

**Workshop on Integrated Development and Climate Policies: how to realise
benefits at national and international level?**

20-22 September 2006, Paris



***Energy and Climate Policies in Asia and the
Pacific***

***Pranesh Chandra Saha
Chief, Energy Resources Section
United Nations Economic and Social
Commission for Asia and the Pacific
(UNESCAP)***





Why, What and How?



Why energy is so important in CC strategies?

Production and consumption of energy have significant impact on the environment, including land, air and water quality, as well as climate change



Environmental Impacts Related to Energy Consumption

- **Occur in energy harvesting, processing, transport, conversion/burning and disposal**
- **Currently, commercial energy activities were responsible for:**
 - **85 % of sulphur emissions**
 - **75 % of CO₂**
 - **45 % of oil spill to oceans**
 - **40 % of lead**
 - **35 % of the particulates**
 - **35 % of non-methane HC emissions**
 - **30 % of Nitrogen fixation**
- **Tackling climate change can be a win-win to both the energy sector and the environment**



Lessons learnt



General perception of energy for sustainable development in developing countries

- ✓ Current pattern of energy sector development focuses on economics with some attention on social issues and local environment but somewhat lesser priority on climate concerns
- ✓ However, many programmes and projects contribute immensely to benefit climate



Key Lessons learnt(1/2)

- Energy security remains a top concern, particularly in energy importing countries
- Supply side receives much higher attention to address energy security issue than the demand side
- Commendable strategy is in place or on the making supported by impressive programme/projects on accelerated use of renewable energy
- In response to high price and volatile oil/energy market, energy efficiency improvement through both supply and demand side management is receiving increasing attention
- Both pricing and non-pricing policies are applied in containing energy demand growth
- Though SD is widely appreciated as a policy, domestic fossil fuels likely to dominate/influence national strategy
- As such introduction of advanced and environmentally sustainable energy technologies, including renewable energy and energy efficiency technologies need to be accelerated



Key Challenges (2/2)

- Challenges to and opportunities for mainstreaming CC policies in national SD strategy
 - ✓ Climate regime includes very few actions to address energy security and developmental needs;
 - ✓ Future climate regime could correct this deficiency especially in terms of making them acceptable to countries;
 - ✓ Promising initiatives for national/sectoral/regional policies could be supported by international initiatives to enhance their impact;
 - ✓ Top-down and bottom-up approaches could be optimized so that developmental benefits are realized while simultaneously stabilizing climate in a reasonable time frame.



Outline

- **Overview of the energy scene and challenges in the region**
- **Energy and CC Policy integration**
- **Some questions the Workshop may wish to address towards better linking Energy and Climate Change policies**



Overview



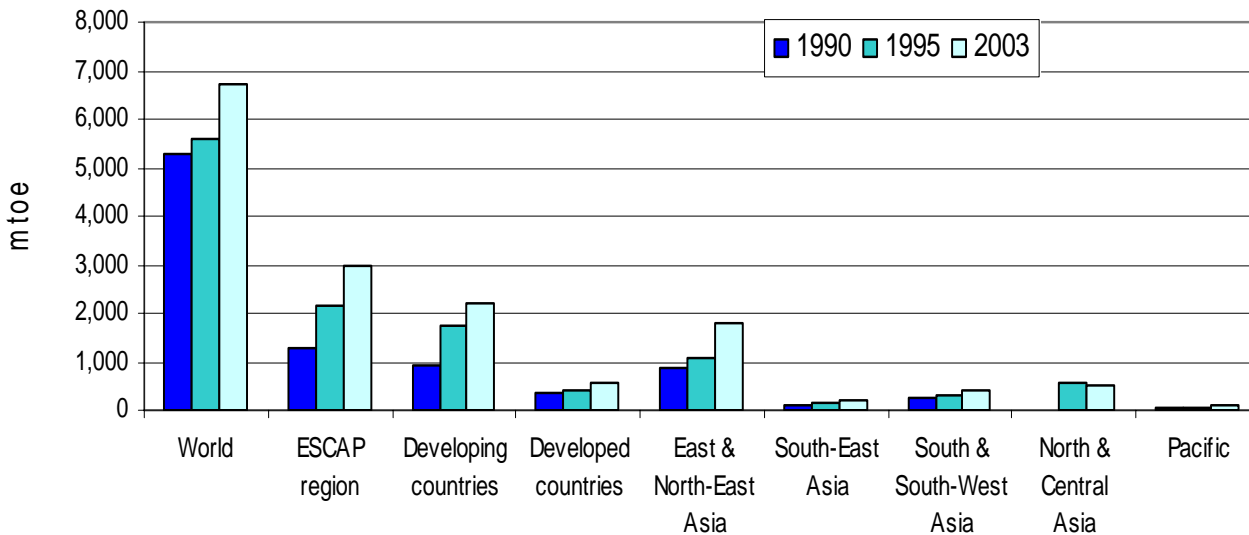
Asia & the Pacific regional development

- **Large population (~ 4 billion or 60% of the world total in 2005)**
- **Rapid economic growth in developing countries**
 - **>6 % average GDP growth rate from 2000-2005**
 - **Industrial production increased by 40% from 1995 to 2002(globally increased 23%)**
 - **Agricultural production increased by 62% from 1990 to 2002 (globally increased 27%)**
- **Wide diversity**

Current Regional Energy Scene in Asia and the Pacific

■ Relatively Low Energy Consumption Level

Total final energy consumption
(excluding combustible renewables and wastes)



More than 60% of the World's population consumes less than 40% of commercial energy

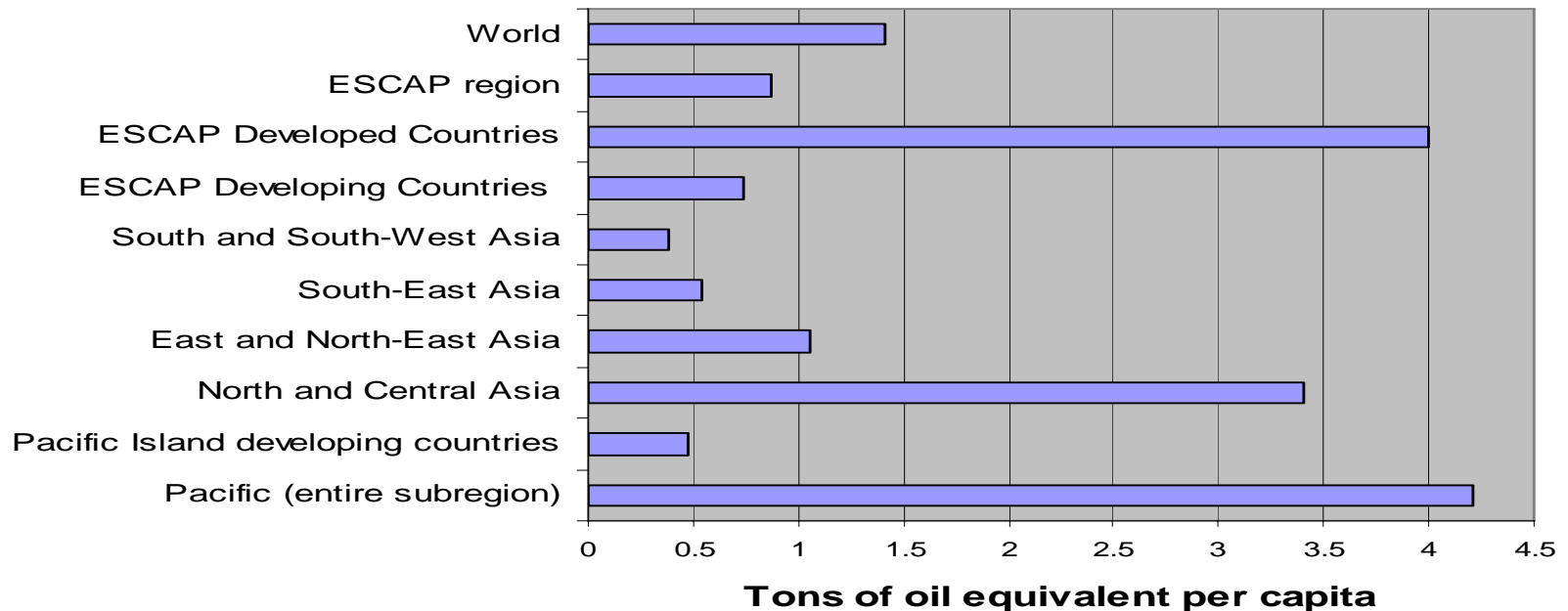
Note: 1990 totals for ESCAP, developing and developed countries exclude Central Asia

•Source of data:

- IEA (2004), Energy Balances of Non-OECD Countries
- IEA (2004), Energy Balances of OECD Countries

Per capita energy consumption is around 60% of the global average

Per capita energy consumption (2002)



Source: Extrapolated from United Nations. *Common Database*, <http://unstats.un.org/unsd/cdb/cdb_help/cdb_quick_start.asp>, accessed September/October 2005.

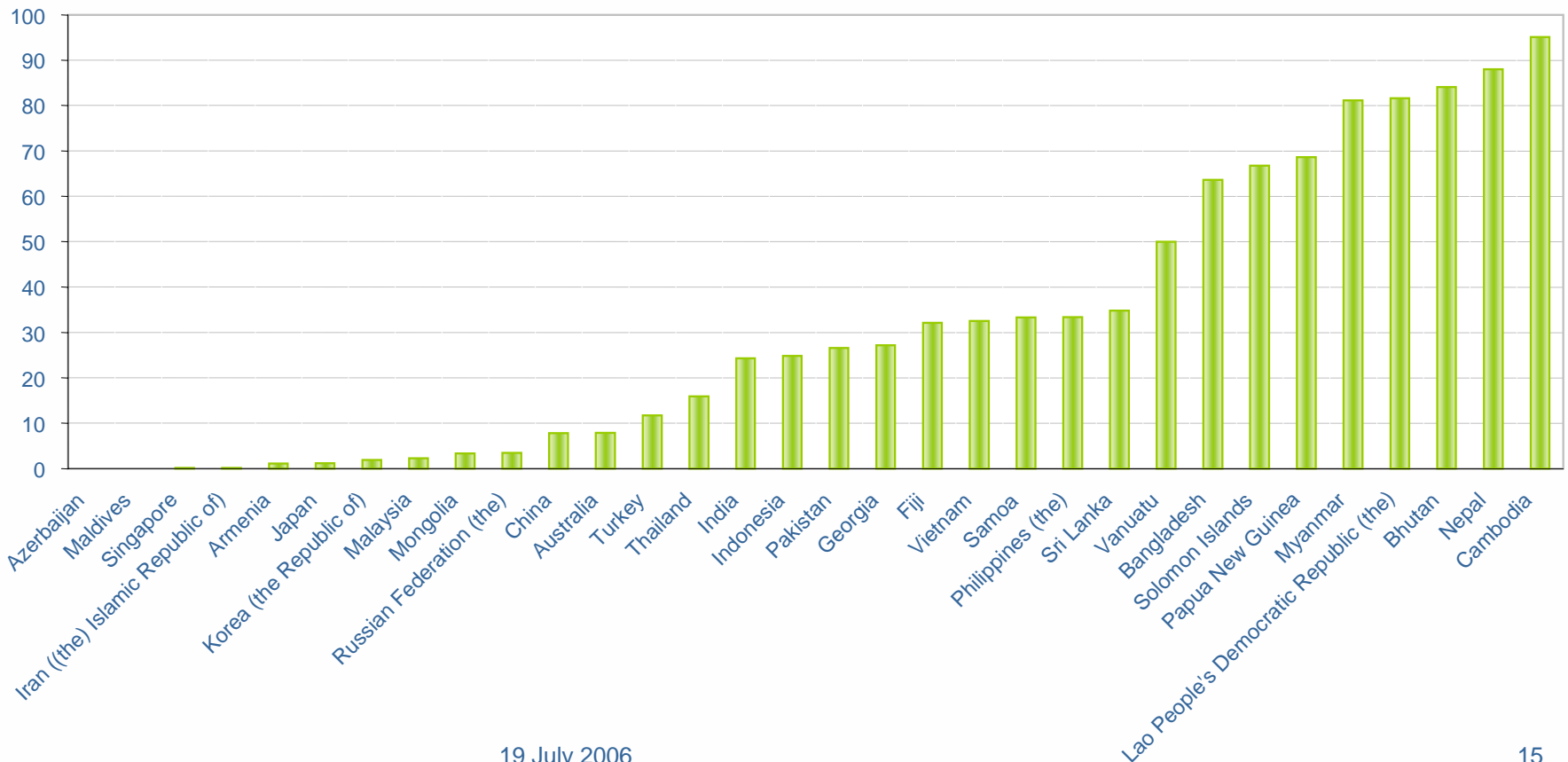


Electricity Access in 2002

Country or Area Name	Electrification rate %
Afghanistan	2.0
Bangladesh	26.3
Bhutan	4.54
Cambodia	18.3
India	44.4
Indonesia	52.5
Korea, Democratic People's Republic of	20.0
Lao P.D.R	34.0
Myanmar	5.0
Nepal	25.9
Pakistan	53.0
Sri Lanka	65.5
Viet Nam	79.6

Lack of access to modern energy by rural population (South Asia: 30% of rural population has access to electricity vs. 68% of the urban population)

As 50-80 % of population in some countries live in rural areas, they rely heavily on biomass for their primary energy needs



19 July 2006

Source: Human Development Report 2004, UNDP



Energy and CC policy options



Why energy security gets preference

- **Energy demand and supply imbalance**
- **Demand spurred by high economic growth from developing countries in this region**
- **Increased net imports and dependence on the Middle East**
- **Disparities of energy reserves particularly oil and gas**
- **Rising and volatile oil/energy prices**



Oil production and consumption imbalance

- **In 2004 the region**
 - **Produced 23 million barrels of oil daily, or 29 % of the world's oil**
 - **Consumed 29 million barrels daily or 36 %**
 - **The region remains a net importer**

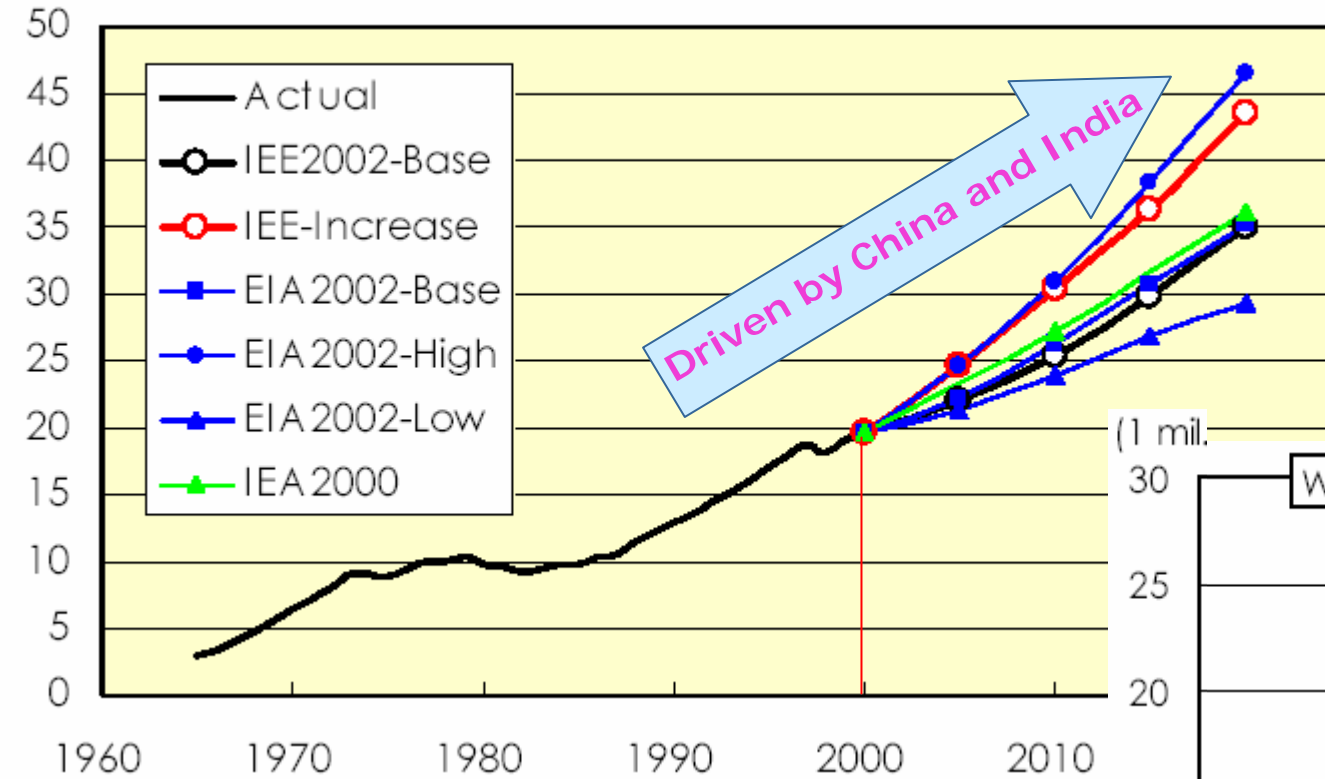


Oil demand projections

- **Global primary oil demand expected to grow by 1.6 % per year to 121 million bpd, or 5766 mtoe, by 2030**
- **Demand in developing countries will grow rapidly, with the major increase in oil demand occurring in the transport sector**
- ***The Asia Pacific region is estimated to account for 2100 mtoe, or 36 % of the global primary oil demand***

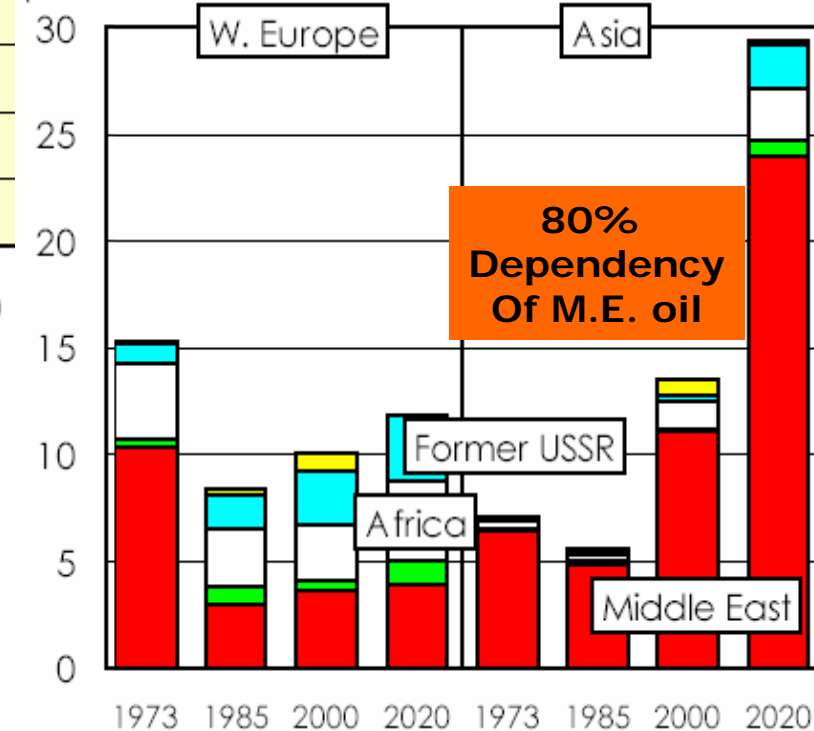
Oil Demand in ASIA

(1 mil. B/D)



By 2010-2015 Malaysia and Indonesia will Become net oil importers

(1 mil.



- **ASIA's oil consumption will double by 2030 to 40 mil. B/D**
- **More than 80% of ASIA oil will come from Middle East**



High vulnerability to oil price

- **Oil price remains consistently high (Still close to \$US70/bbl)**
- **Higher oil prices hit the low income countries the most**
- **Many countries depend heavily on imported oil/energy**
- **Many of these countries do not have much option for substitution**

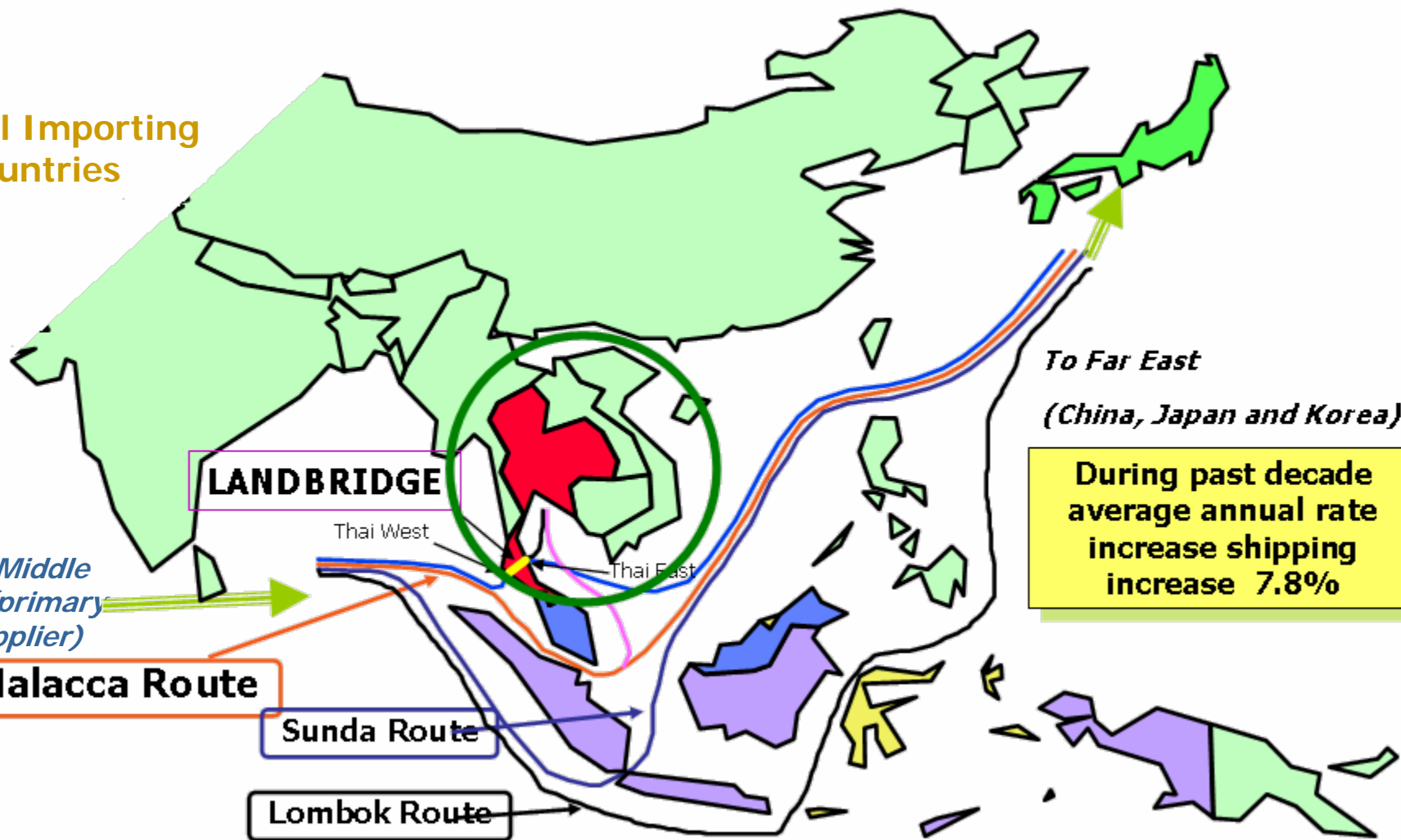
Oil Import Dependency of selected countries

Country	Total Oil Supply (Thousand bpd)	Import (Thousand bpd)	Dependency (%)
China	5421.49	2023.96	37.33
Japan	5160.04	5224.50	100.00
India	2485.00	1710.64	68.84
Thailand	815.48	598.43	73.38
Republic of Korea	2032.33	2055.82	100.00
Philippines	316.04	318.82	100.00
New Zealand	136.55	110.44	80.88

Source: OECD/IEA, 2005 (2003 data)

Vulnerability of oil supply route to Asia-Pacific

Oil Importing Countries



To Far East
(China, Japan and Korea)

During past decade
average annual rate
increase shipping
increase 7.8%



Energy/CC Policy Integration

- **Strategic planning and management to integrate CC in the energy sector policy together with appropriate market and structural reform (pricing, subsidy)**
- **Raising the share of low carbon energy, in particular renewable energy in the energy mix**
- **Formulation and implementation of energy efficiency policies**
- **Widening access of energy services to the poor**



Means of policy implementation

- **Facilitation and financing of technology transfer**
- **Mobilization of public and private financial assistance**
- **Support cooperation among countries (North-south and South-south)**
- **Promote international, regional and subregional cooperation (ASEAN, NEA, SA, ECO and TAES) through greater synergies**



Questions the Group may wish to address towards Energy Security and Climate Change

- What could be the policy priorities to ensure energy security and enhance access to affordable energy supplies, while mitigating the impacts of climate change in the Asia-Pacific region?
- What kinds of innovative strategies could improve the energy and linkages to benefit climate beyond 2012?



Thank you

Further information

<http://www.unescap.org/esd/energy/>