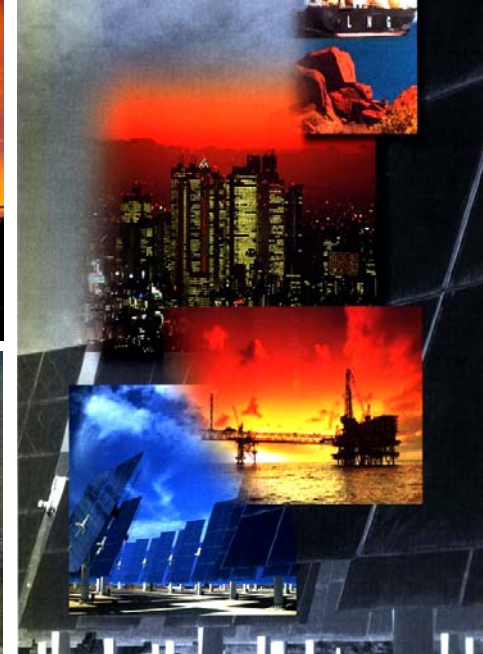
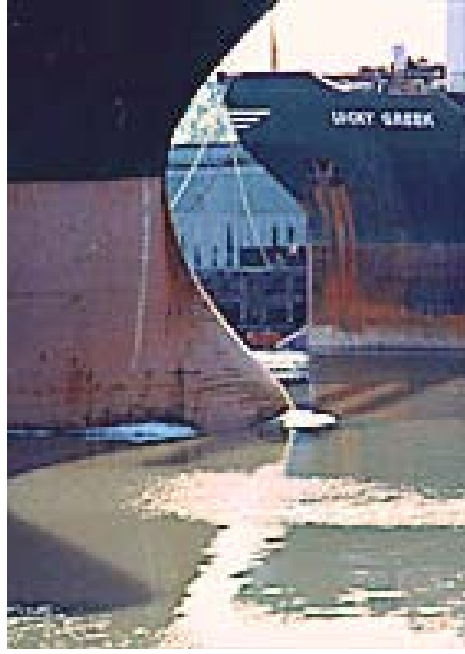




Asia-Pacific  
Economic Cooperation

Asia Pacific Energy  
Research Centre



## APEREC Update

# Petrostocks 2009: Stockpiling in New Market Realities

9 February 2009

Houston, Texas USA

Kenji Kobayashi

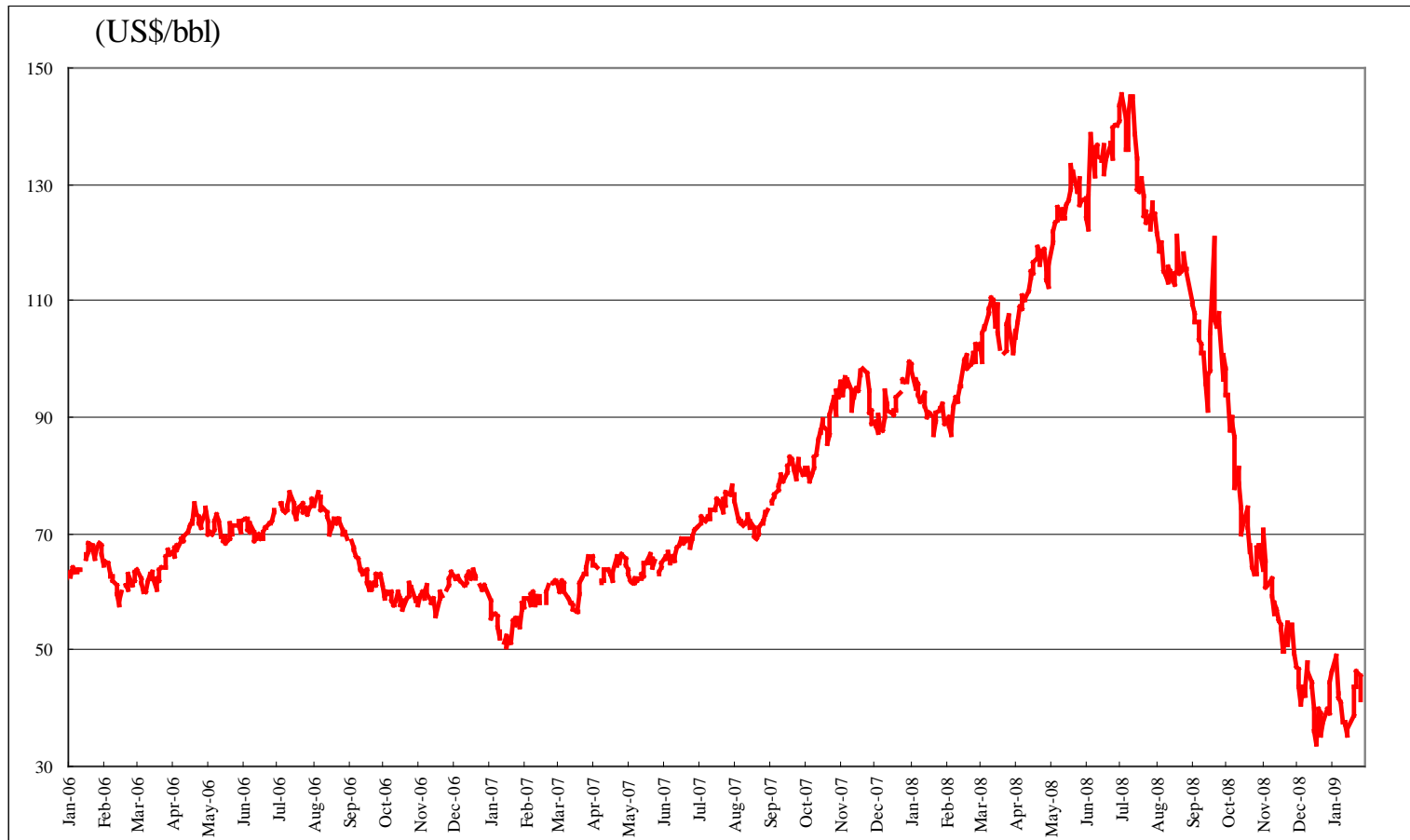


## Outline

- **Impact of Record High Oil Prices early 2008 on Oil Stockpiling**
- **Impact of Economic/Financial Crisis on Short-term and Longer-term Oil Demand Projections**
- **Update on Various Risks of Oil Supply Disruption**
- **Long-Term Prospects for Oil Import Dependence**
- **Update on Efforts/Cooperation to develop Strategic Oil Stockpiling in the Asia Pacific Region**
- **Need for Further Efforts/Cooperation in the area of Strategic Oil Stockpiling**



# Highly Volatile Oil Market in Recent Years



Source: NYMEX



## World Economic Outlook Update

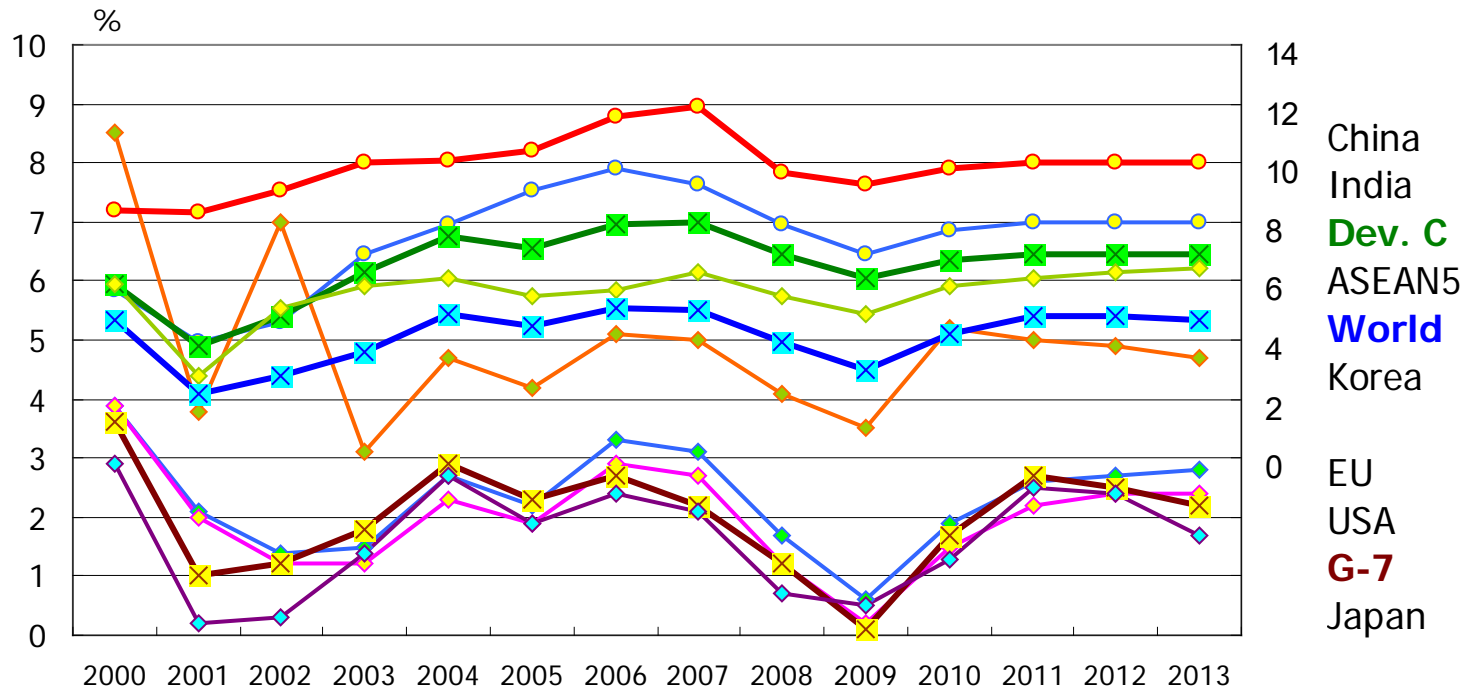
	2008 Outlook				2009 Outlook			
	2008 Jul	2008 Oct	2008 Nov	2009 Jan	2008 Jul	2008 Oct	2008 Nov	2009 Jan
World	4.1	3.9	3.7	3.4	3.9	3.0	2.2	0.5
OECD	1.7	1.5	1.4	1.0	1.4	0.5	-0.3	-2.0
USA	1.3	1.6	1.4	1.1	0.8	0.1	-0.7	-1.6
Non- OECD	6.9	6.9	6.6	6.3	6.7	6.1	5.1	3.3
China	9.7	9.7	9.7	9.0	9.8	9.3	8.5	8.0

Source: IMF "World Economic Outlook (Jul, Oct, Nov, Jan(2009))"  
World Bank "Global Economic Prospects 2009 (Dec)"



# Medium-term World Economic Outlook

## Growth rates





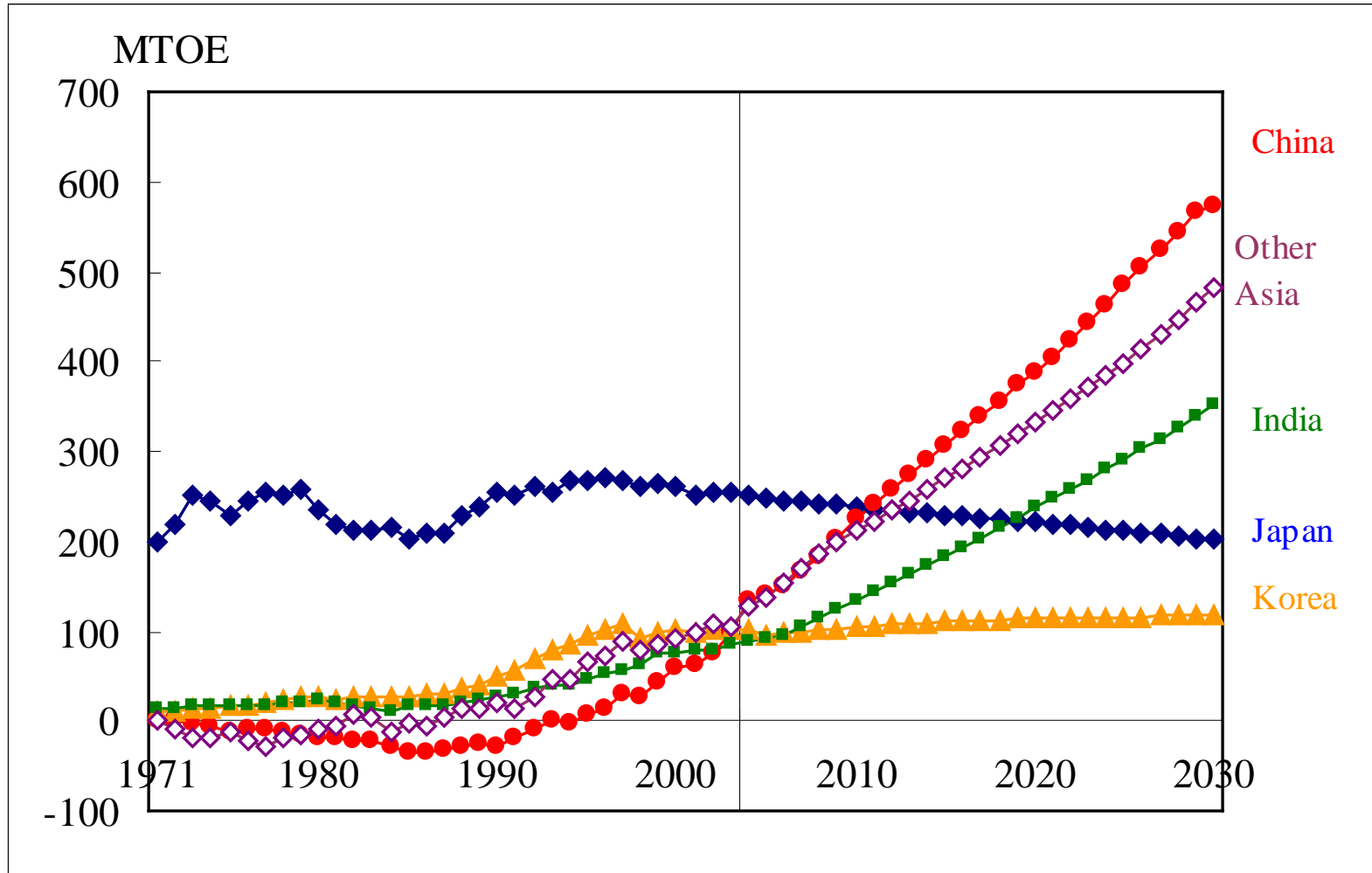
## Impact of Record High Oil Prices & Subsequent Economic Crisis on World Oil Demand

Oil Demand (Barrels/Day)

	First Oil Crisis			Second Oil Crisis			Third Oil Crisis ?		
	1973	1975	Change	1979	1983	Change	2007	2009	Change
World	56.3	55	-1.3	64.4	57.9	-6.5	86.1	87.2	1.1
OECD	41.5	38.7	-2.8	44	36.5	-7.5	49.2	47.5	-1.7
FSU	6.1	7.1	1	8.1	8.4	0.3	4.1	4.4	0.3
Others	8.7	9.2	0.5	12.3	13	0.7	32.8	35.3	2.5



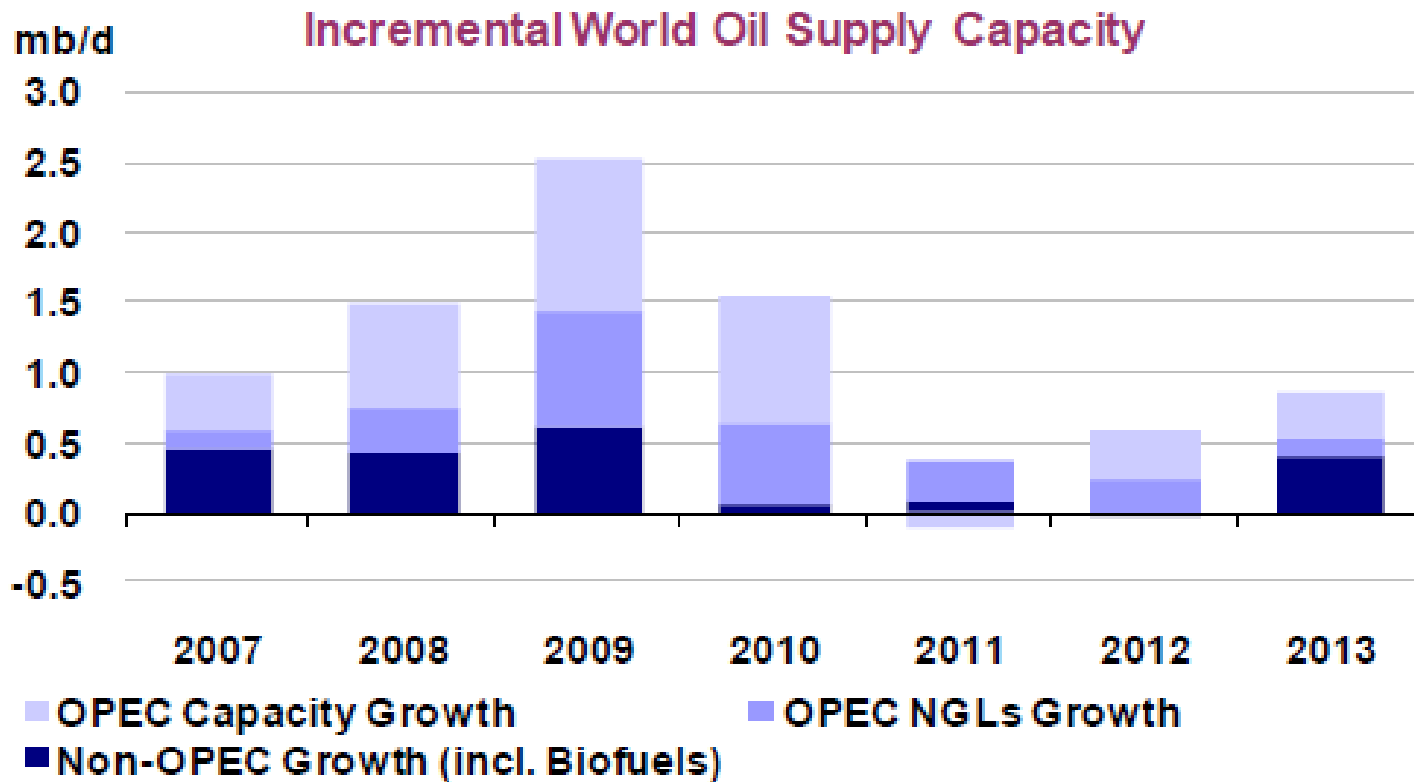
# Outlook for Net Oil Imports by Asian Countries



Source: IEEJ (Asia/World Energy Outlook 2007)



## Spare Production Capacity Update



(Source) IEA Medium-Term Oil Market Report - July 08



## Update on Various Risks Throughout the Energy Supply Chain

### ■ Risks of supply disruption upstream :

- Terrorism
- Political and social problems

### ■ Risks of supply disruption in transportation /transit and downstream:

- Piracy
- Natural Disaster ( e.g. Hurricanes and earthquakes)
- Accidents



# Geopolitical Risks in Middle East Update



**-Terrorists' and pirates' threats to energy production and exports**

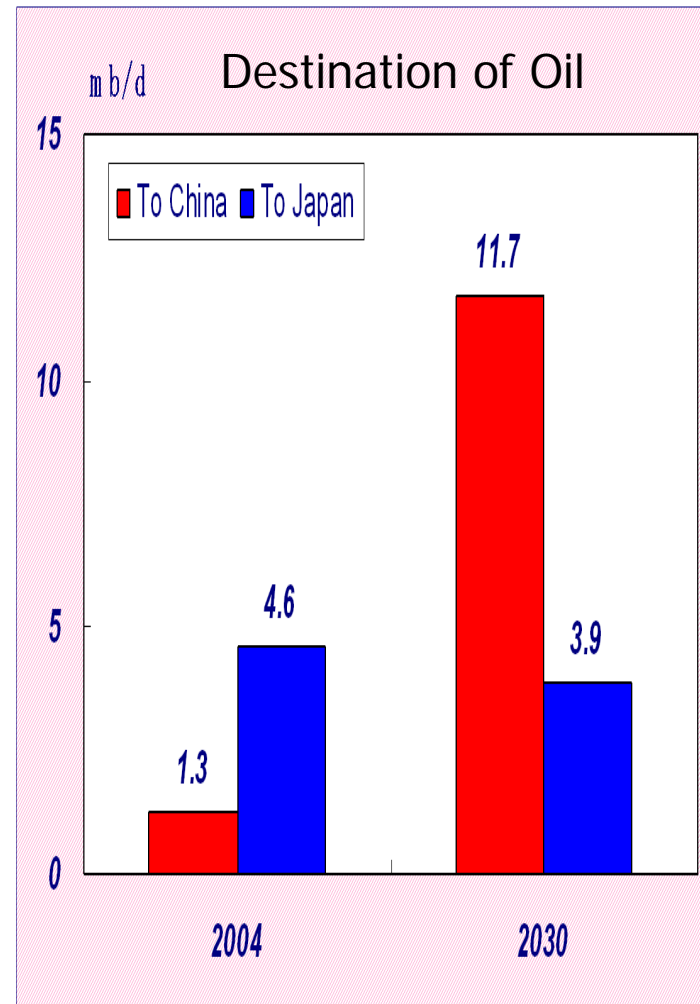
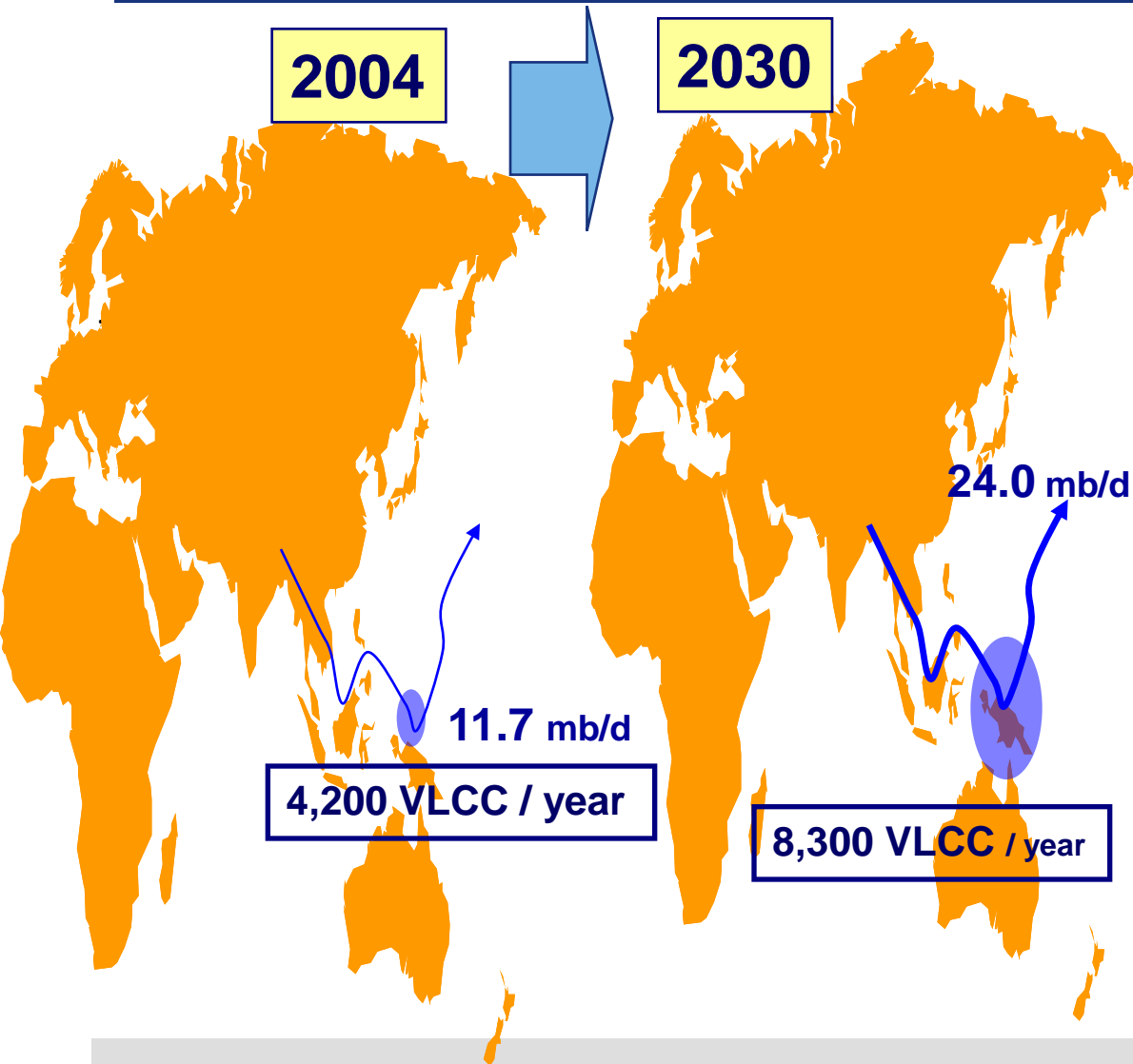
**-Iraqi situation after the war**

**-Tensions regarding Iran's nuclear development**

**-Uncertain prospects for Middle East peace**



## Tanker Traffic at Straits of Malacca





## Update on Efforts/Cooperation to Develop Strategic Oil Stockpiling

### ■ ASEAN

**- The revision of 1986 APSA: under consideration**

### ■ ASEAN+3 ( China, Japan and Korea)

**- Discussion on Road Map to develop Oil Stockpiling in ASEAN+3: started in 2008**



## Update on Efforts/Cooperation to Develop Strategic Oil Stockpiling

### ■ China

- a) **First phase plan for construction of National Oil Reserves Facilities:**
  - Construction completed in 2008
  - Above-ground Tanks in Zhenhai, Aoshan, Huangdao and Dalian
  
- b) **Second-phase plan for construction of National Oil Reserves Facilities:**
  - Various types of storage facilities are under consideration
  
- c) **National Oil Reserve Center was established early 2008**  
**(国家石油储备中心)**



## Update on Efforts/Cooperation to Develop Strategic Oil Stockpiling

### ■ India

**-The first phase for construction of Strategic Petroleum Reserves:  
underground caverns**

**a) Visakhapatnam (1.33 Mt):**

**Construction started in May, 2008**

**Operation is expected to start in mid-2011**

**b) Mangarol (1.5Mt)**

**Construction is expected to start in Spring, 2009**

**Operation is expected to start in mid-2012**

**c) Padur (2.5Mt)**

**Construction is expected to be completed in early 2013**

**-The second phase for construction of Strategic Petroleum Reserves(10Mt):  
Various types of storage are under consideration; possible policy  
decision later 2009**



## Update on Efforts/Cooperation to Develop Strategic Oil Stockpiling

### ■ **Bilateral Cooperation between New Zealand and Japan**

- **NZ and Japan signed emergency oil stockpile accord in November 2007**
- **NZ bought options to buy oil from a Japanese company in 2008 and in 2009**



THANK YOU