

アジアのエネルギー安全保障問題の課題 Energy Security Challenges in Asia

第3回海外エネルギーセミナー

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Presentation Topic

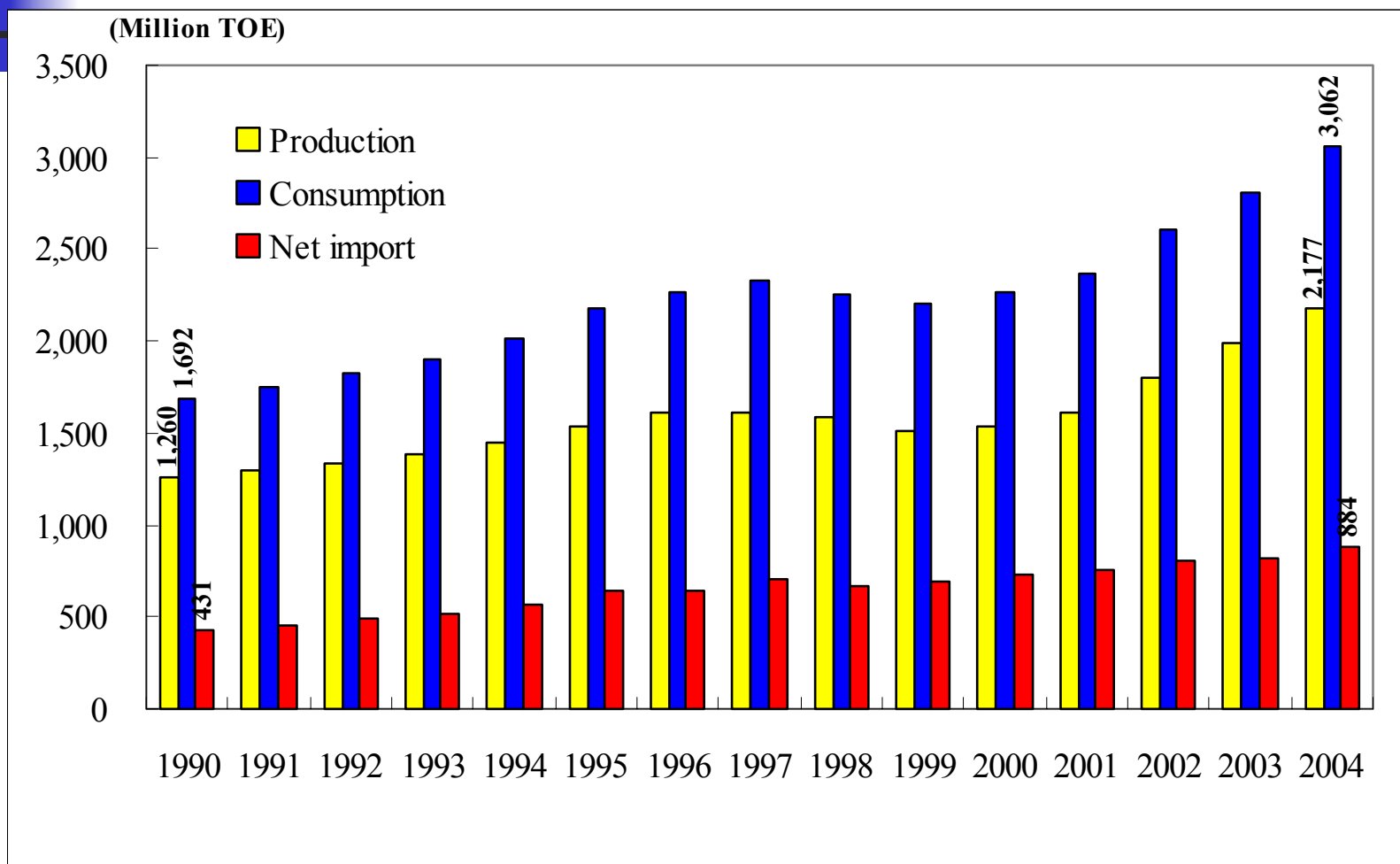
- 1. Growing energy imports in Asia**
- 2. Perspectives on energy security in Asia**
- 3. Strategy to enhance energy security and regional cooperation in Asia**
- 4. Conclusion**



Energy Situation in Asia

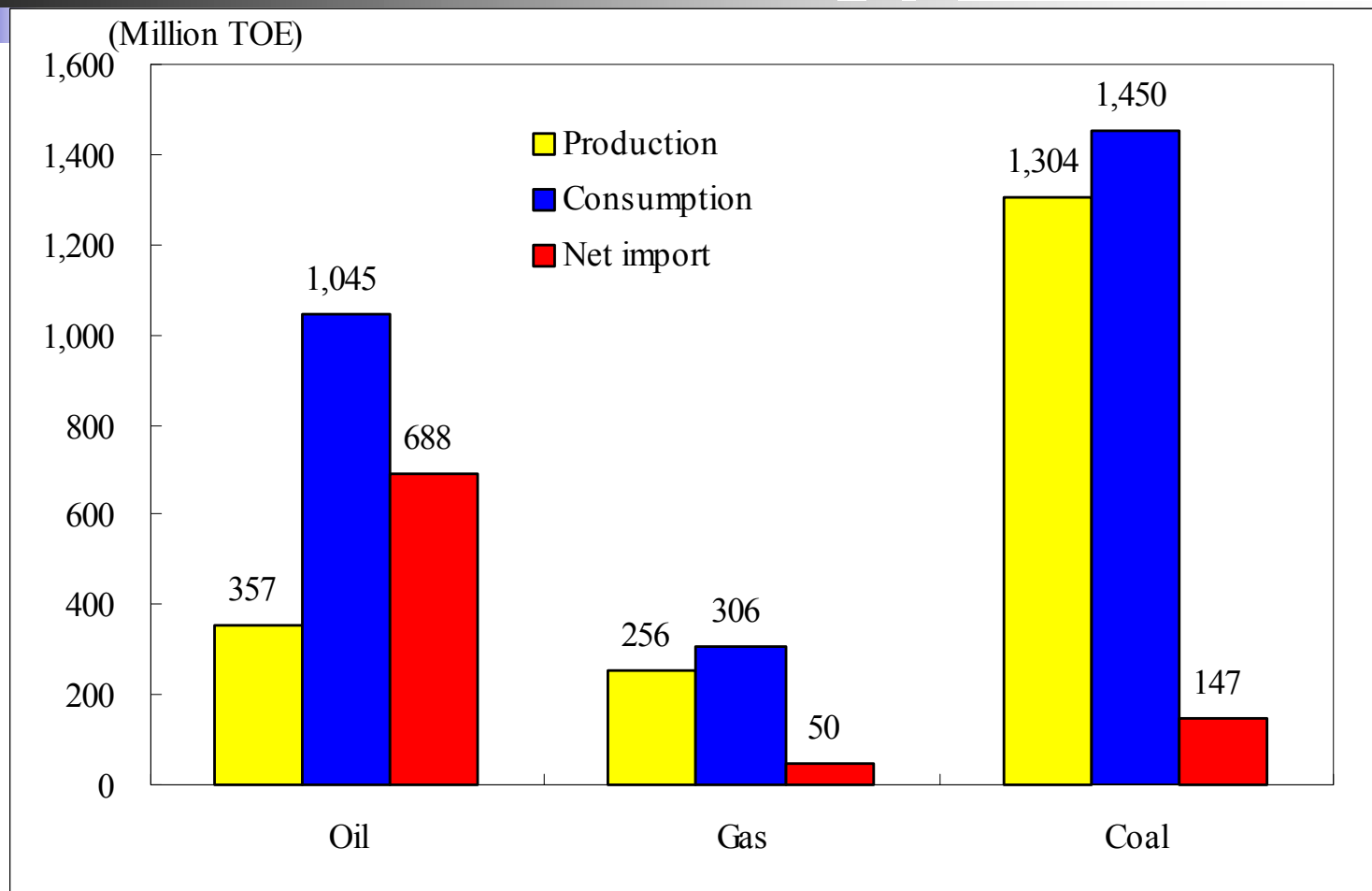
- **Energy demand fueled by strong economic growth**
- **As a region, Asia is a net energy importer**
- **Supply/demand balances differ by type of energy**
- **Widening energy supply/demand gap is covered by growing oil imports**

Trend in Energy Supply/Demand in Asia

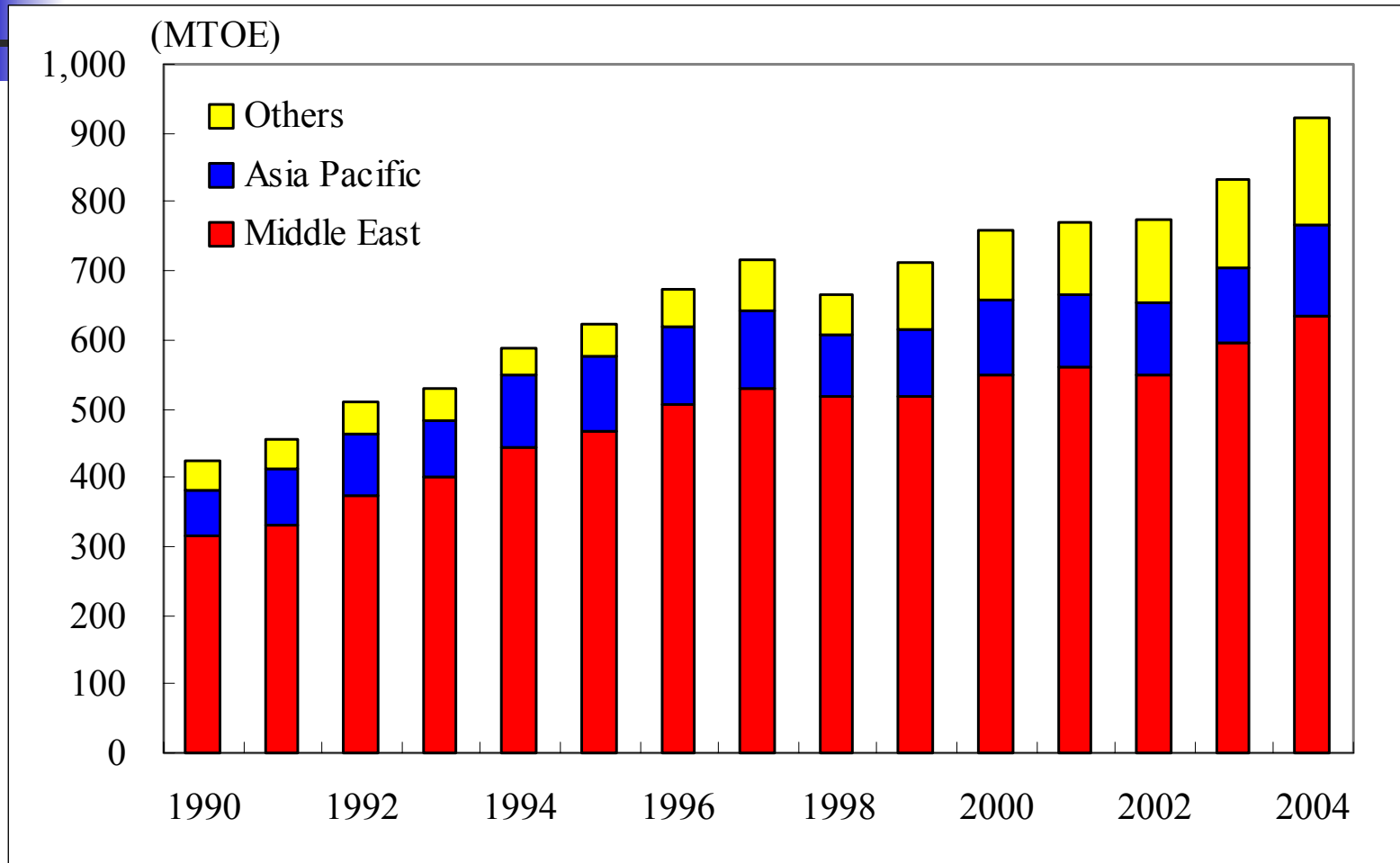


Source: BP Statistical Review of World Energy 2005

Supply/Demand Balances by Type of Energy in Asia (2004)

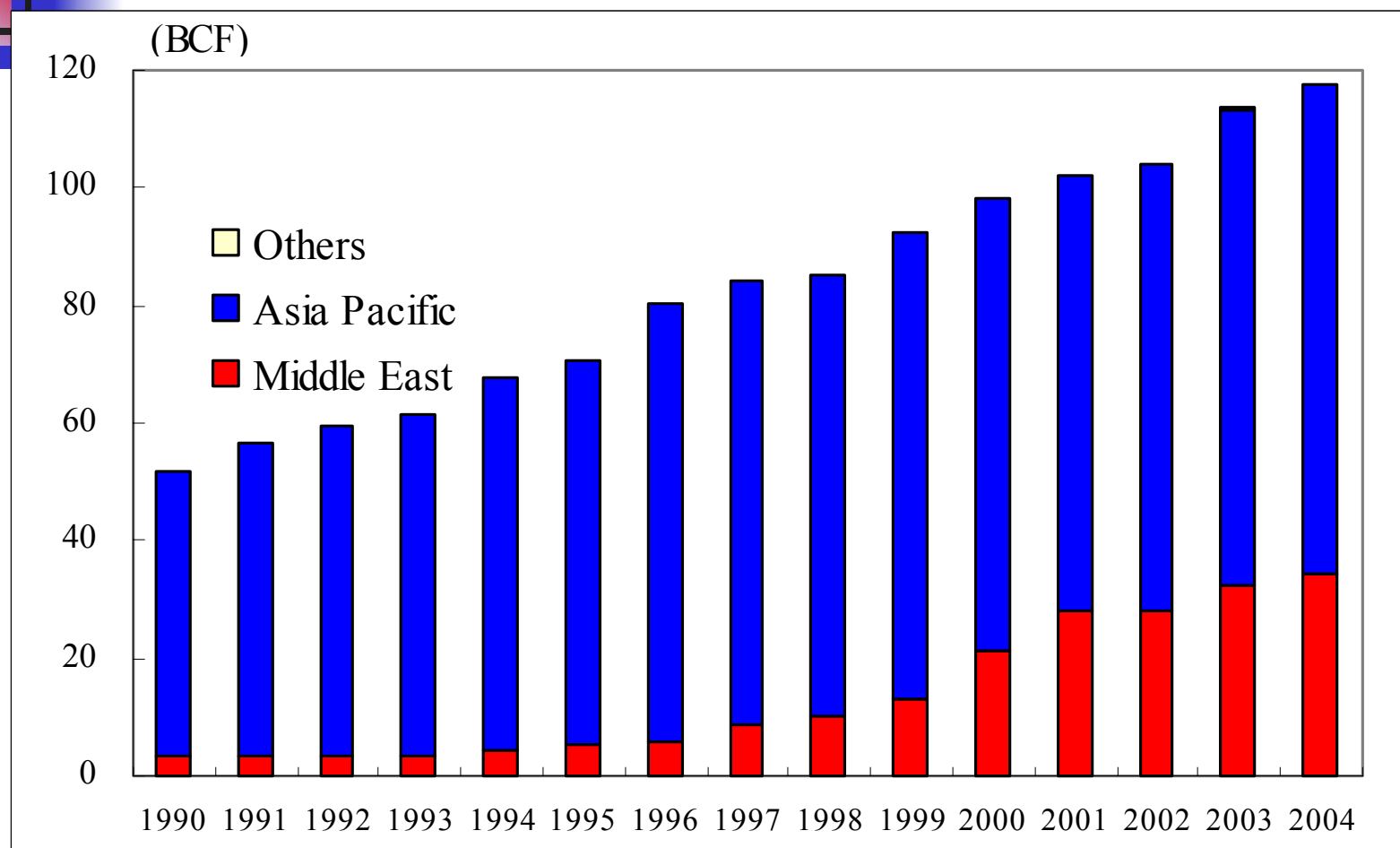


Asia Depends Heavily on Middle East Oil Import



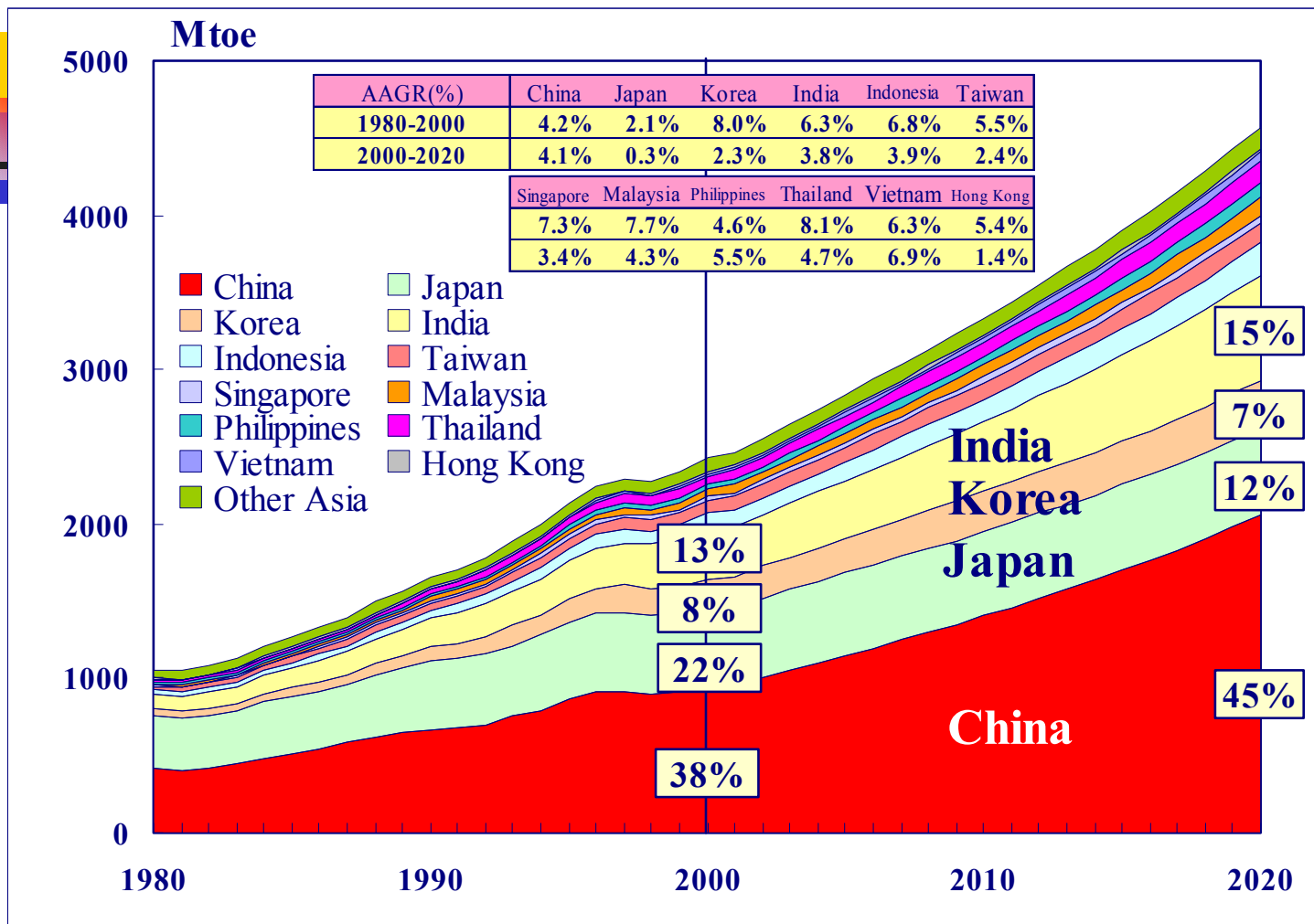
Source: BP Statistical Review of World Energy 2005

Asia-Pacific LNG dominates in Asia, but Middle East LNG increased



Source: BP Statistical Review of World Energy 2005

Primary Energy Demand by Region in Asia



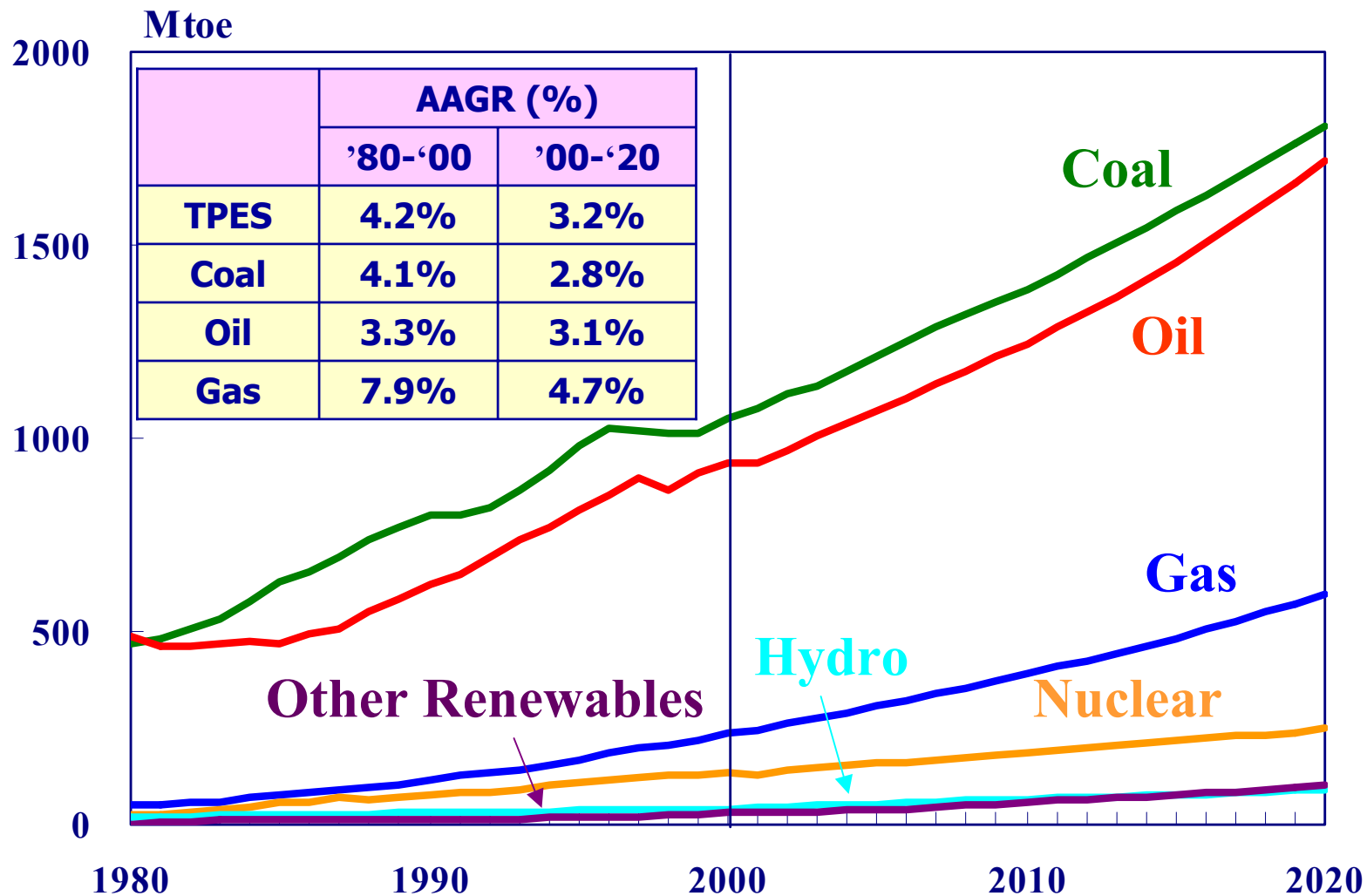
2000
2,423Mtoe

↓

2020
4,570Mtoe

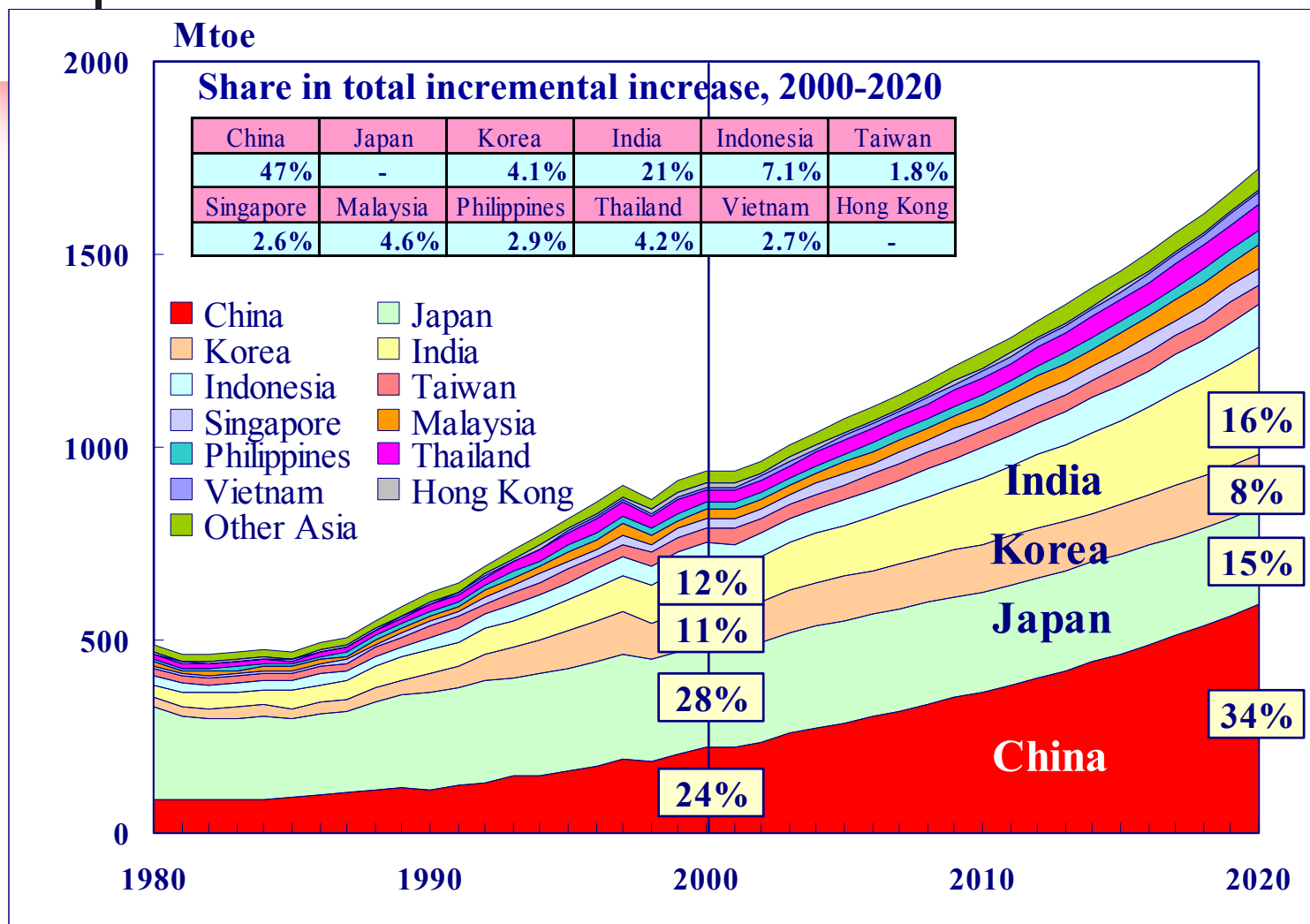
A 1.9-fold increase

Primary Energy Demand by Fuel in Asia



Source: IEEJ "Asia/World Energy Outlook", March 2004

Oil Demand by Region in Asia



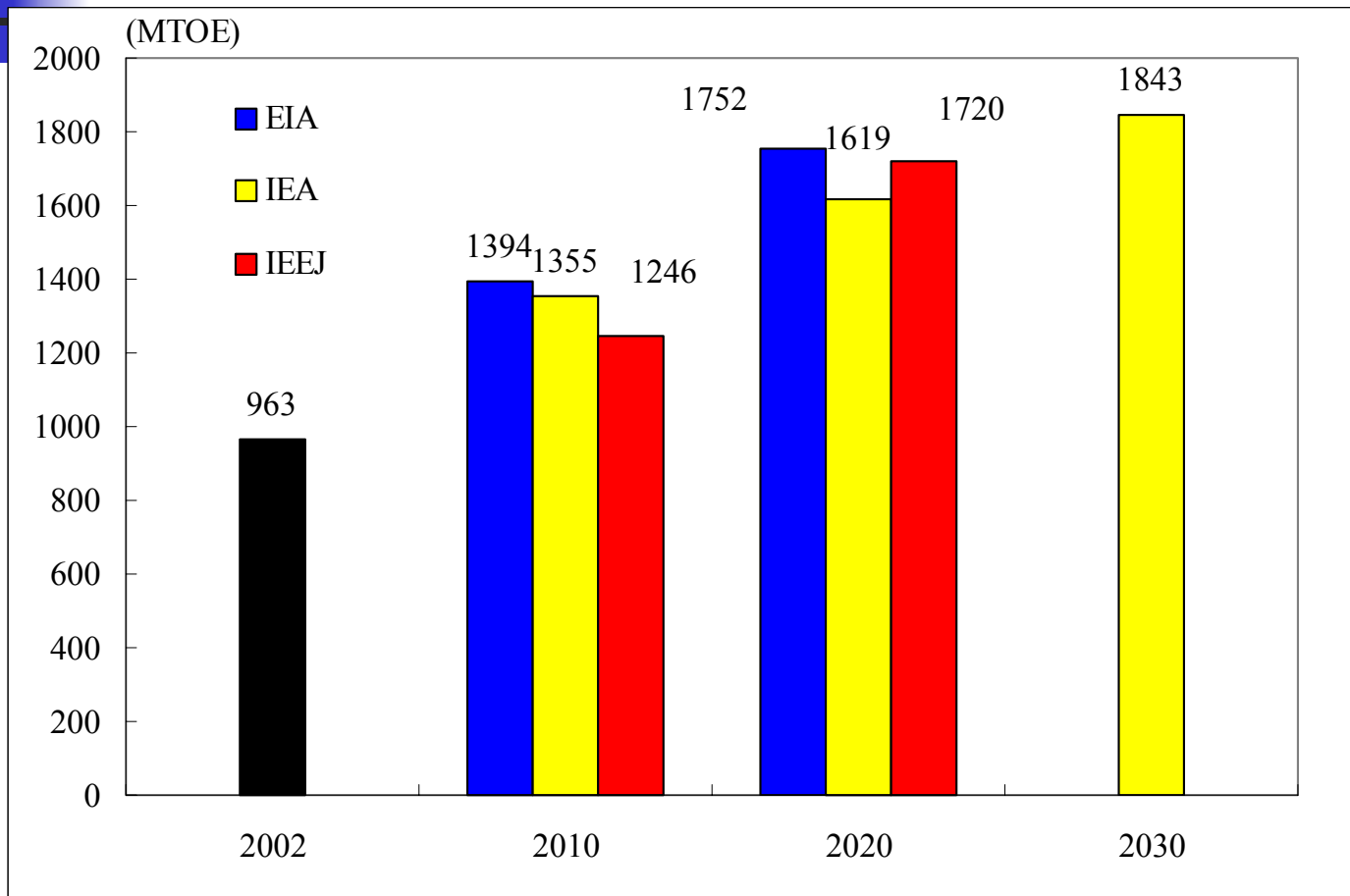
2000
938 Mtoe
(189mb/d)

↓

2020
1,720 Mtoe
(345mb/d)

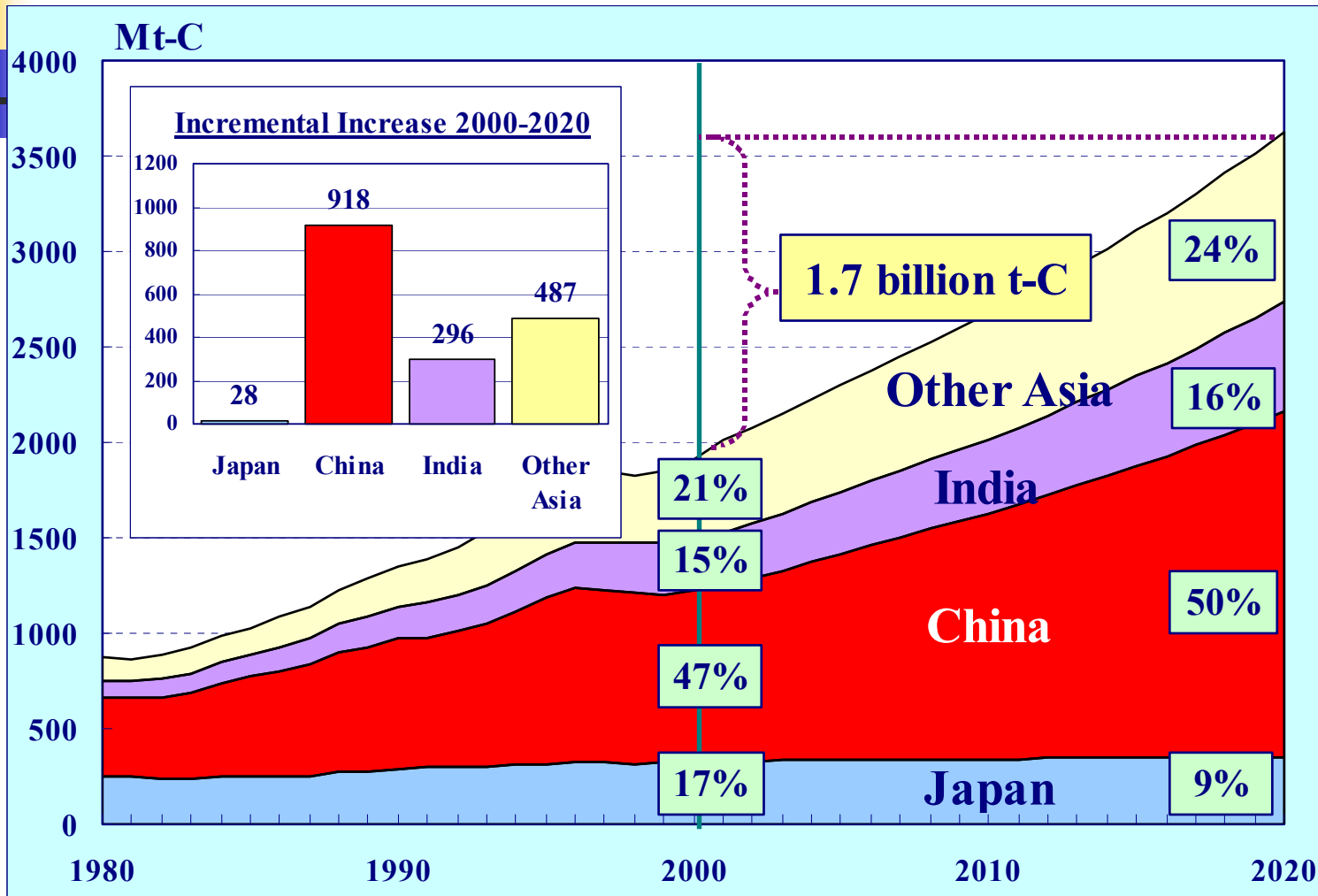
A 1.8-fold increase

Oil Demand Outlook for Asia



Source: IEA "World Energy Outlook 2005", US.DOE/EIA "International Energy Outlook 2005", IEEJ "Asia/World Energy Outlook", March 2004

CO₂ Emissions by Region in Asia

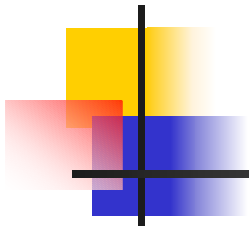


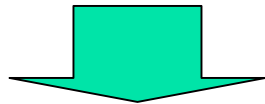
Environmental Sustainability, An Emerging Challenges in Asia



- **Energy & Environment, two sides a coin**
- **Energy demand growth put pressures on environmental sustainability in Asia**
 - **Rapid economic growth**
 - **Urbanization**
 - **Motorization**
 - **Coal dominant energy structure**
 - **Priority on economic development/growth**
- **Environment protection, increasingly becoming an important policy agenda in Asian countries**

Energy Security, an emerging agenda in Asia

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- **Growing oil import dependence of the region**
 - **Emerging large-scale importers (China, India, followed by Indonesia, etc.)**
 - **Oil price increase after 1999**
 - **Impact of September 11**
 - **Instability in the Middle East**
 - **Growing attention to “Geopolitical aspects” of energy**



- **Active strategy development to enhance energy security**

Perceived Risks for Energy Security



■ Contingent risks

- Political and military risks in main energy supply area
- Accidents in energy supply chain
- Consumers' panic behavior

■ Structural risks

- Supplier's embargo with political objectives
- Market power of major suppliers
- Supply/demand squeeze due to insufficient investment, rapid growth of demand, etc.
- Resource constraints and chronic energy shortage
- Side effects of market liberalization and environmental restrictions

Changes in the perception on the risks



- **In the 1970s, embargo and OPEC market power tended to be regarded as the most serious risks**
- **In the 1980s, concerns over the above mentioned risks receded, because of the structural changes in the world oil market**
- **In the 1990s, contingents risks tended to be regarded as major energy security risks**
- **Recent price increase and geopolitical events in the Middle East, etc arouse public concern again, and energy security concern revisited**

Energy Security Strategy Taken in Asia



- **Unilateral Approach**
 - **Energy Source Diversification**
(Promotion of Natural gas, Coal, Nuclear, etc.)
 - **Oil Import Source Diversification**
 - **Overseas Upstream Investment**
 - **Oil Stockpile Buildup**
 - **Etc.**
- **International Cooperation**

Majors Players Embarking on Energy Policy & Strategy Development



- **Japan**
 - **Discussion on National Energy Strategy**
- **China**
 - **Strategy discussed in the 11th 5 year plan**
- **India**
 - **Active energy diplomacy/strategy development**
- **Etc.**

Implications of the Initiatives

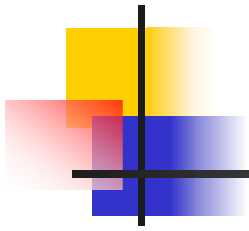


- **In principle, pursuit of energy security by each country can contribute to enhance regional and global energy security**
- **However, if initiatives to enhance energy security conducted too exclusively, tensions could be generated and escalated among Asian economies, thus damaging regional energy security**
- **Therefore, Asia countries have a common interest in establishing regional energy security.**

International Cooperation in Asia

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- **Northeast Asia:** Bilateral consultations between Japan-China, Japan-Korea. Regional forum by industry and expert, business dialogue/partnership become active in the region.
 - **ASEAN + 3 (Japan, Korea and China):** During the 8th IEF in Osaka, energy ministers of ASEAN + 3 met to discuss agenda for future cooperation. They agreed on such issues as: creation of emergency network; initiative of oil stockpile development; joint study on the Asian oil market; etc. Energy ministers met in Manila on June 9, 2005 and agreed to further promote “ASEAN+3 Energy Partnership.”
 - **Producer/Consumer Dialogue:** Ministerial roundtable meetings were held in India (Delhi) to promote producer/consumer dialogue in Asia in 2005 in pursuit of oil market stability

Importance of Regional Cooperation

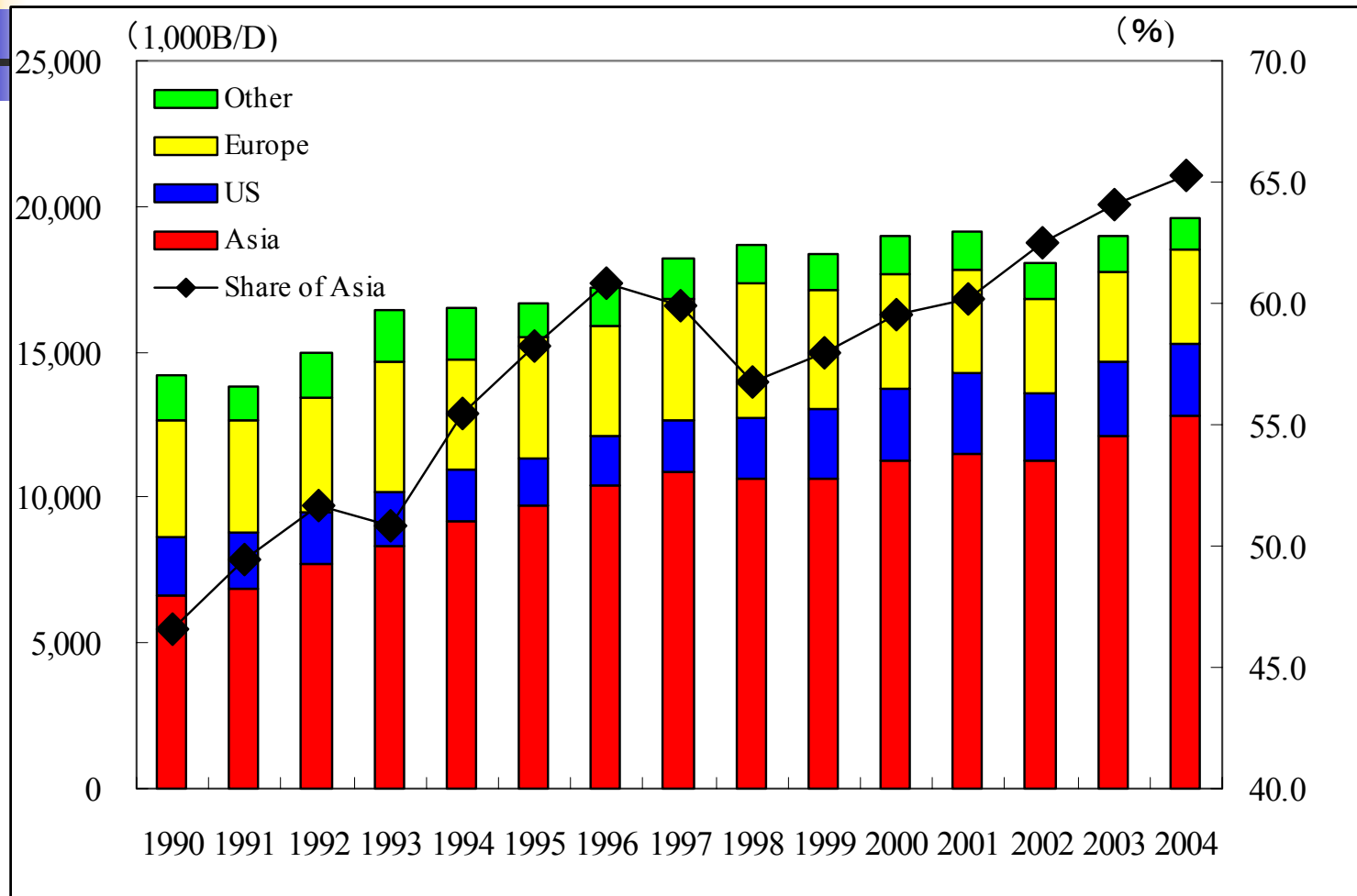
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- **Understanding that energy security is a common challenge for Asia**
 - **Cooperation can be beneficial:**
 - **Synergies**
 - **Optimal use of existing resources, capital, technology, know-how, infrastructure, etc.**
 - **Bargaining power**
 - **From “national energy market” to “regional energy market”**
 - **Efficiency**
 - **New business opportunity**
 - **Existence of various “constraints” should be overcome**

Importance of cooperation between Asia and the producing countries

Producing countries need Asia because:

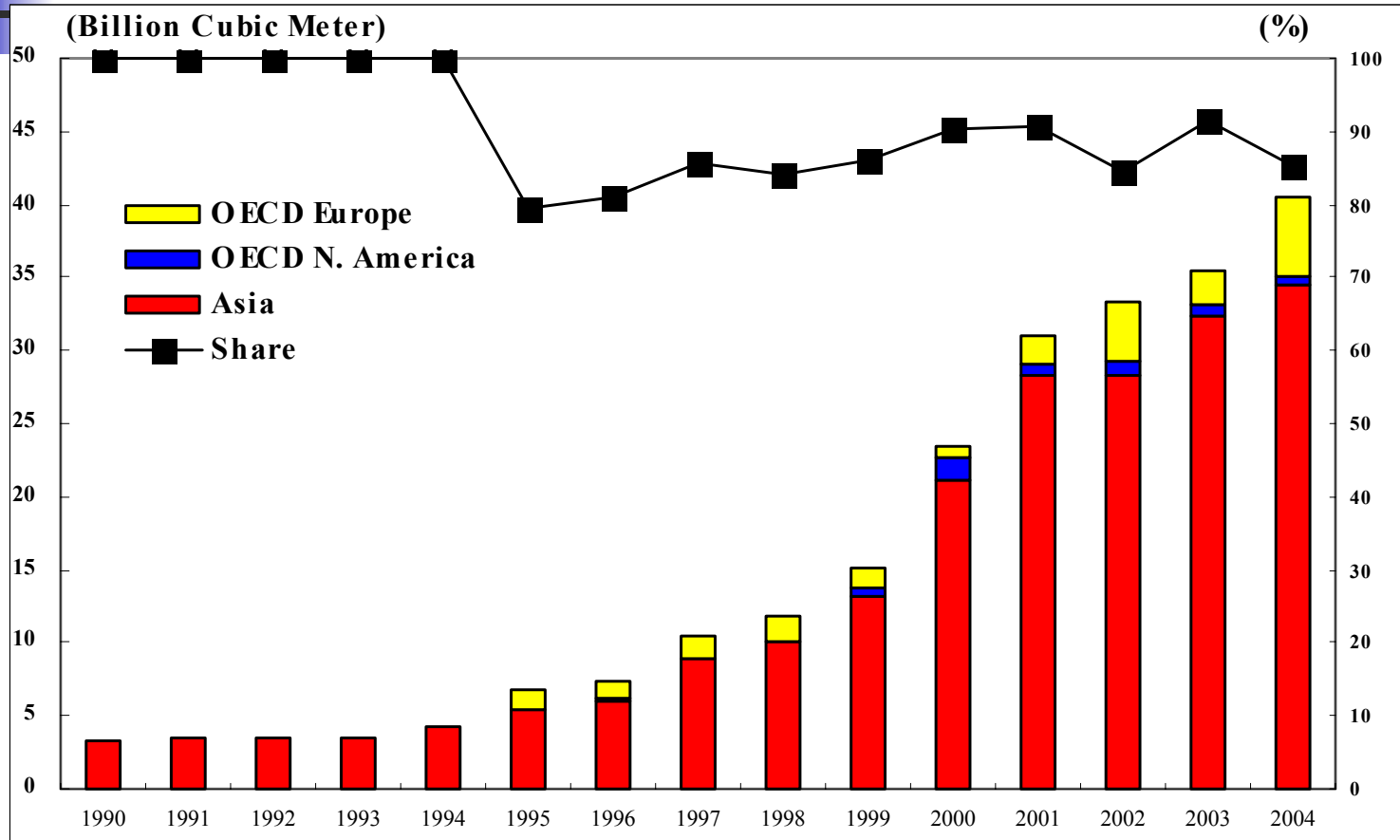
- **Growing market for their most important commodity**
- **Relative attractiveness compared to the US/European market**
- **Crucial needs for stable and sufficient revenue flows for their sustainable development**

Asia, an increasingly important outlet for Middle East oil exports



Source: BP Statistical Review of World Energy 2005

Most of Middle East LNG Heads for Asia



Source: BP Statistical Review of World Energy 2005

Producing countries Need Stable Energy Export Earnings



- **Energy revenue dependent economy**
- **Growing financial requirement for domestic economic development**
(Growing population, infrastructure buildup for higher living standard, etc.)
- **Needs for re-investment in their energy sector**
(to maintain and expand energy exports)
- **Importance of economic diversification as a long-term target**

Common Interests for Asia and the producing countries



- **Asia needs sufficient energy supply at reasonable prices to meet their growing energy requirement (Energy Supply Security)**
- **Producing countries need markets for their energy commodity to secure stable and sufficient revenue flows (Energy Demand Security)**
- **To achieve sustainable development, it is essential for the two region to have a better understanding of the interdependency and pursue the common interests**



Conclusion

- **Rapid growth in energy demand in Asia put pressures on the international energy market and environmental sustainability**
- **Pressed by the growing energy demand and rising import dependence, Asian countries are now embarking on strategy development to enhance energy supply security and sustainability**
- **Asia countries need **Energy Supply Security**, and Producing countries need **Energy Demand Security****
- **To achieve sustainable development, it is essential for the two region to have a better understanding of the interdependency and pursue the common interests**

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