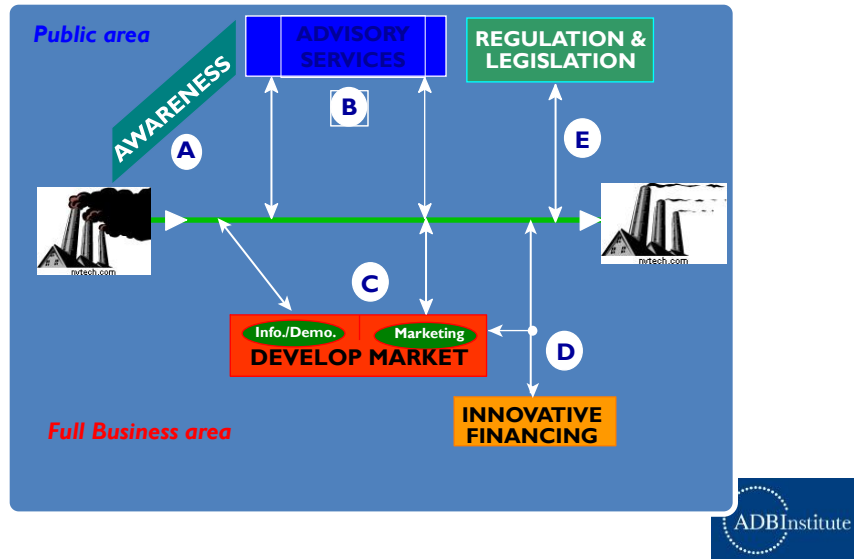
Note: Investment required for achieving 450PPM scenario [almost equal to a 50% reduction by 2030, by actions in energy & transport infrastructure, energy efficiency and forest sectors]

Source: OECD (2012); IEA (2012); and FAO (2009).

Low-Carbon Green Growth in Asia



Enduring the Green Jobs in AEC



Regional Cooperation

- **Strengthen regional financing mechanisms** to accelerate cross-border investment in low-carbon energy projects
- **Phase out fossil fuel subsidies** through a regionally coordinated way with adequate, targeted social protection measures
- **Create a regional energy market that is tied to global carbon markets** through cap-and-trade systems
- **Establish a network of regional, low-carbon innovation centers** to help developing countries accelerate the diffusion of technologies
- **Enable regional free trade agreements** to include trade in low-carbon technology and services

In conclusion

- **Potential for green jobs in an integrated Asia is immense.** But much of it will not materialize without massive and sustained investments in the public and private sectors.
- **Without innovation, there is no green jobs.** R&D programs need to shift decisively toward clean technologies, energy and material efficiency, and sustainable workplace practices, as well as towards environmental restoration and climate adaptation
- **Governments need to establish a firm and predictable framework** for greening all aspects of economy, with the help of targets and mandates, business incentives and reformed tax and subsidy policies.
- **Cooperative technology development and technology sharing program** may be needed to replace unrealistic optimism on technology transfer.
- **Major shift in employment patterns and skill profiles will be felt in high impact sectors,** and the regions and communities highly depend on them may face serious consequences. They may need proactive assistance in diversifying the economic base, creating alternative jobs and acquiring new skills.
- **Expansion of green education, training and skill education, training and skill building program in broad range of occupations is crucial** to manage the transition



Thank you!

Low-Carbon Green
Growth in Asia
Policies and Practices



<http://www.adbi.org/book/2013/06/28/5773.low.carbon.green.growth.asia.policies.practices/>

E-mail: vanbumozhi@adbi.org

