

**CULTURGEST**

***Fundação da Caixa Geral de Depósitos***

*Lisboa, 8 de Fevereiro de 2012*

**“PETRÓLEO, GÁS, a ENERGIA em MUDANÇA:  
da GEOPOLÍTICA às TECNOLOGIAS e MERCADOS”**

António Costa Silva

Presidente da Comissão Executiva

**PARTEX**  
OIL AND GAS

## **1ª Conferência**

### **“MUDANÇAS ESTRUTURAIS E ESTRATÉGICAS EM CURSO NO MERCADO DA ENERGIA”**

## **SUMÁRIO**

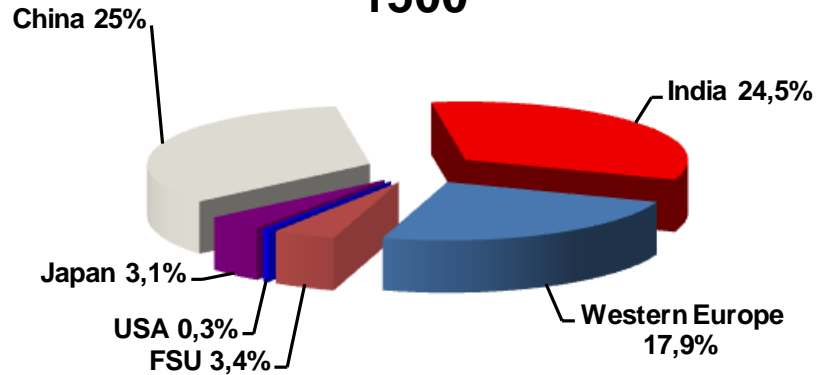
- 1. PANORAMA ACTUAL do MERCADO ENERGÉTICO e TENDÊNCIAS ESTRUTURAIS e ESTRATÉGICAS**
- 2. O QUE ESTÁ a MUDAR nos MERCADOS da ENERGIA?**
- 3. A EVOLUÇÃO dos PREÇOS do PETRÓLEO e CONSEQUÊNCIAS**
- 3. CENÁRIOS FUTUROS e o IMPACTO na ENERGIA**

## **1. PANORAMA ACTUAL do MERCADO ENERGÉTICO e TENDÊNCIAS ESTRUTURAIS e ESTRATÉGICAS**

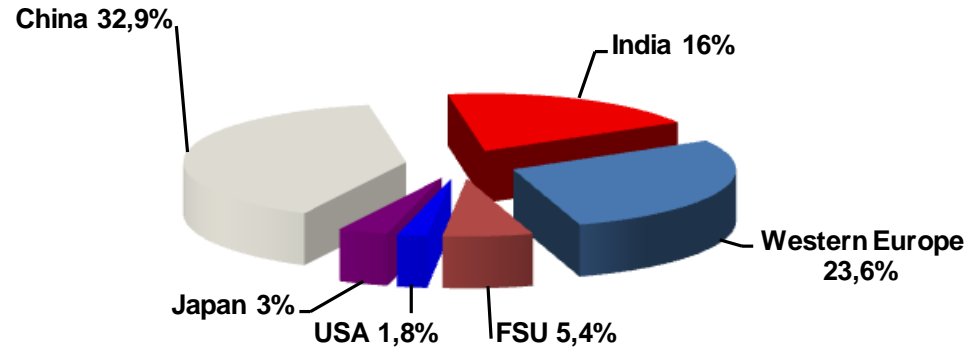
# A BRIEF HISTORY OF THE WORLD

## Shifting Mix of Global PIB %

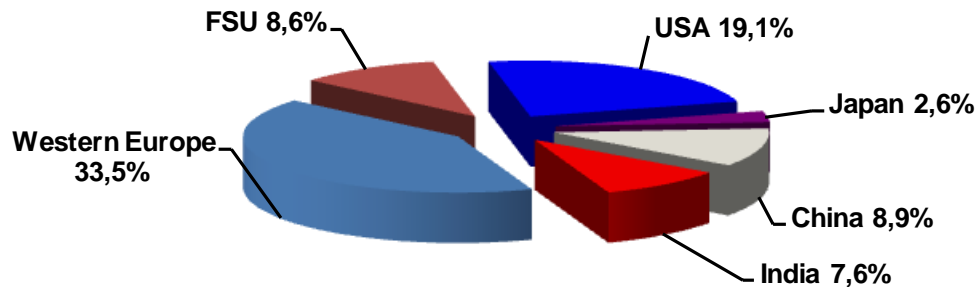
1500



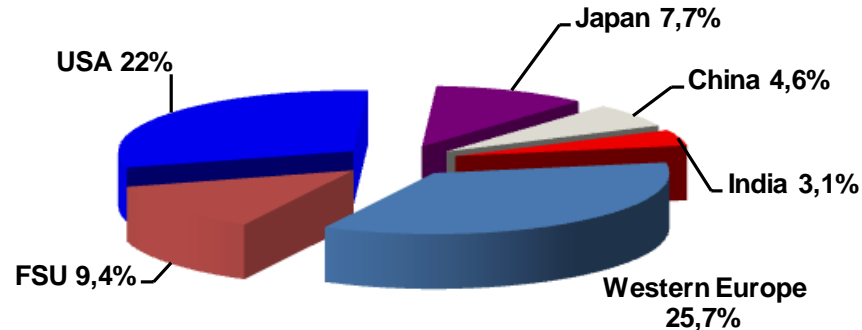
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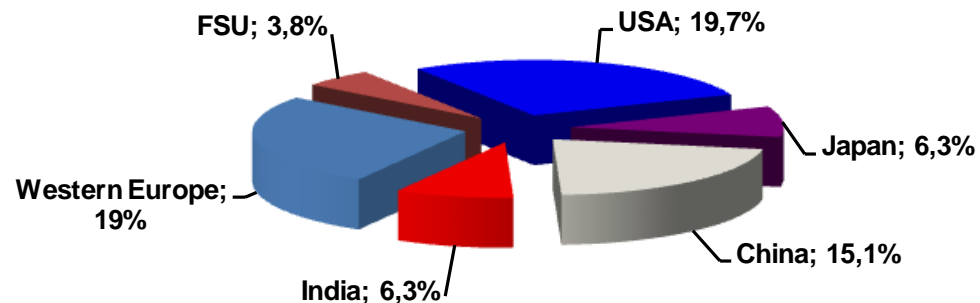
1913



1973



2006



# ***WORLD DAILY CONSUMPTION***

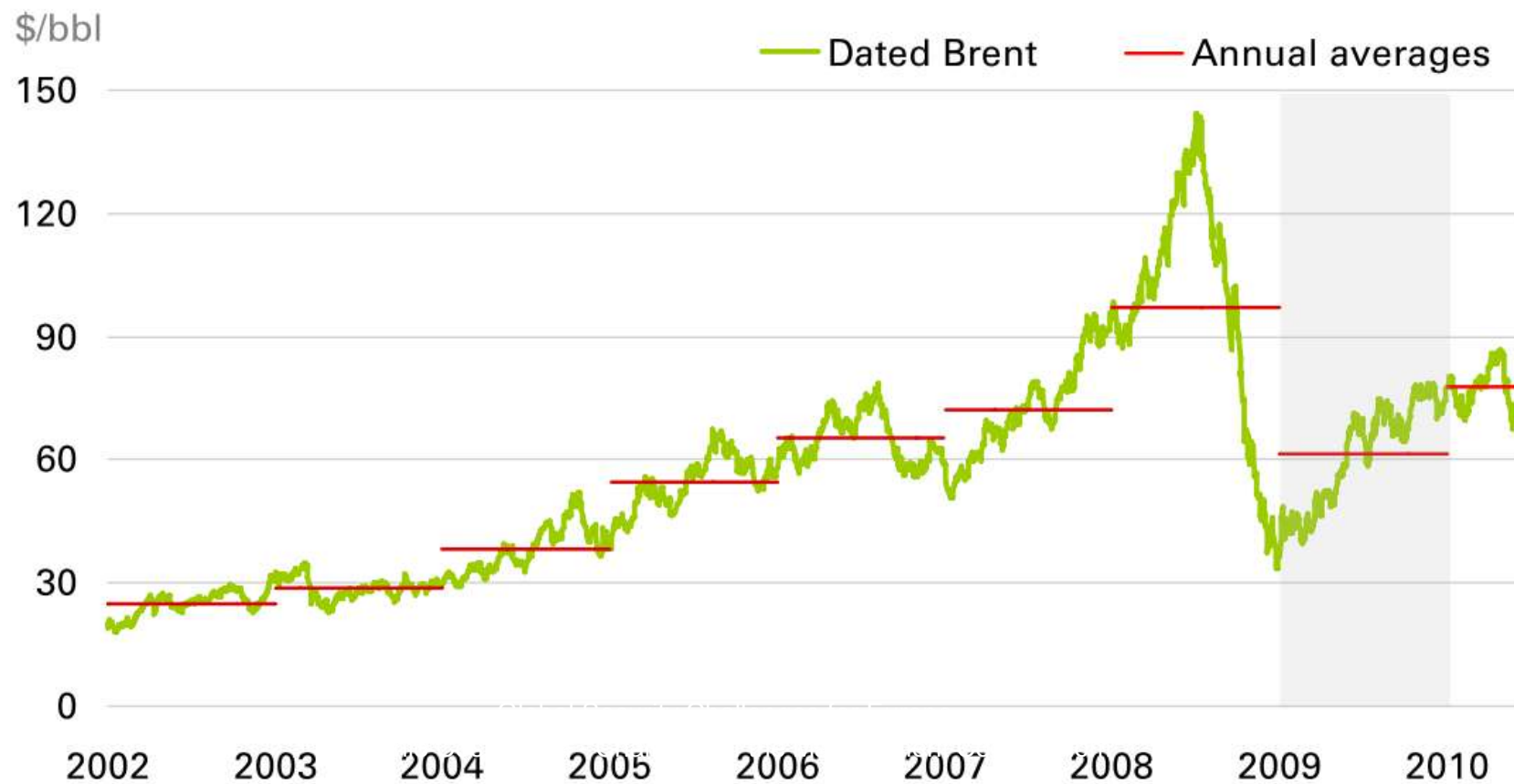
- 85 Million Barrels of Oil
- 306 Billion Cubic Feet of Natural Gas
- 14 Million Tons of Coal

85 MB/D – Means

One Olympic-sized swimming pool of Oil CONSUMED  
in 15 SECONDS

ONE DAY OF CONSUMPTION = 5500 swimming pools

# Crude Prices: What Happened?







## OIL SHOCK 2007 - 2008 FEATURES

### THE GLOBALIZATION OF OIL DEMAND

- . From 2000-2007 85% of growth from developing countries
- . Combined effects of INCOME and population growth
- . Global demand increased 33% from 2004/2008

### THE STAGNATION OF OIL SUPPLY

- . Non-Opec supply decreased 33% (2004/2007)
- . Failure of production to increase between 2005/2007
- . Saudi decline in 2007
- . Fears of resource depletion and cost inflation

### OIL PRICE VOLATILITY

- . Less than 40 US\$/bbl in 2004
- . 147 US\$/bbl in July 2008
- . Back to 32 US\$/bbl in December 2008

### ACCELERATION OF VERTICAL INTEGRATION DECLINE

- . Refining sector under turmoil
- . 20 largest oil producers refine 77% of their crude

### FINANCIALIZATION OF OIL

- . Became a financial asset and has taken "a second identity"
- . Sarkozy/Brown call for a solution to "DESTRUCTIVE VOLATILITY"
- . Speed and magnitude of price collapse led to the theory of SPECULATIVE Price Bubble (Masters)

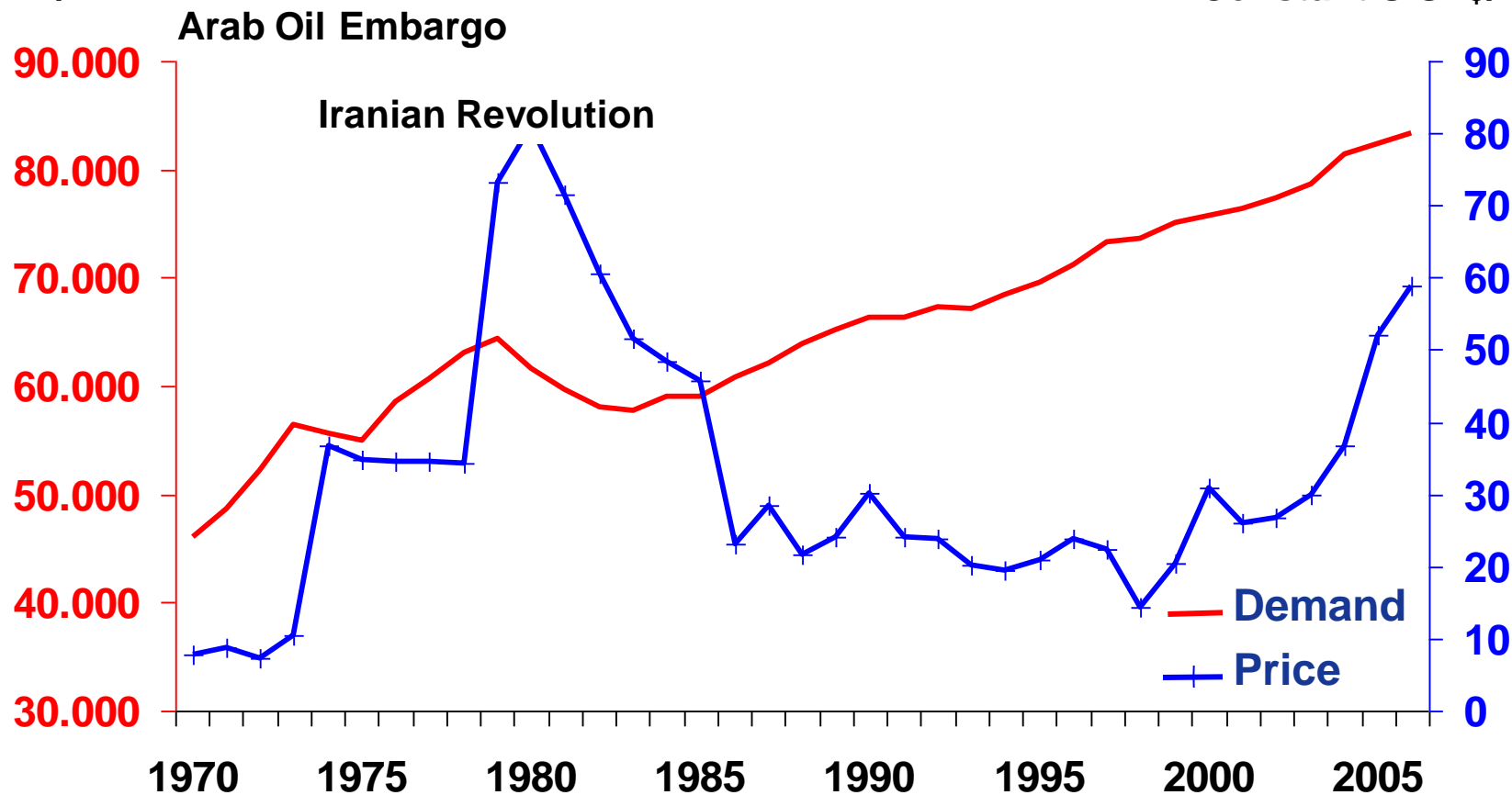
### NEW ERA OF OIL PRICING DYNAMICS

- . Extreme volatility
- . Saudi erosion of spare capacity
- . No mechanisms to smooth huge price swings

# DEMAND HAS FALLEN BEFORE ON HIGH PRICE BUT NOT THIS TIME

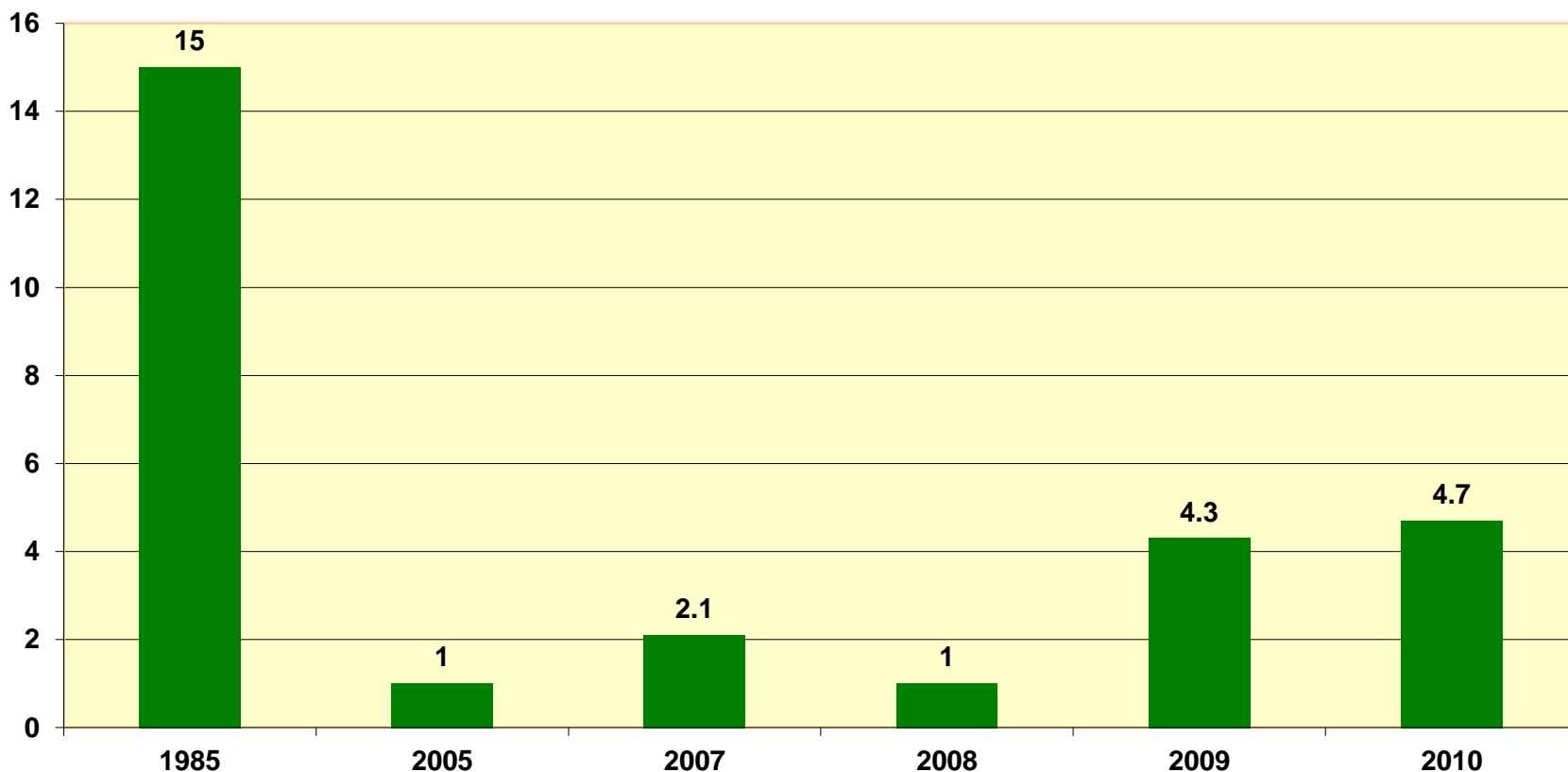
Global Crude Oil Demand  
MB/D

Arab Light Crude Oil Price  
Constant U.S. \$/B



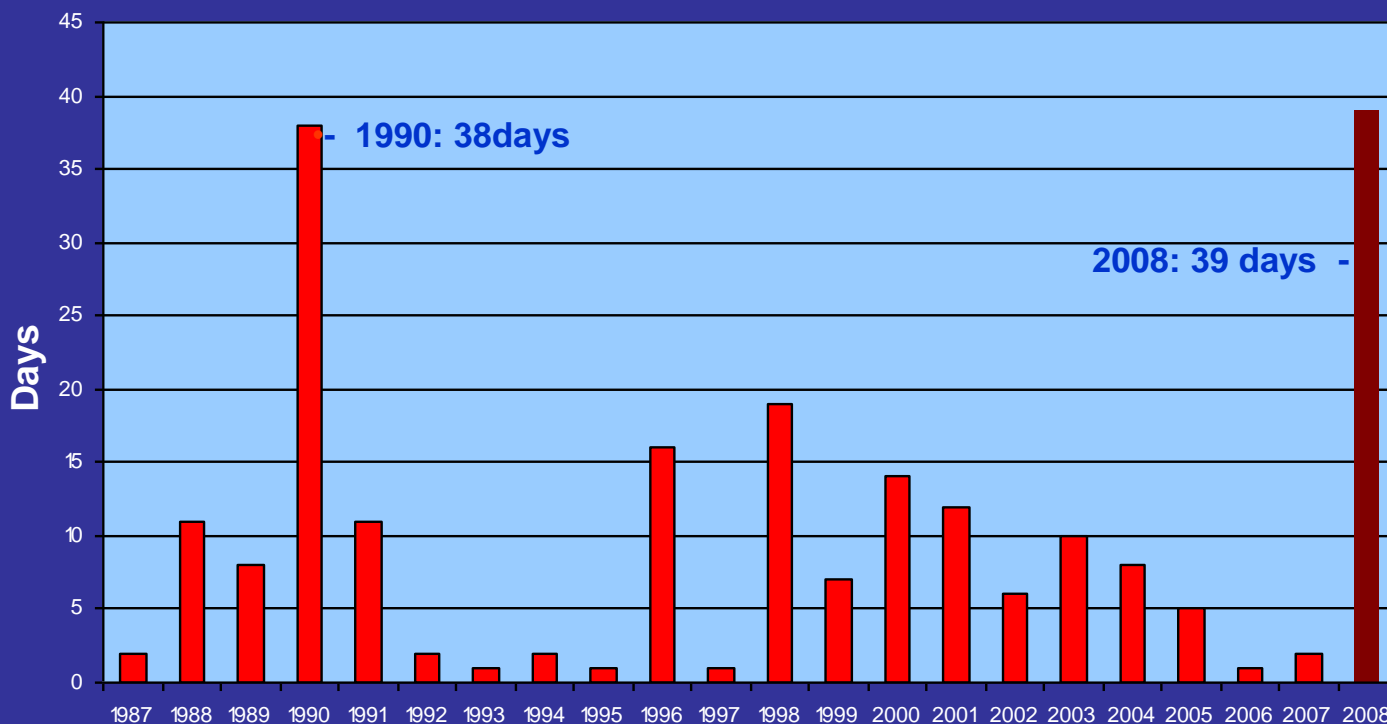
# OPEC EXTRA-CAPACITY

M Barrels per Day



Source: IEA

# VOLATILE OIL MARKET



Source: Bloomberg

**In 2008 the price of oil changed 5% or more from its previous close on 39 days. The most recent year with comparable volatility was 1990**

# OIL SHOCK 2007 - 2008 NEW TRENDS

## OPEC ACTION TO RESTRAIN PRODUCTION

- . 2007/2008 cuts amounted to 4.2 MB/D
- . Supply restrictions increase volatility and exert pressure on future ability to deliver

## OPEC SPARE CAPACITY

- . Huge erosion (less than 1 MB/D) but recovered with the economic crisis and decline in demand

## QUOTAS LIMITATIONS DROVE OPEC TO ACCELERATE PRODUCTION OF CONDENSATES and NGL's

2009: + 340,000 B/D  
2010: + 420,000 B/D

## DEVELOPED COUNTRIES LIKE US SHIFT TO PRODUCTION OF UNCONVENTIONAL GAS

- . US Gas Shales is an enormous resource
- . US Gas production increased 7.5% in 2008, the strongest growth since 1984

## WINTER 2009/2010: THE WEATHER IS IRRELEVANT FOR THE OIL PRICES

- . The worst global recession in 7 decades affected the oil supply/ demand
- . Winter 2009/2010: is not the weather but the economic recovery's impact on oil demand that will play a bigger influence on oil prices

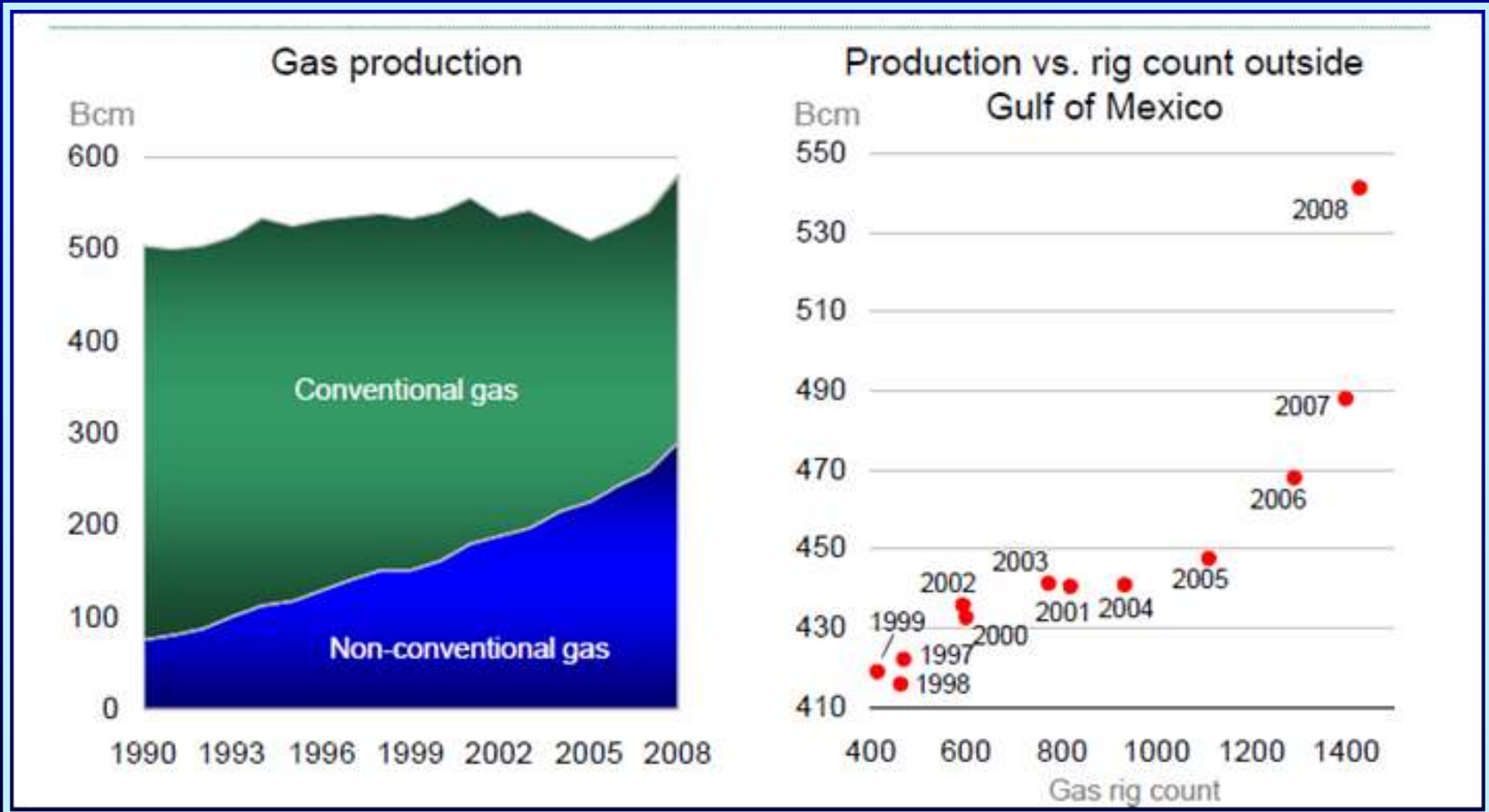
## INCREASE ON WORLD OIL STOCKPILES

- . All oil + heating + products close to 7 billion barrels at the end of September 2009 (record in the history)
- . FLOATING STORAGE increased from 64 MB to 188 MB (September 2007/2008)

## HUGE DESTRUCTION OF WORLD OIL DEMAND

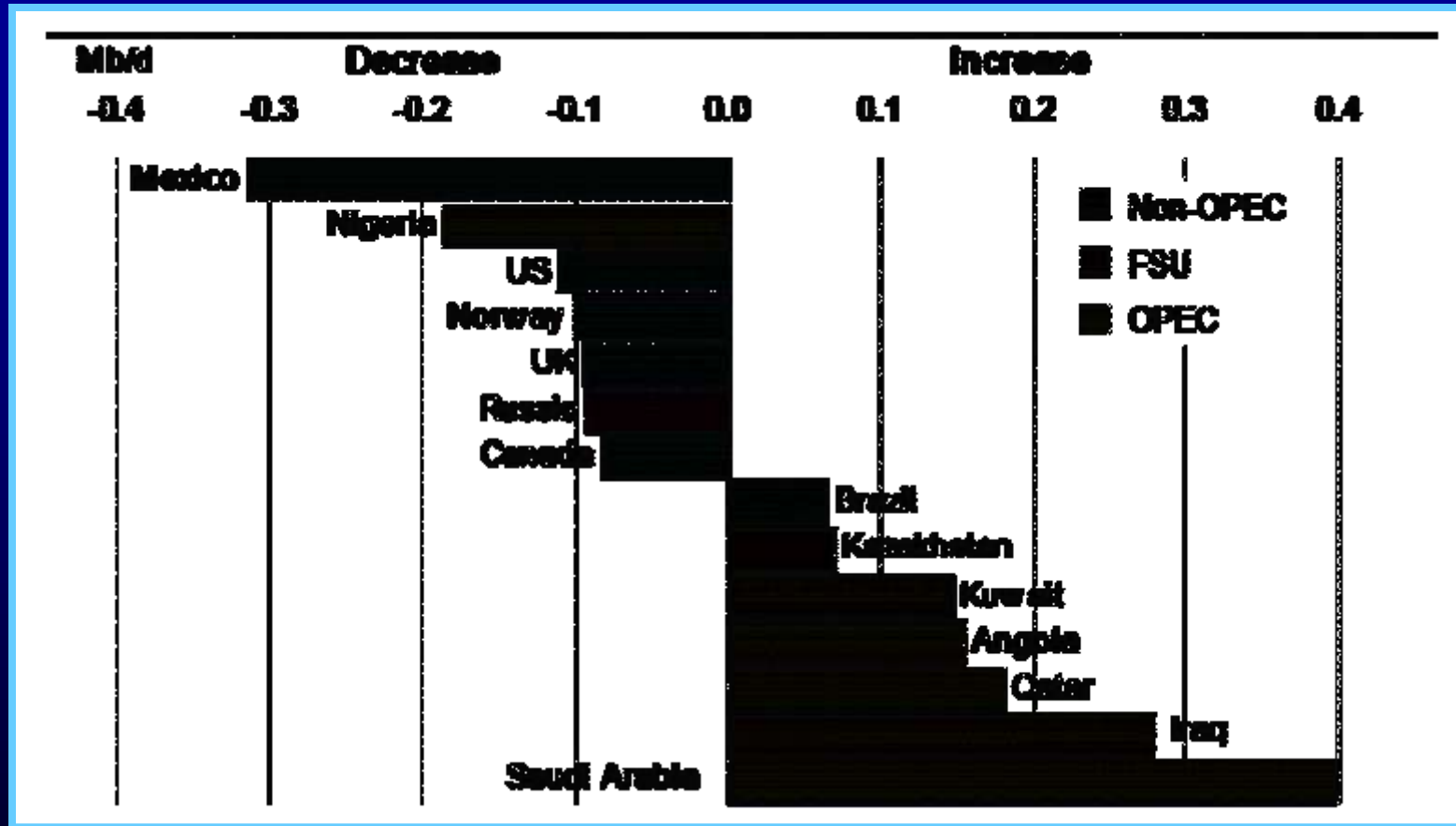
- . Oil demand collapsed 2.2 MB/D in second semester 2008
- . 2008 oil demand decreased 0.6%, the first decline since 1993 and the largest since 1982

# US Gas Production Changes



Source: BP Statistical Review of World Energy June 2009

# Main Oil Production Changes



Source: BP Statistical Review of World Energy June 2009

## **2. O QUE ESTÁ a MUDAR nos MERCADOS da ENERGIA?**



# Energy Game Changers in XXI Century?

## Possible Game Changers

## Possible Consequences / Effects

### SHALE GAS

- Reserves may range from 60% to 250% of conventional
- May dramatically change USA and Europe landscape
- Implications for gas developments and supply in Europe
- Available internal reserves
- Obstacles: technology, environment, costs (tight gas)

### BP'S MACONDO OIL SPILL

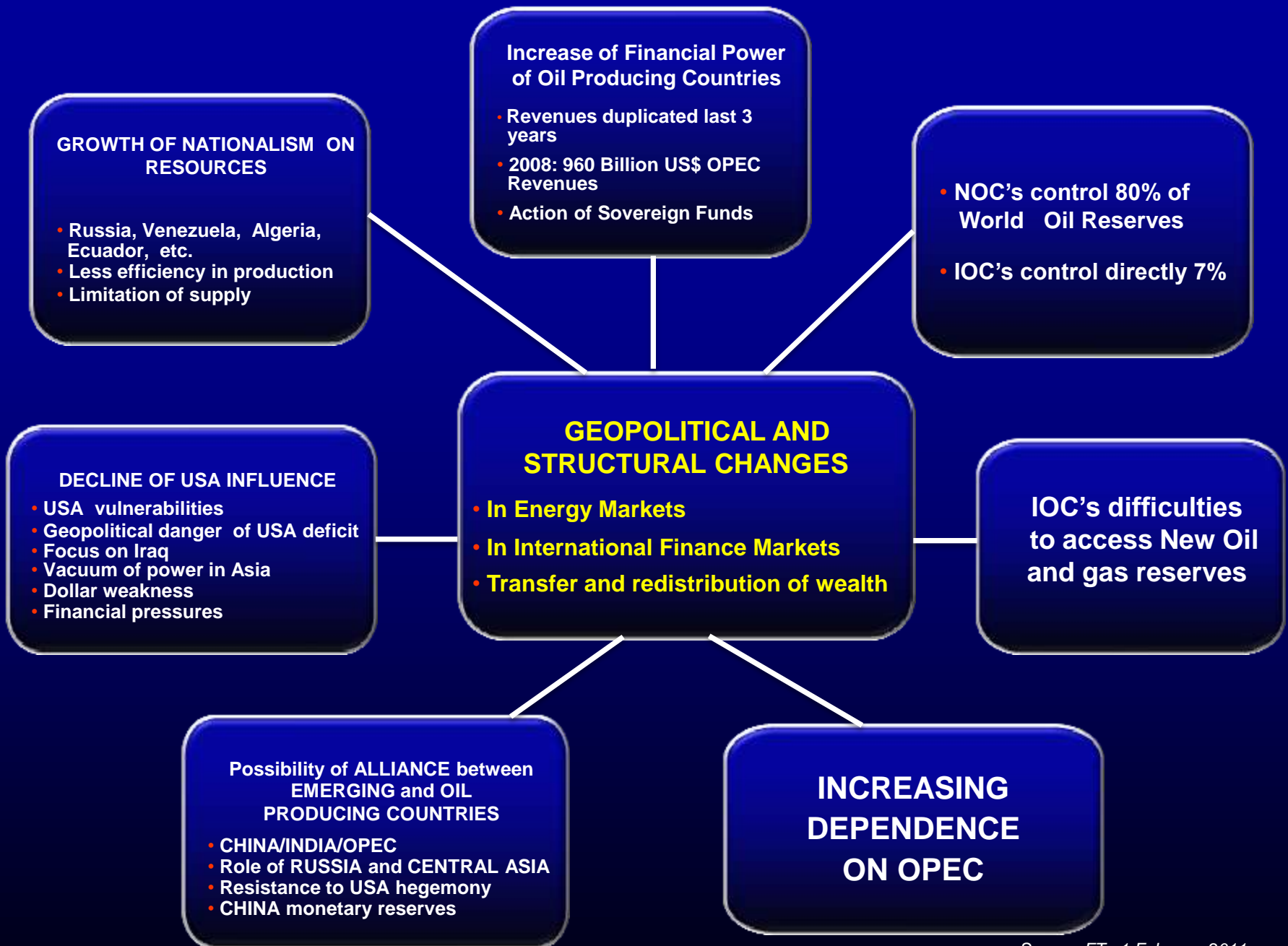
- Implications on safety and environmental issues
- Regulations more tight
- Impact on costs
- Implications on long-term supply
- Deep offshore safety and developments
- Risk management

### IRAQ'S UPSTREAM POTENTIAL

- Iraq plan to increase production 6 times to reach 12 MB/D in 5 years
- Enormous challenges but potential is there
- Implications of technical and political realities
- Impact on OPEC policies and cohesion

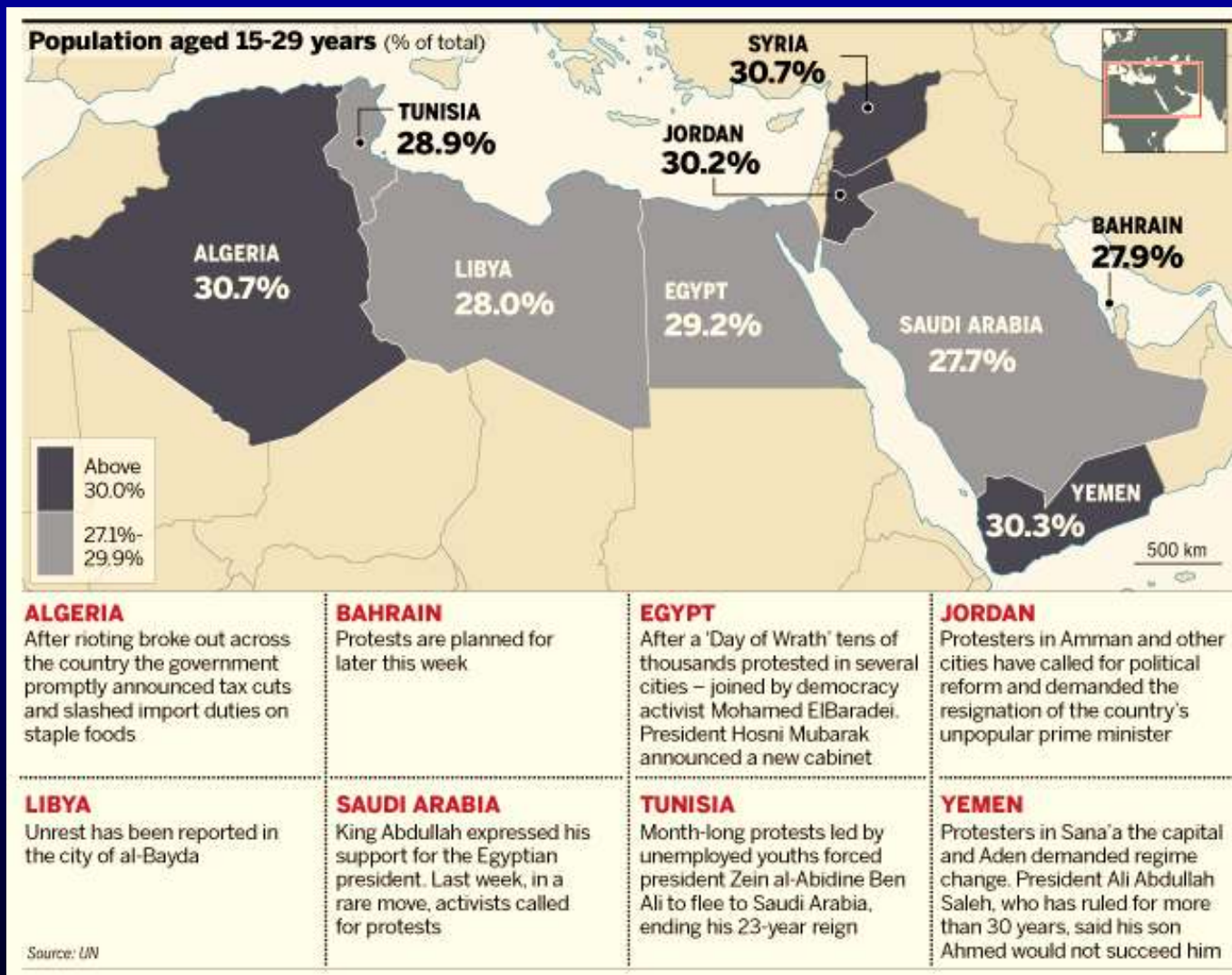
### SHIFTING OF POWER FROM ATLANTIC TO PACIFIC BASIN

- Tilt to the Pacific may trigger major implications on world balance of power
- China development is sustainable?
- Trade, finance and investment trends may change
- What corporate policies for European companies?
- Geopolitical strategy and potential emergence of new conflicts



Source: FT, 1 February 2011

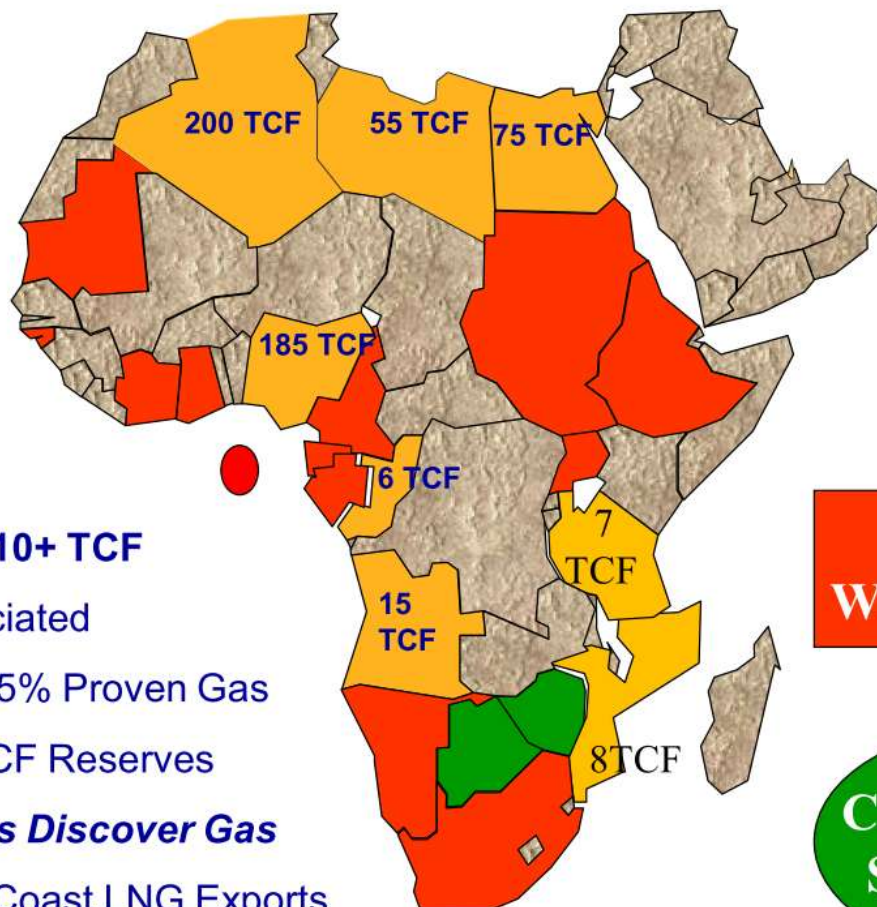
# NORTH AFRICA and MIDDLE EAST CRISIS



Source: FT, 1 February 2011

# Africa: Proven Gas Reserves

**Africa  
Long Gas  
Future**



**Major Gas  
Reserves**

**Countries  
With Proven Gas**

**CBM Potential  
SA Shale Gas**

Proven Gas: **510+ TCF**

50% Non Associated

6 Countries = 95% Proven Gas

Cut Off > 5.0 TCF Reserves

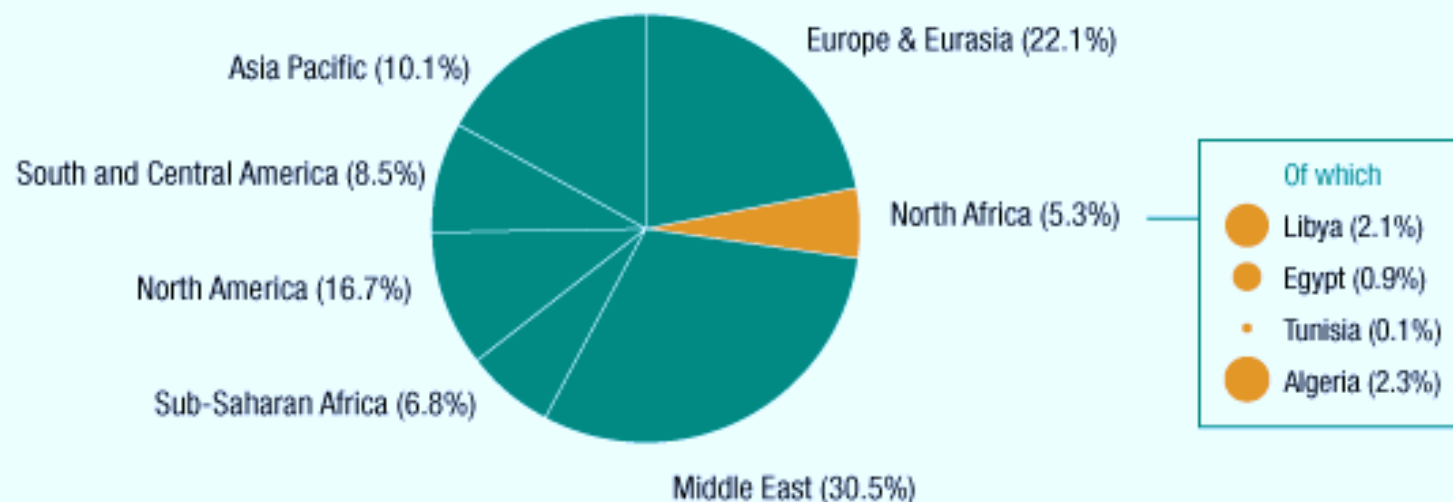
**More Countries Discover Gas**

Atlantic + East Coast LNG Exports

Source: 21st World Upstream Conference Global Pacific & Partners

# ***WORLD CRUDE PRODUCTION (%)***

World crude production (%)



Source: BP Statistical Review of World Energy 2010



# LIBYAS'S OIL AND GAS



Source: The Economist 18 June 2011

## Closure of the Suez Canal would divert Middle East oil



### Oil transit

Crude oil and refined products  
(barrels per day, m)

Travelled northbound  
through the Suez Canal  
to the Mediterranean sea

2009



Travelled southbound  
to the Red Sea



Transit through Sumed pipeline

2007

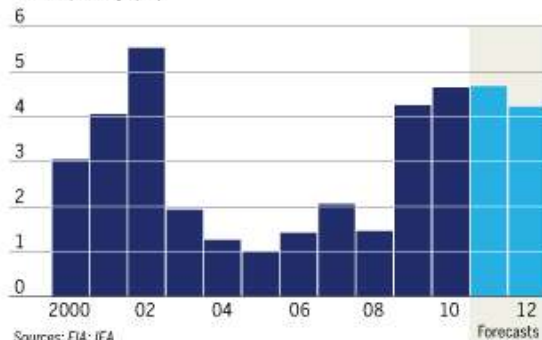


2009



### Opec surplus crude oil production capacity

Barrels per day (m)



### OECD total oil stock cover

Days of forward demand



# Effect on oil prices and Gulf economies



- Three competing effects
  - Damage, disruption and insecurity
  - High oil prices
  - Increased social spending and budgetary requirements

22

Source: 21st World Upstream Conference Global Pacific & Partners

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António Costa Silva - Presidente da Comissão Executiva

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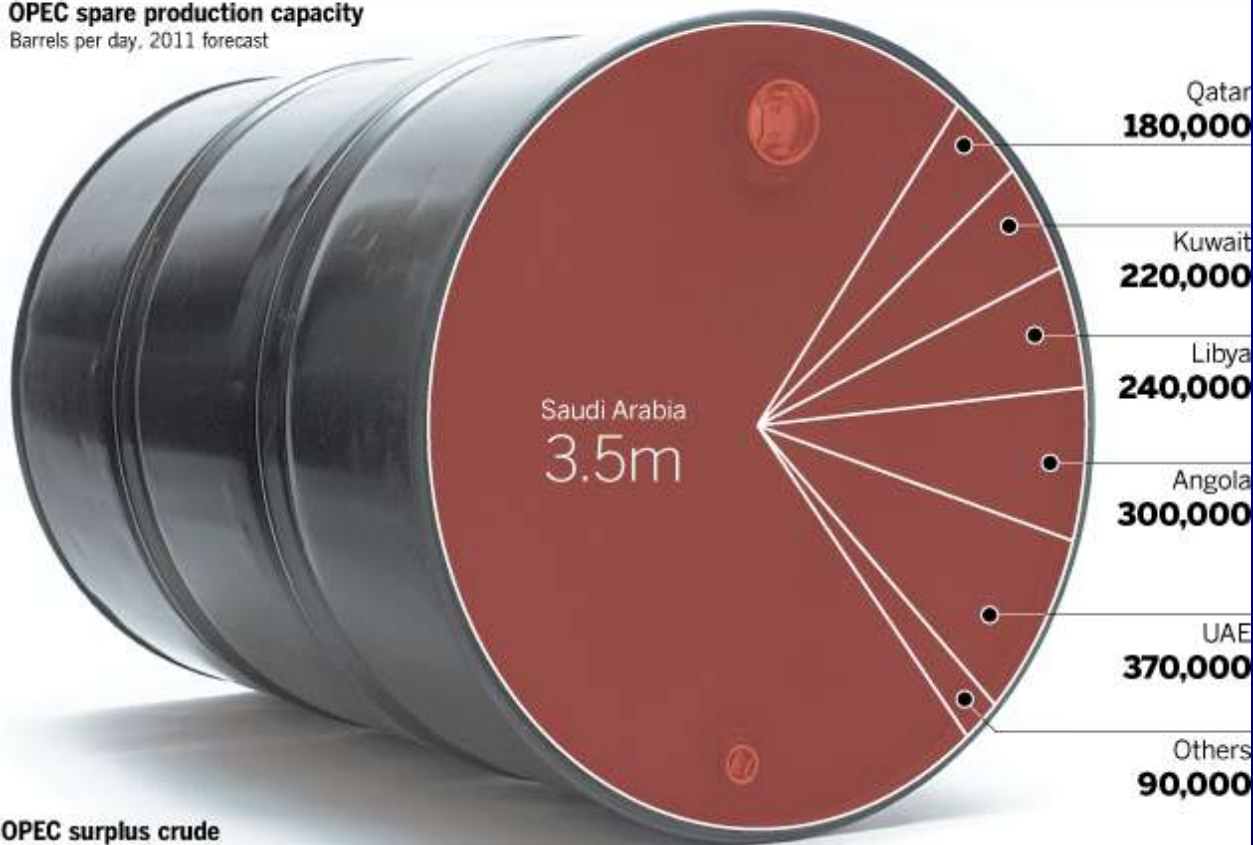
**PARTEX**  
OIL AND GAS



# Plenty left in the barrel

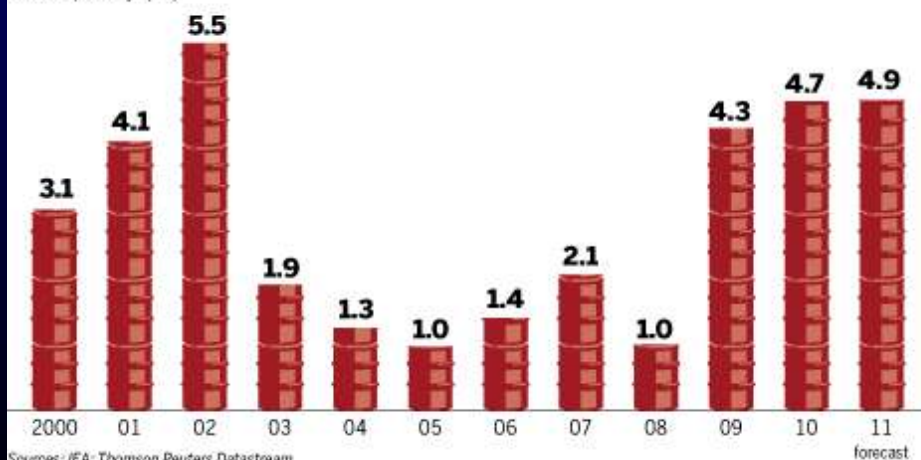
## OPEC spare production capacity

Barrels per day, 2011 forecast



## OPEC surplus crude production capacity

Barrels per day (m)



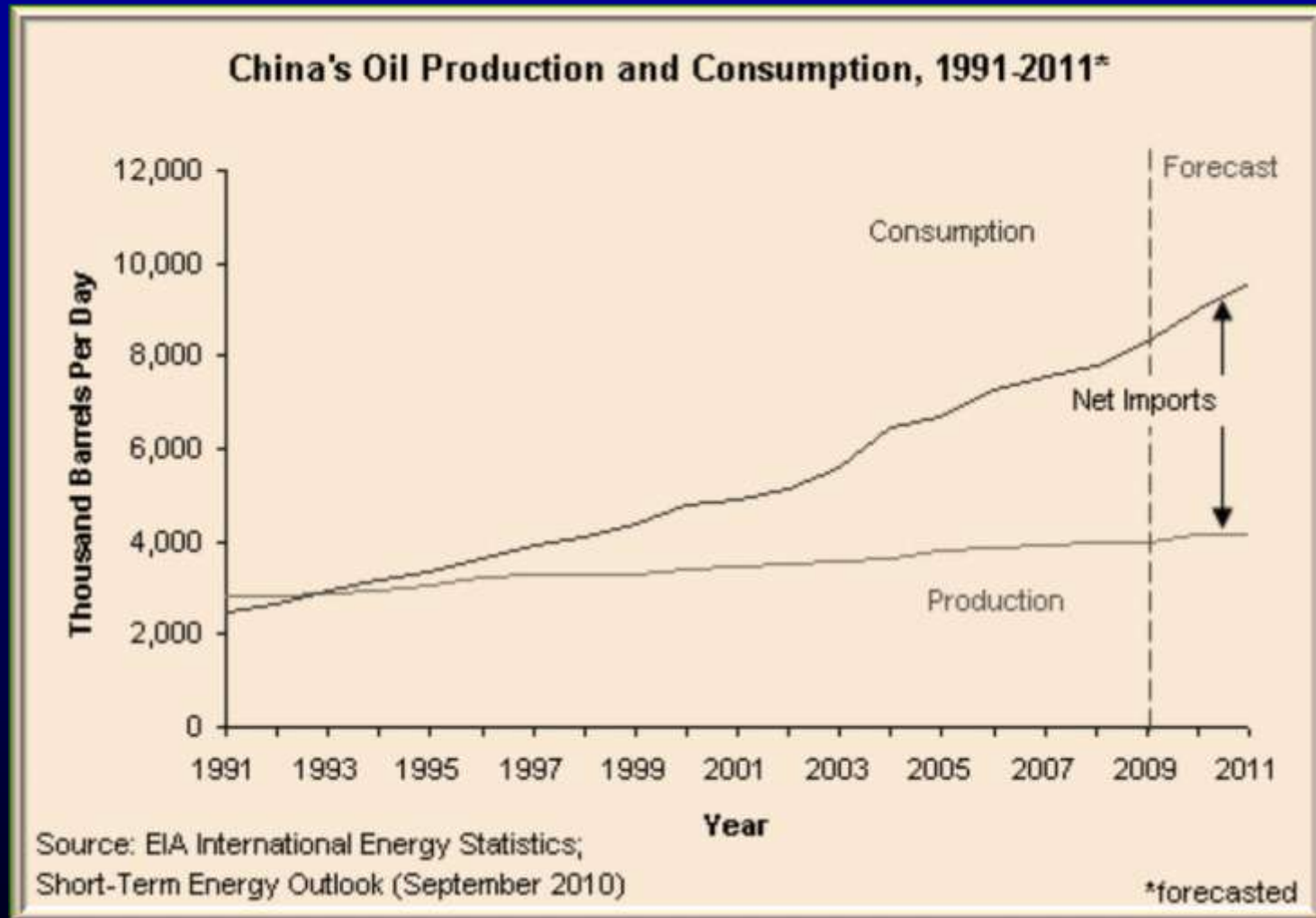
## Brent crude

\$ per barrel



# CHINA

## Crude oil Domestic production and consumption



# CHINA BIG OIL STRATEGY

## Kazakhstan

One of China's most important areas of focus. Building pipelines, agreeing loans and investing in energy companies has allowed Beijing dramatically to increase its influence on its oil and mineral-rich neighbour

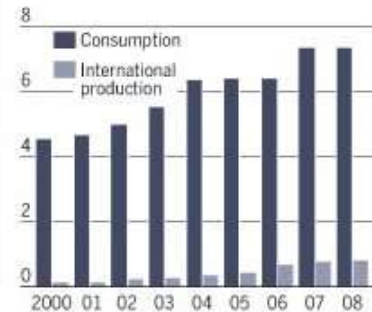


## Russia

Following high-level talks on closer co-operation (including Chinese premier Wen Jiabao, far left, and Russian Prime Minister Vladimir Putin, left). China has this year agreed \$25bn in loans with Russian oil groups Transneft and Rosneft in return for 300,000 b/d for the next 20 years. The extension of Russia's East Siberian Pacific Ocean pipeline, which would help China diversify its imports, is dogged by pricing disputes

## Overseas crude production to domestic consumption

Barrels per day (bn)



## M&A investment in oil and gas exploration and production overseas

2008  
\$3bn

2009  
\$9bn  
(estimate)

## Iran

China is helping Iran exploit its ageing oil fields

## Iraq

CNPC has struck a deal to develop the Rumaila field with BP, which could boost its production from about 1m to about 3m b/d, making it one of the world's three biggest fields

## Burma

China has convinced Burma to allow it to build a natural gas and oil pipeline through the country to enable it to circumvent the dangerous Straits of Malacca

## Sudan

The source of about 20 per cent of China's foreign oil and gas production. The country's brutal civil conflict has brought Chinese projects under attack, both literally and from western capitals



## Angola and Nigeria

Chinese oil companies have a foothold in Angola's prolific deep offshore fields, where they have partnered with western oil companies with more technical and managerial expertise. In Nigeria, where it has great ambitions, China has been far less successful as political rivalry has threatened to unravel deals agreed with the previous regime



## Brazil



China Development Bank and Sinopec this year signed an agreement with Petrobras, the oil company controlled by the government of President Luiz Inácio Lula da Silva (above right), for a \$10bn loan to help it develop huge off-shore oil deposits. In return China will get 100,000-160,000 b/d

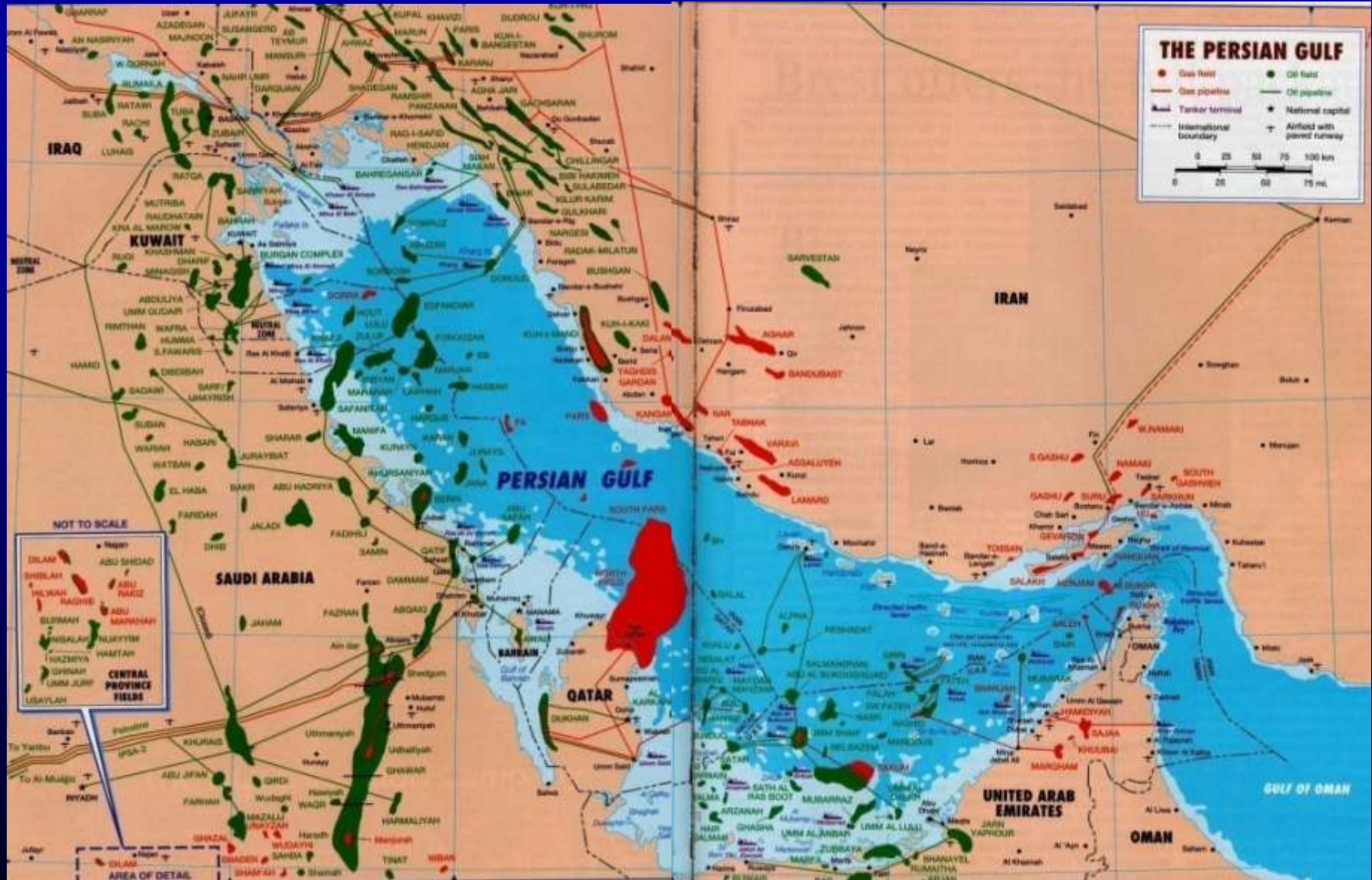
## Key

- Producing oil and/or gas
- Developing fields for production and infrastructure for transport
- Exploring for oil and/or gas
- Negotiating with companies and governments
- Pipelines Under construction



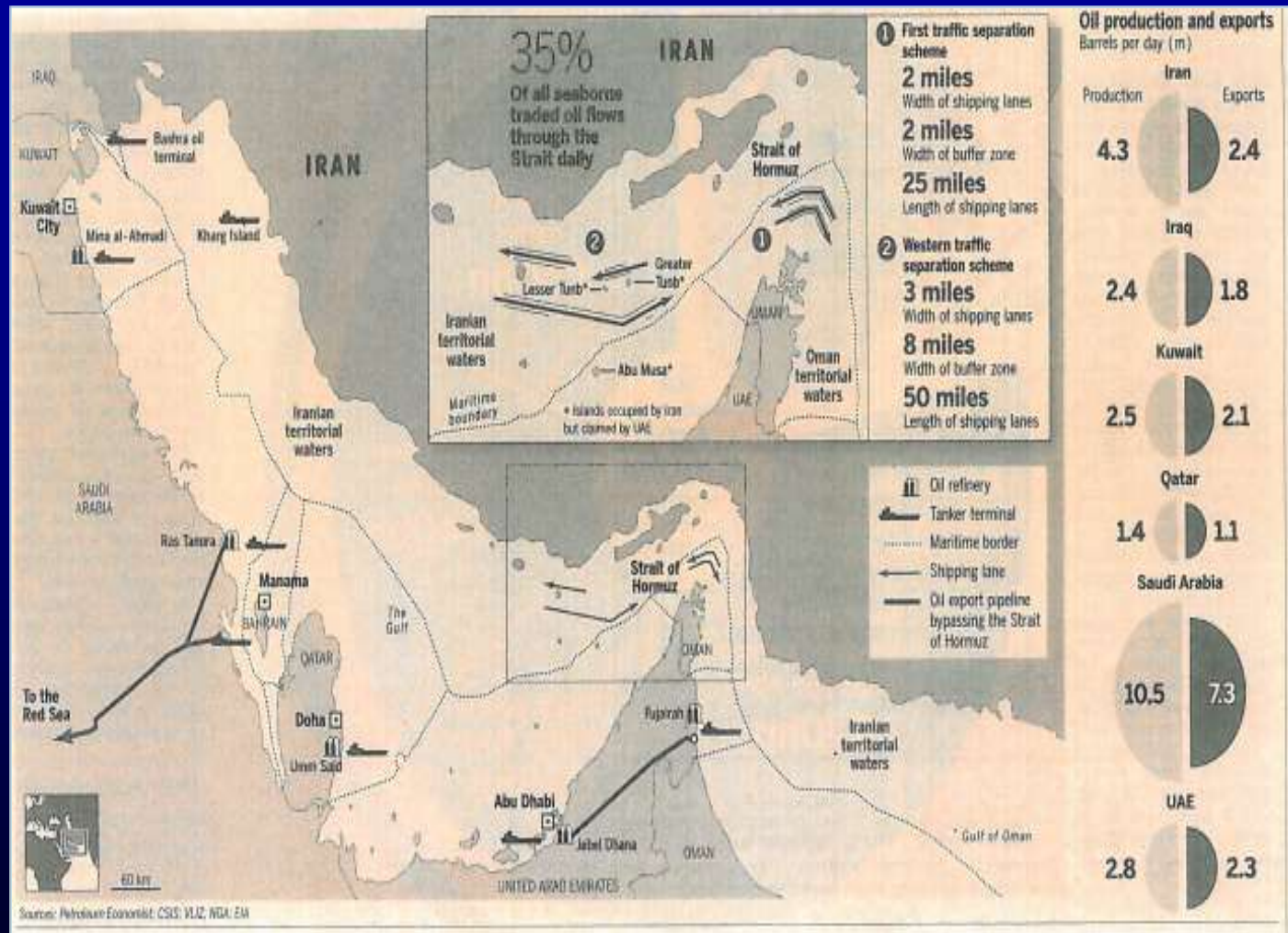


# CONSTRAINTS ON OIL AND GAS FLOW FROM MIDDLE EAST



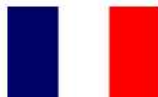
Source: 21st World Upstream Conference Organizer Global Pacific & Partners

# THE STRAIT of ORMUZ: DANGEROUS BOTTLENECK for the WORLD OIL MARKET



Fonte: FT, 19 Jan 2012





## Western Navies dedicated to protecting vital oil supply routes are overstretched



**KEY SHIPPING LANE FOR OIL  
IN AND OUT OF THE MEDITERRANEAN  
- THE OLD KEY BRITISH/FRENCH INTERESTS**



**KEY SHIPPING LANE FOR OIL  
IN AND OUT OF THE GULF  
- THE OLD KEY BRITISH POSSESSIONS**

Source: 21st World Upstream Conference Organizer Global Pacific & Partners



## SAUDI ARABIA: Americans on the back-foot, and its erstwhile ally totally dismayed...



Prince Turki al-Faisal

*“Unless problems facing Saudi Arabia are solved, what happened and is still happening in some Arab countries, including Bahrain, could spread to Saudi Arabia, even worse”*

Prince Talal Bin Abdul Aziz of the Saudi Royal family, to the BBC in **February 2011**

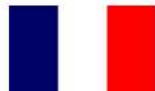
*“The 'special relationship' between Saudi Arabia and the United States would increasingly be seen as toxic by the vast majority of Arabs and Muslims, who demand justice for the Palestinian people”*

Prince Turki al-Faisal, former Saudi ambassador to Washington, in the NY Times on **September 11th**

Source: Presstv.ir, New York Times, BBC

Source: 21st World Upstream Conference Organizer Global Pacific & Partners





## Turkish navy poised to fill the vacuum in the Eastern Mediterranean



Source: 21st World Upstream Conference Organizer Global Pacific & Partners





## Military confrontation in the Eastern Mediterranean could lead to far more serious consequences...



**EXPECT A BIG ARMS RACE IN THE MIDDLE EAST,  
AS OTHER GULF BASED NATIONS SEEK TO DEFEND THEMSELVES**

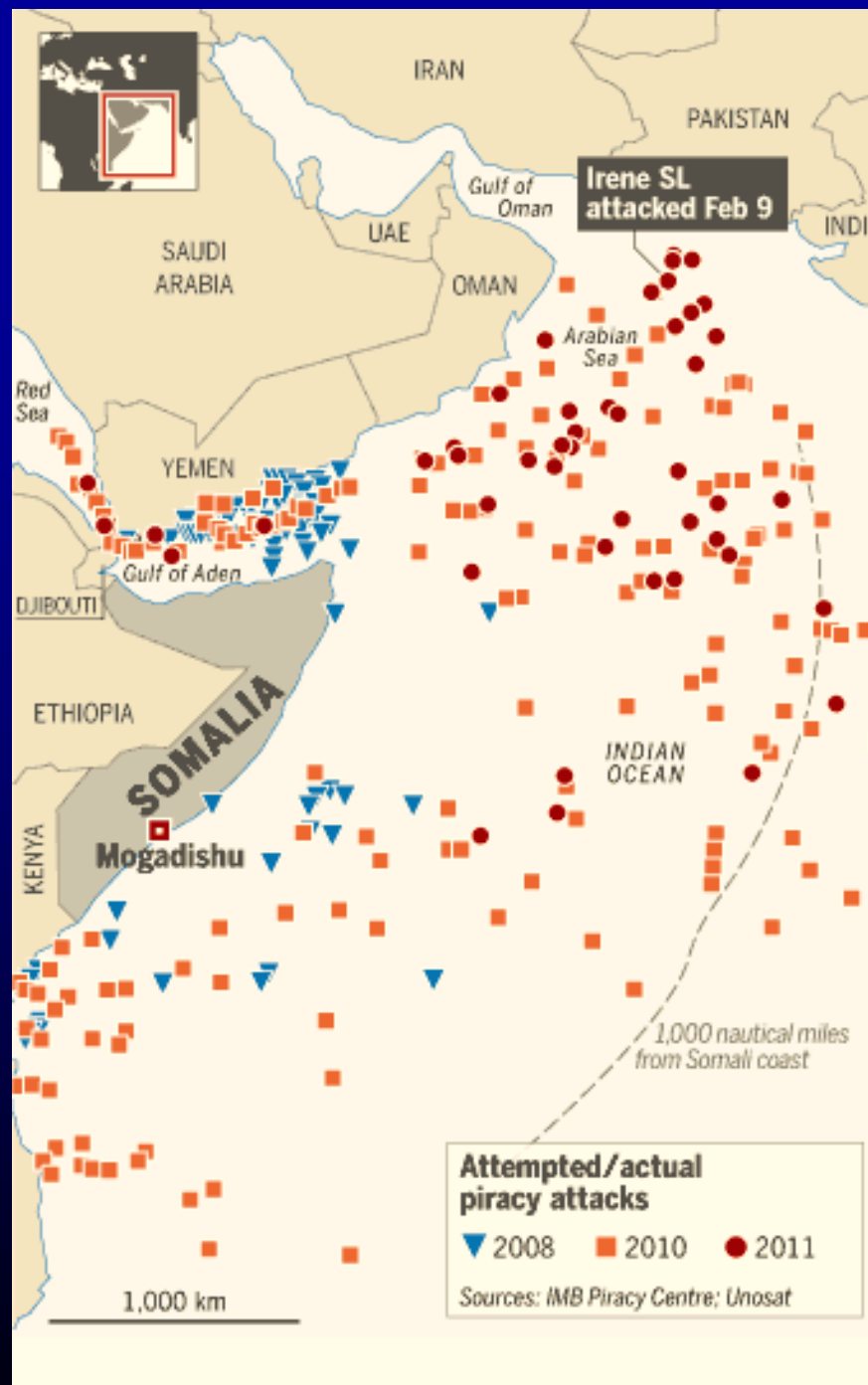
Source: AFP, Getty Images

Source: 21st World Upstream Conference Organizer Global Pacific & Partners

## ***Pirate Attack Saudi Super-Tank seized off Kenian Cost on 16th November 2008***



*Source: Reuters, November 2008*



# JAPAN'S ENERGY CRISIS A MATTER OF TRUST



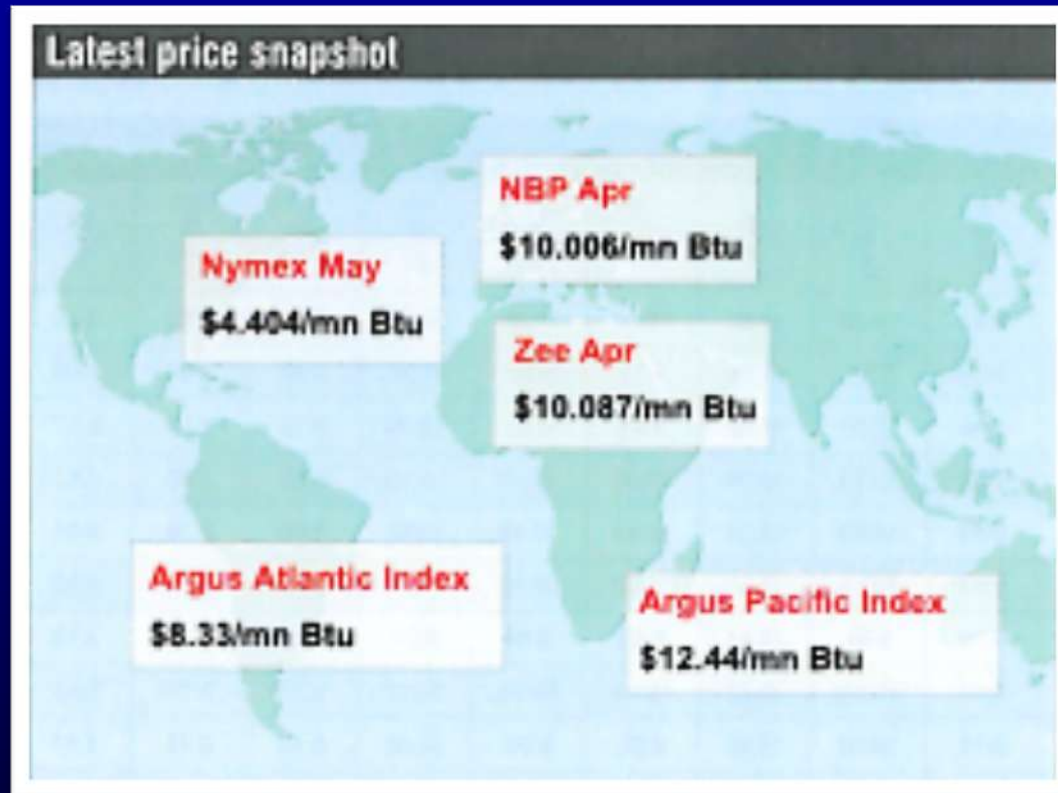
Source: *The Economist*, 25 June 2011



# ***JAPAN CRISIS: GAME CHANGER for GLOBAL LNG***

<b>FACTS</b>	<b>MARKET REPONSES</b>	<b>EFFECTS ON ENERGY MARKET</b>
<ul style="list-style-type: none"> <li>▪ Earthquake and Tsunami 11<sup>th</sup> March 2011</li> <li>▪ Power supply disrupted</li> <li>▪ Likely permanent loss of a significant portion of Japan's nuclear power generation capacity</li> <li>▪ Effects on world Energy Markets and specially LNG</li> <li>▪ This can be a game-changer with Japan needs of ADDITIONAL LNG volumes of 4 to 8 million tons/year</li> <li>▪ Japan's LNG regasification facilities have come through the Earthquake and Tsunami relatively safe</li> <li>▪ Severe damage to power infrastructures: 11% of Japan's total generating capacity taken out and some nuclear capacity out on a permanent basis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Russia, Indonesia and Qatar have all been quick to offer LNG cargoes to help Japan restore and maintain power supplies</li> <li>▪ Uncontracted LNG supply (27 million tons/year) should benefit from this strong market environment</li> <li>▪ Russia Far East SAKHALIN-3 gas project accelerated</li> <li>▪ Flexibility of LNG market proved additional competitive advantage</li> </ul>	<ul style="list-style-type: none"> <li>▪ LNG prices moved up (from 9 US\$/MBTU to more than 12 US\$/MBTU in Asia/Pacific market)</li> <li>▪ This dynamic also lifted benchmark gas price in Europe</li> <li>▪ Europe spot LNG has played a crucial swing supply role and displaced more expensive pipeline gas</li> <li>▪ One effect of Japanese crisis might be to push European gas market currently split 50-50 between oil indexed and non-oil indexed pricing back towards oil indexation</li> </ul>

# *LNG Prices move up on Japan Crisis (March 2011)*



Fonte: Argus Daily LNG Prices, News & Analysis, 31<sup>st</sup> March 2011

# WHAT IS CHANGING IN THE WORLD ENERGY MARKET

## CONCLUSIONS

### SHIFT OF POWER IN FAVOUR OF NOC'S

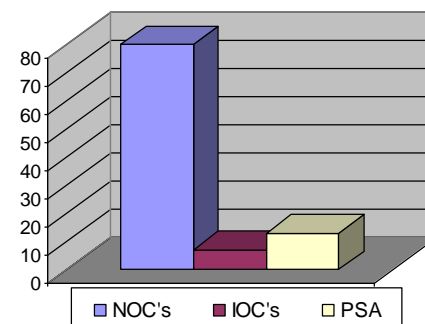
### LOSS OF POWER OF IOC'S (direct access to world oil reserves)

## EVIDENCE

2000-2005 NOC Acquisition deals



2005 - DIRECT ACCESS TO WORLD OIL RESERVES



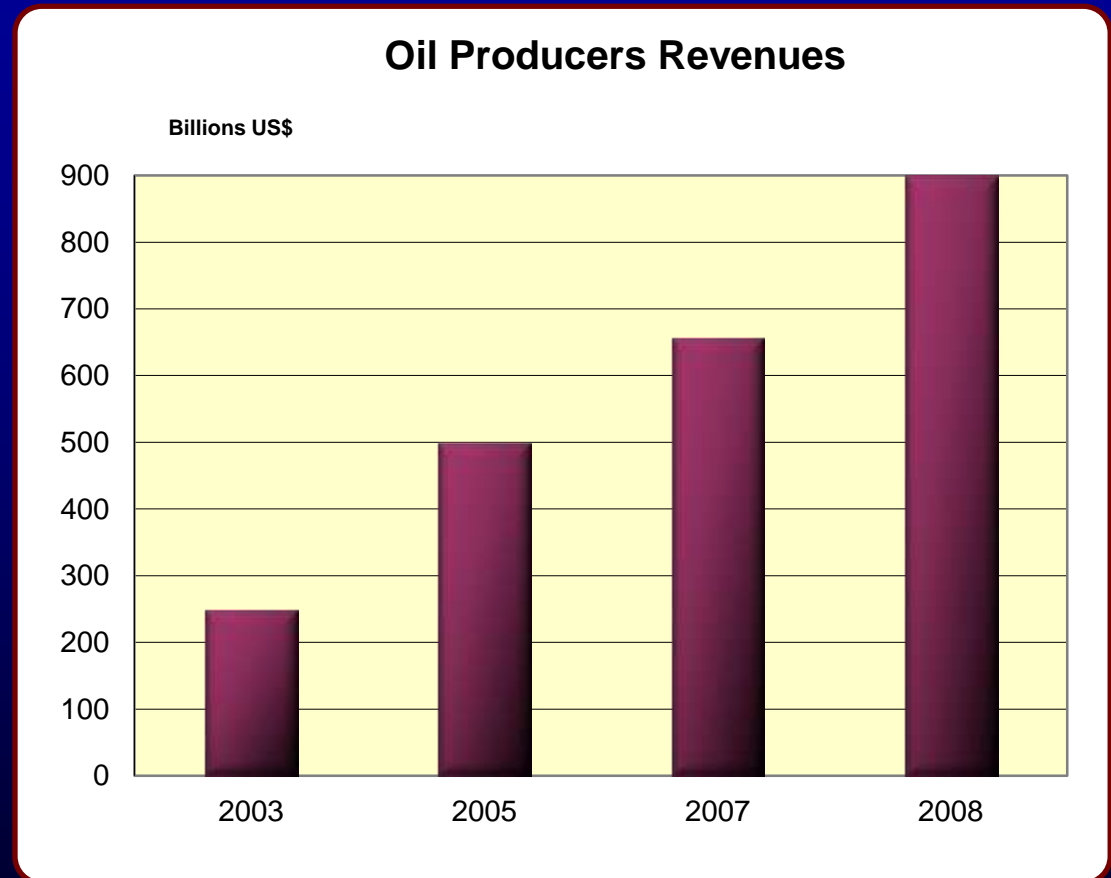
# WHAT IS CHANGING IN THE WORLD ENERGY MARKET

## CONCLUSIONS

### STRONG INCREASE OF FINANCIAL POWER OF OIL-EXPORTING COUNTRIES

- Revenues doubled in 3 years

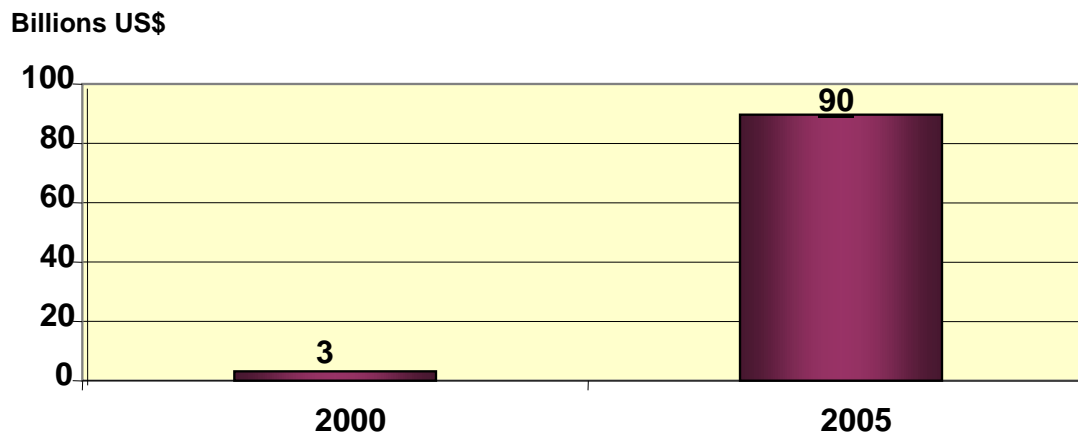
## EVIDENCE





# WHAT IS CHANGING IN THE WORLD ENERGY MARKET

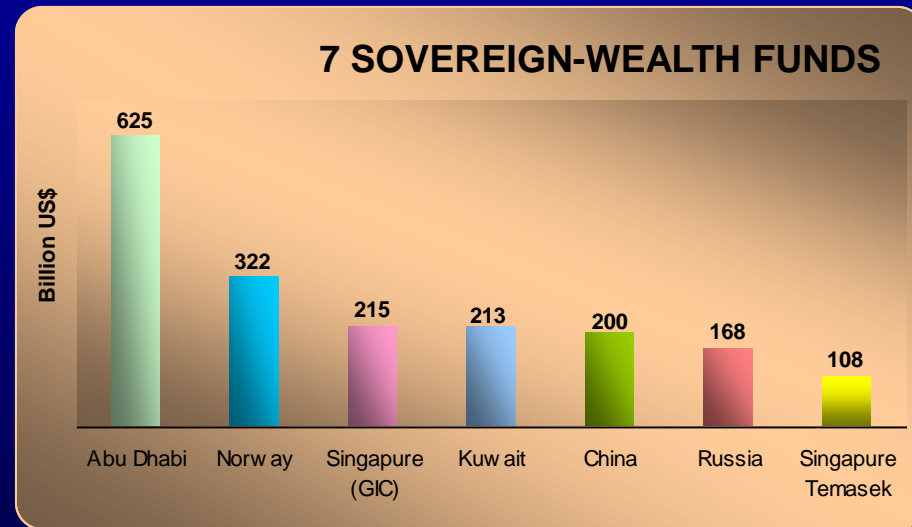
## HEDGE FUND's INVESTMENTS IN ENERGY MARKETS: (increased 30 times/5 years)



Source: IEA

# SOVEREIGN-WEALTH FUNDS

- ◆ Globalization: assumed dominance of market economy and private entities
- ◆ Today some major players are STATE Sovereign Funds
- ◆ States: dominant role on the “Raw Materials”/Commodities” production
- ◆ Sovereign-Wealth Funds: control Assets amounting to more than 2 200 billion US\$

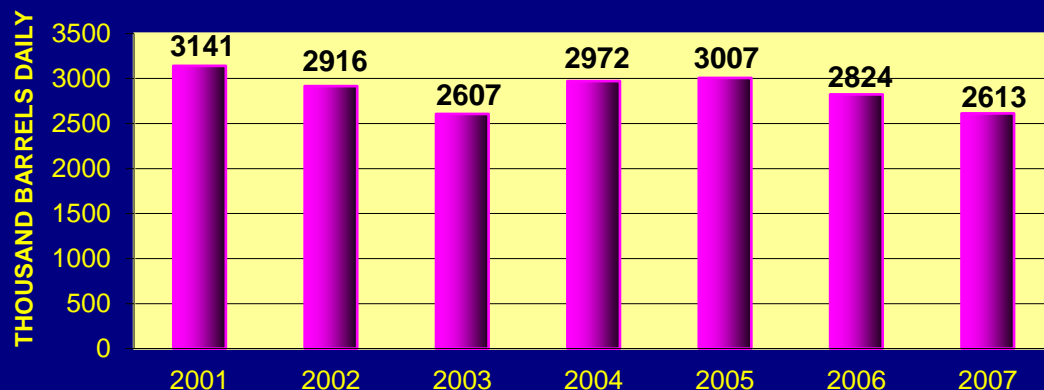


# WHAT IS CHANGING IN THE WORLD ENERGY MARKET

## Return to Nationalism on Resources

- Russia and Yukos affair
- Bolivia nationalization
- Venezuela
- Ecuador

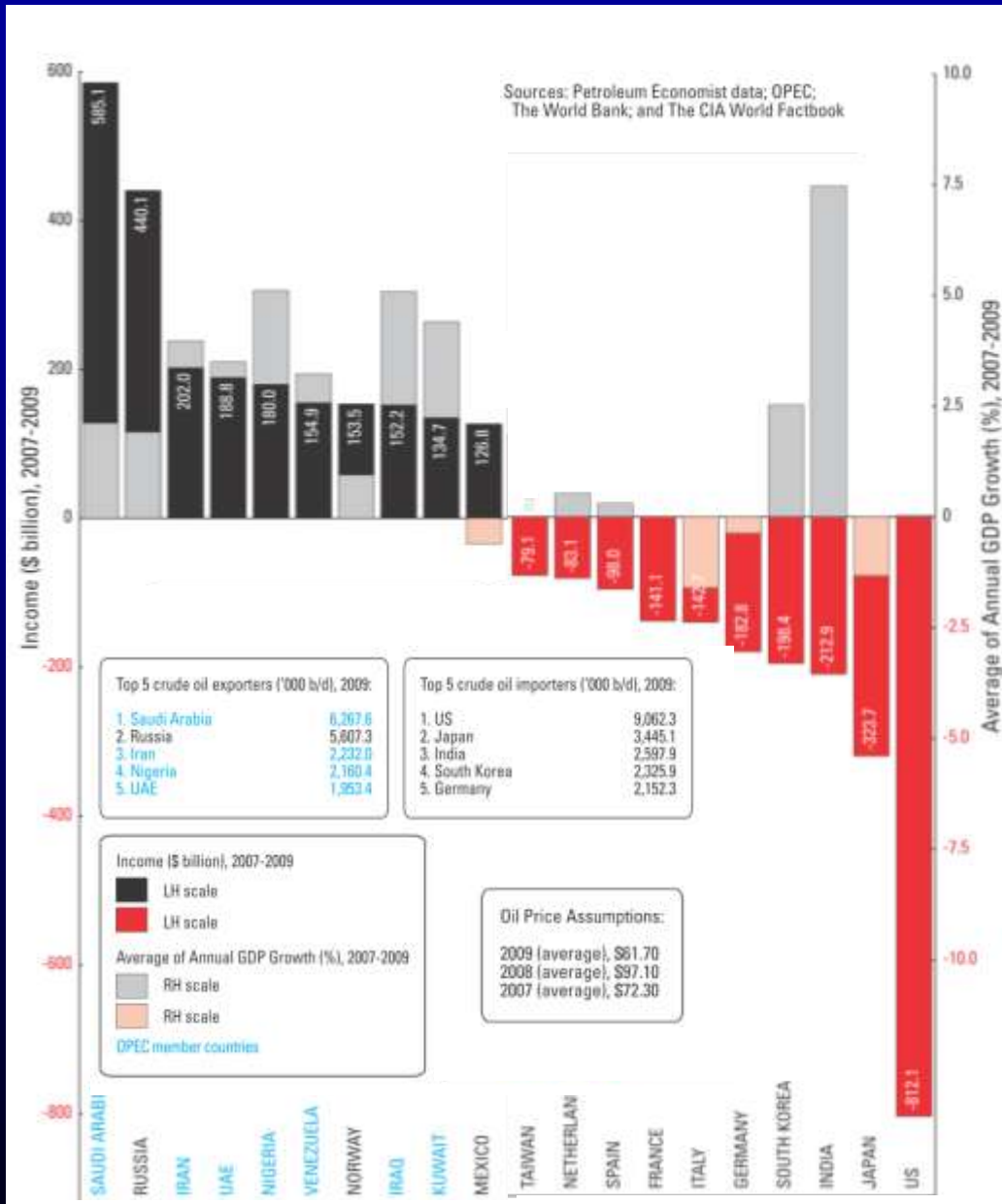
### VENEZUELA PRODUCTION



### EFFECTS:

- Decline in production (20% in 3 years)
- Delay of key projects
- Increase of bureaucracy/corruption
- Non-competitive environment is a reason for inefficiency

# **PETRO-DOLLARS: *who's rich who's not***



### Citizenship Issue

- Mobilization
- Change of behaviour
- Global economy vs local governance
- Multilateral institutions
- Restructuring of world economy

### **CLIMATIC CHANGE**

- Is an issue of Security and survival

## **THE CLIMATIC THREAT**

- Concentration of CO<sub>2</sub> in atmosphere before the Industrial Revolution : 280 ppm
- Current concentration : 400 ppm
- Projection at the end of the XXI Century: 560 ppm ("Business as usual")
- Increase of Earth temperature: 3 – 4° C
- Instability of life on Earth

### Need of action focused on polluter centers:

- Power stations
- Electricity System
- Transport System

Reduction of CO<sub>2</sub> Emissions  
to be successful needs to be  
linked to MARKET mechanisms

### NEED BUILD a Low-Carbon ECONOMY

- Till today action led to poor results
- New Action Plans

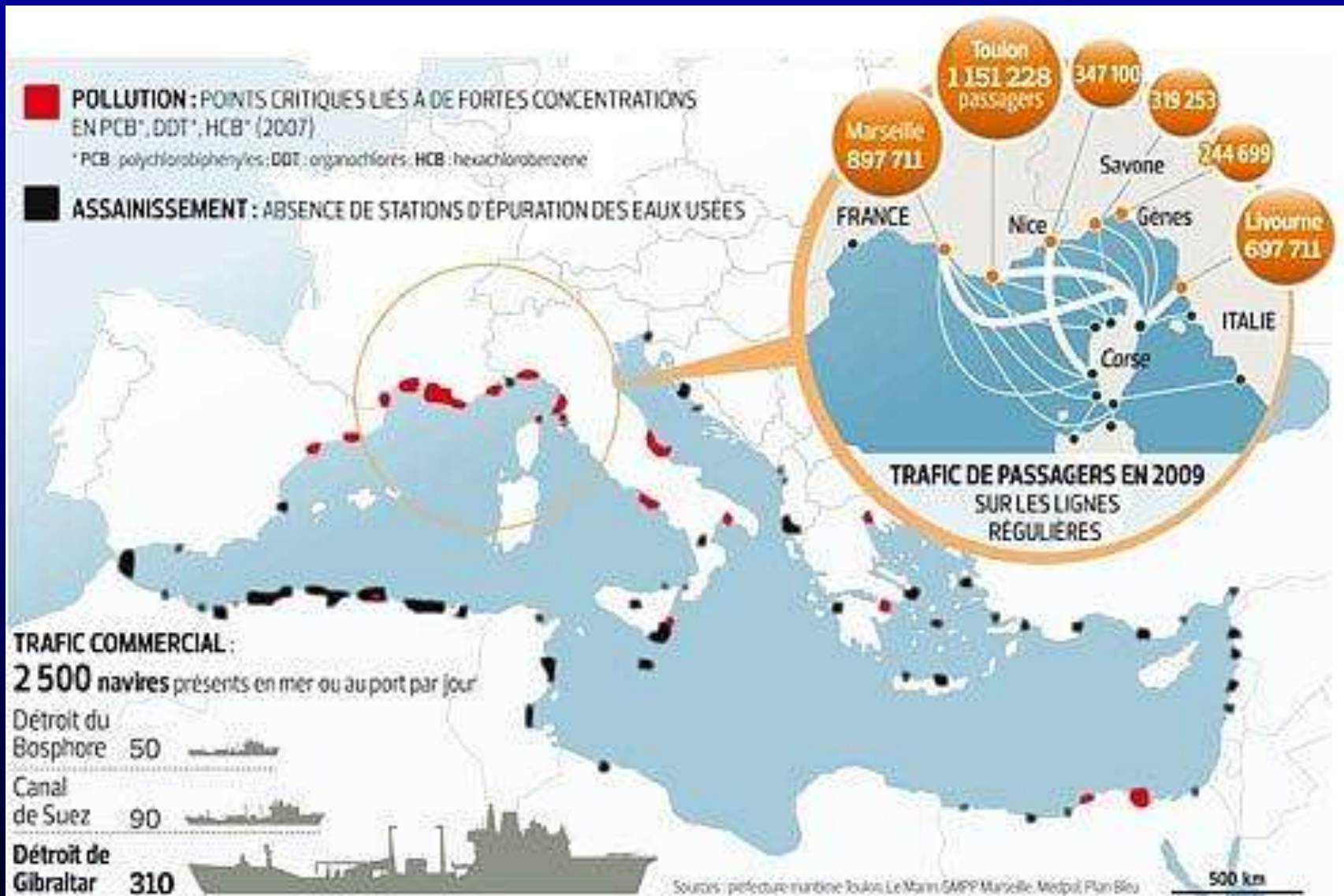
## ***CO<sub>2</sub> EMISSIONS***

<b>YEAR</b>	<b>CO<sub>2</sub> EMISSIONS (Million Tons)</b>	<b>RATE OF INCREASE (%)</b>
2000	22 000	
2030	38 000	<b>Transport 27%</b> <b>Power-Generation 48%</b>

## EVOLUTION of WORLD CAR FLEET FUEL CONSUMPTION

YEAR	Consumption (Million tons)
1985	950
2005	2500

# L'EXPLOITATION PÉTROLIÈRE S'INSTALLE EN MÉDITERRANÉE

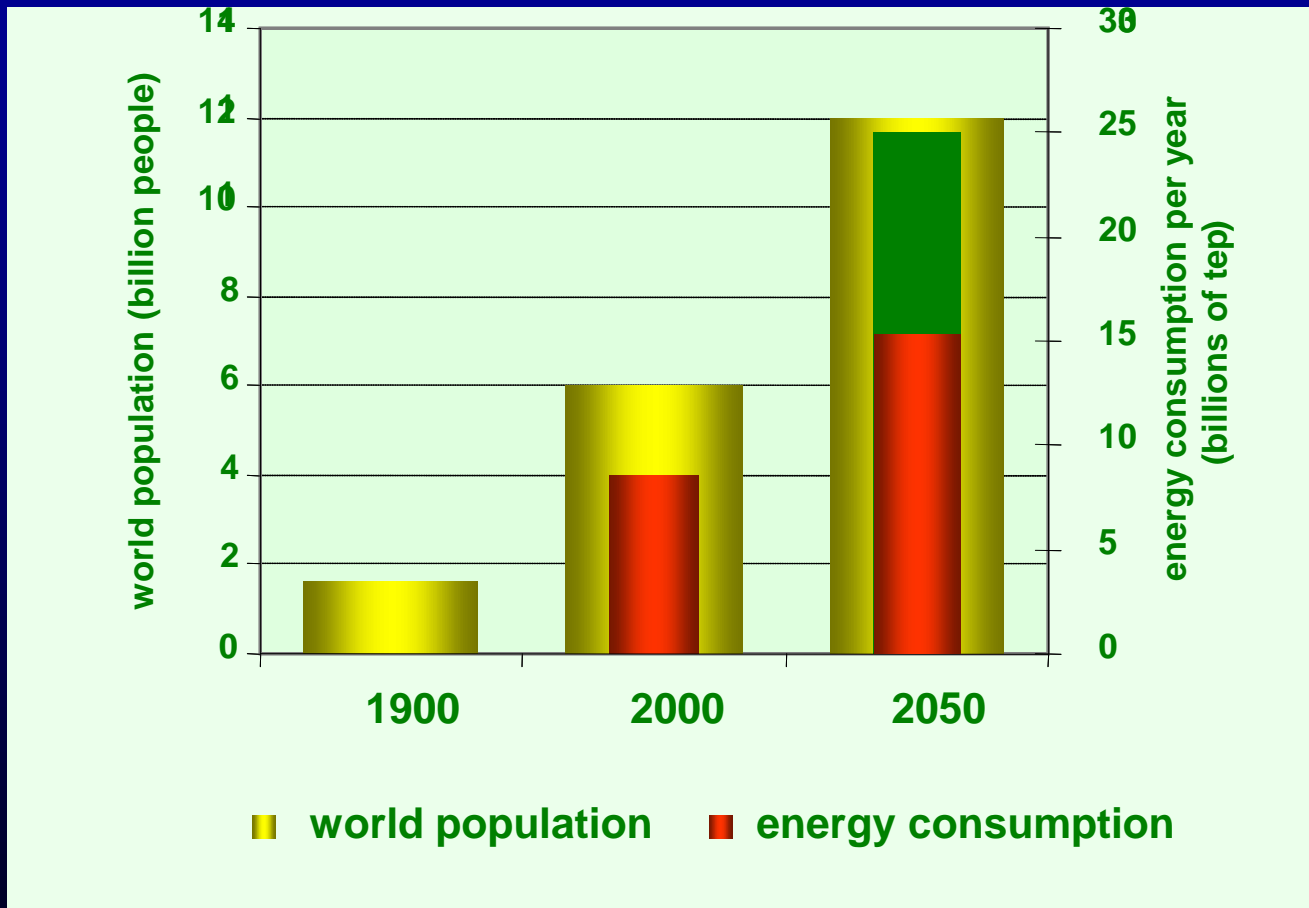


Le Figaro, 23 June 2011



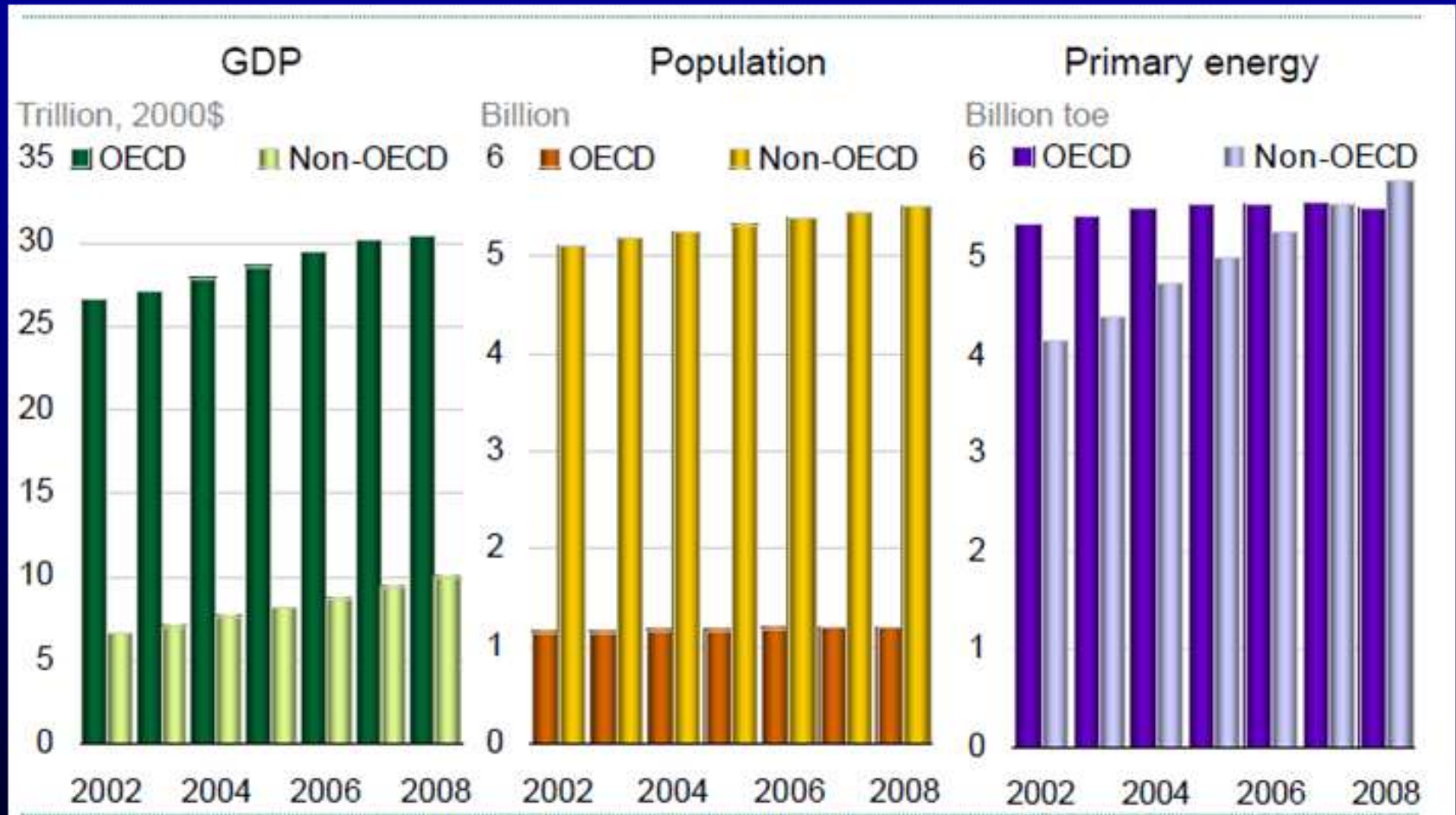
# THE DEMOGRAPHIC FACTOR

## Evolution of World Population and Consumption of Energy



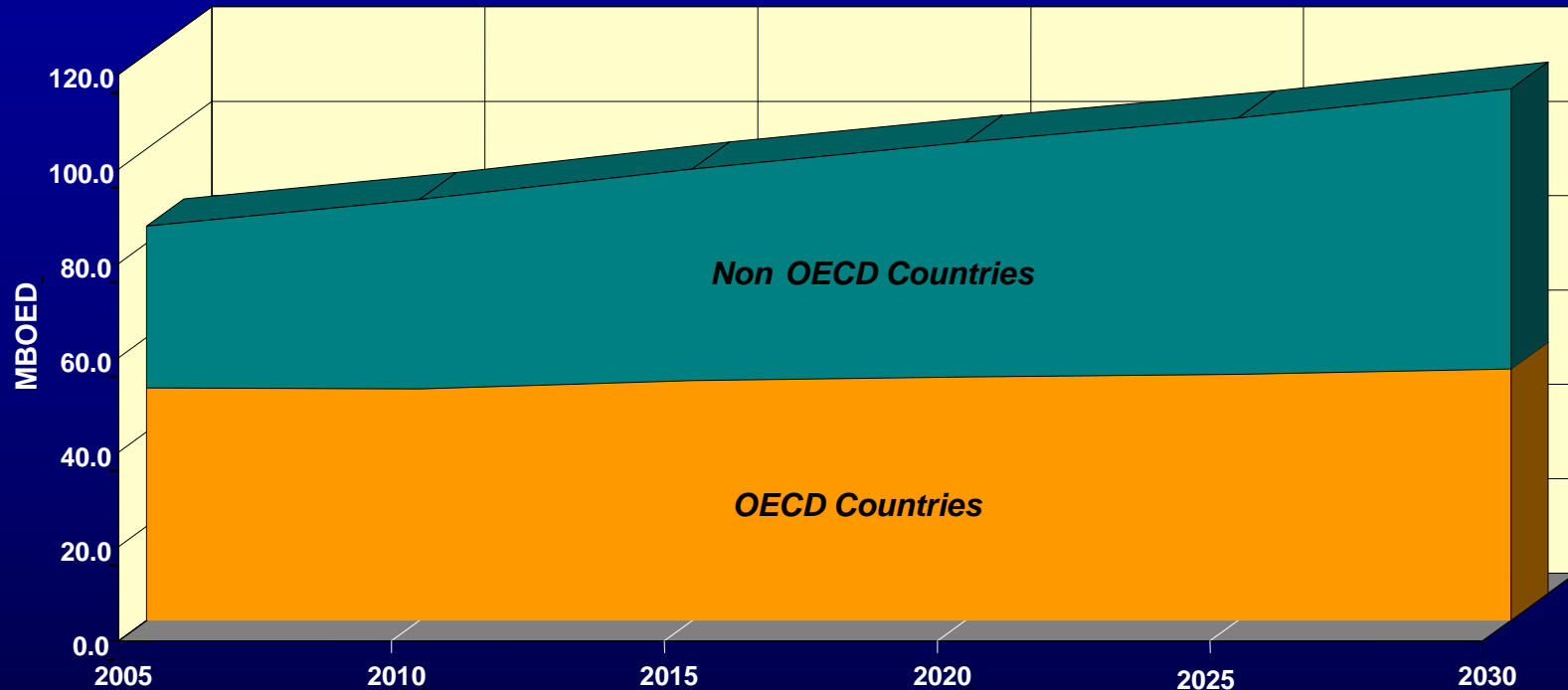
## **3. A EVOLUÇÃO dos PREÇOS do PETRÓLEO e CONSEQUÊNCIAS**

# Population, GDP and Primary Energy Consumption



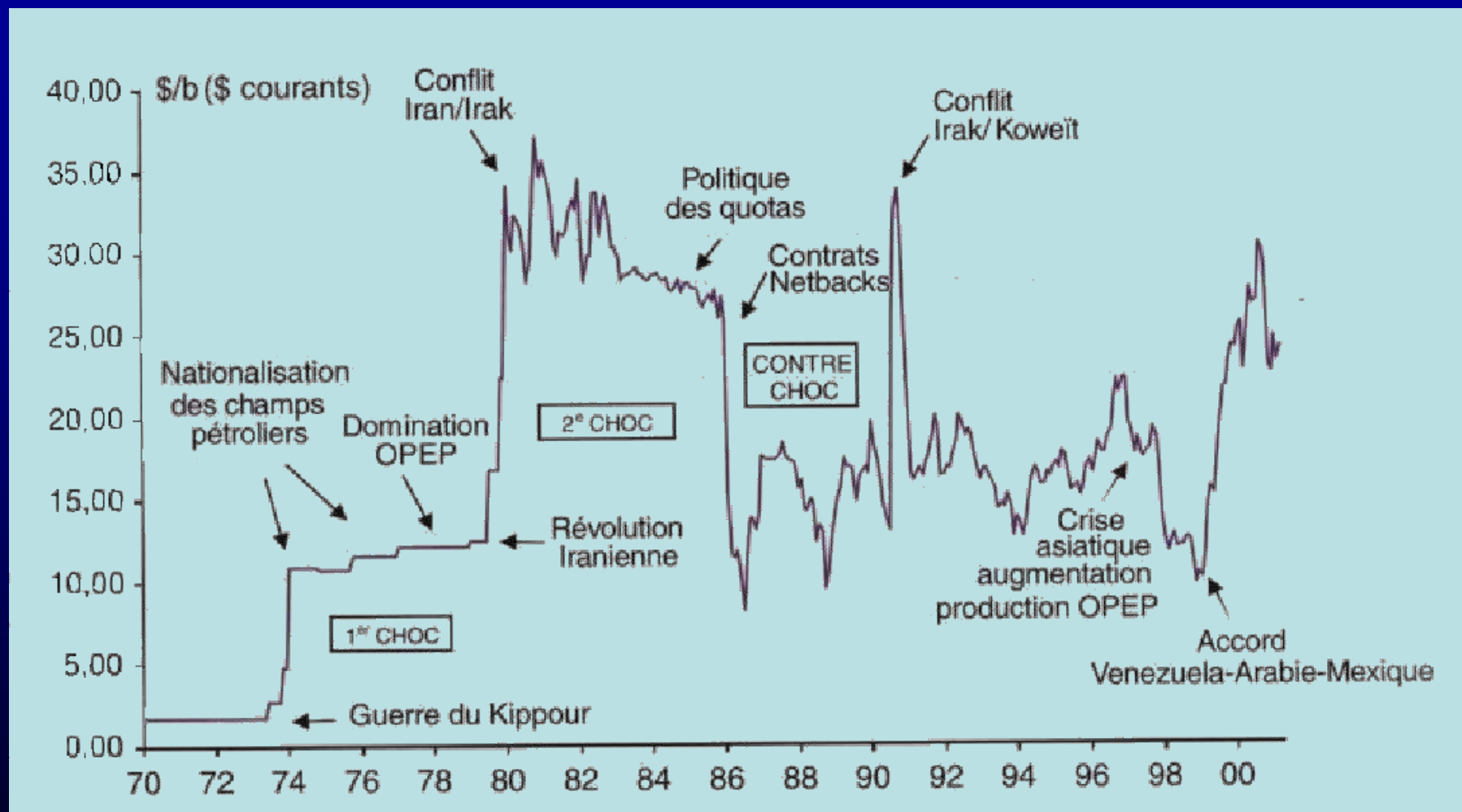
Source: BP Statistical Review of World Energy June 2009

## LONG TERM WORLD DEMAND



- **World marketed energy consumption is projected to increase by 50% from 2005 to 2030. Total energy demand in the non-OECD countries by 85%, compared with an increase of 19% in the OECD countries.**

# EVOLUTION OF THE OIL PRICES

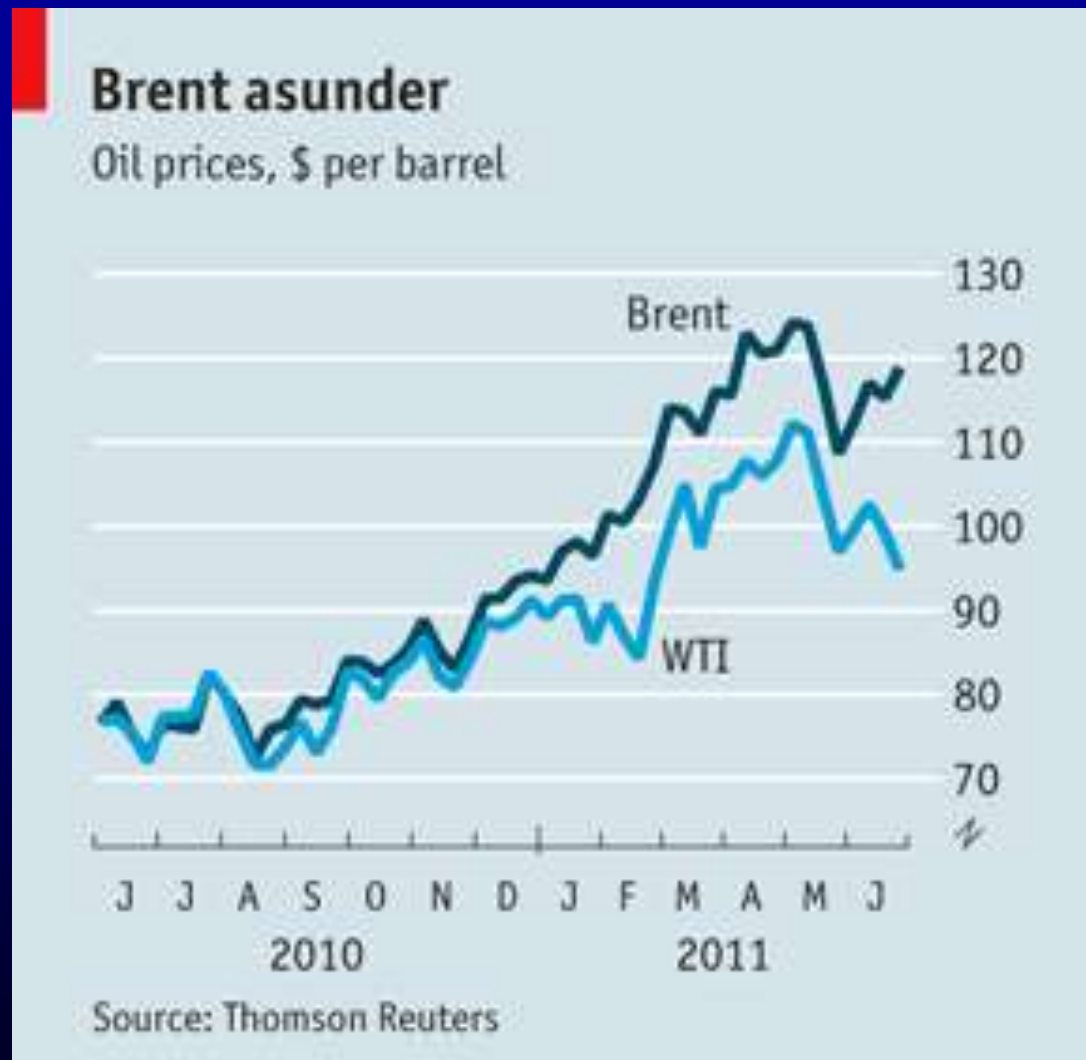


Source: IFP

# OIL BENCHMARKS

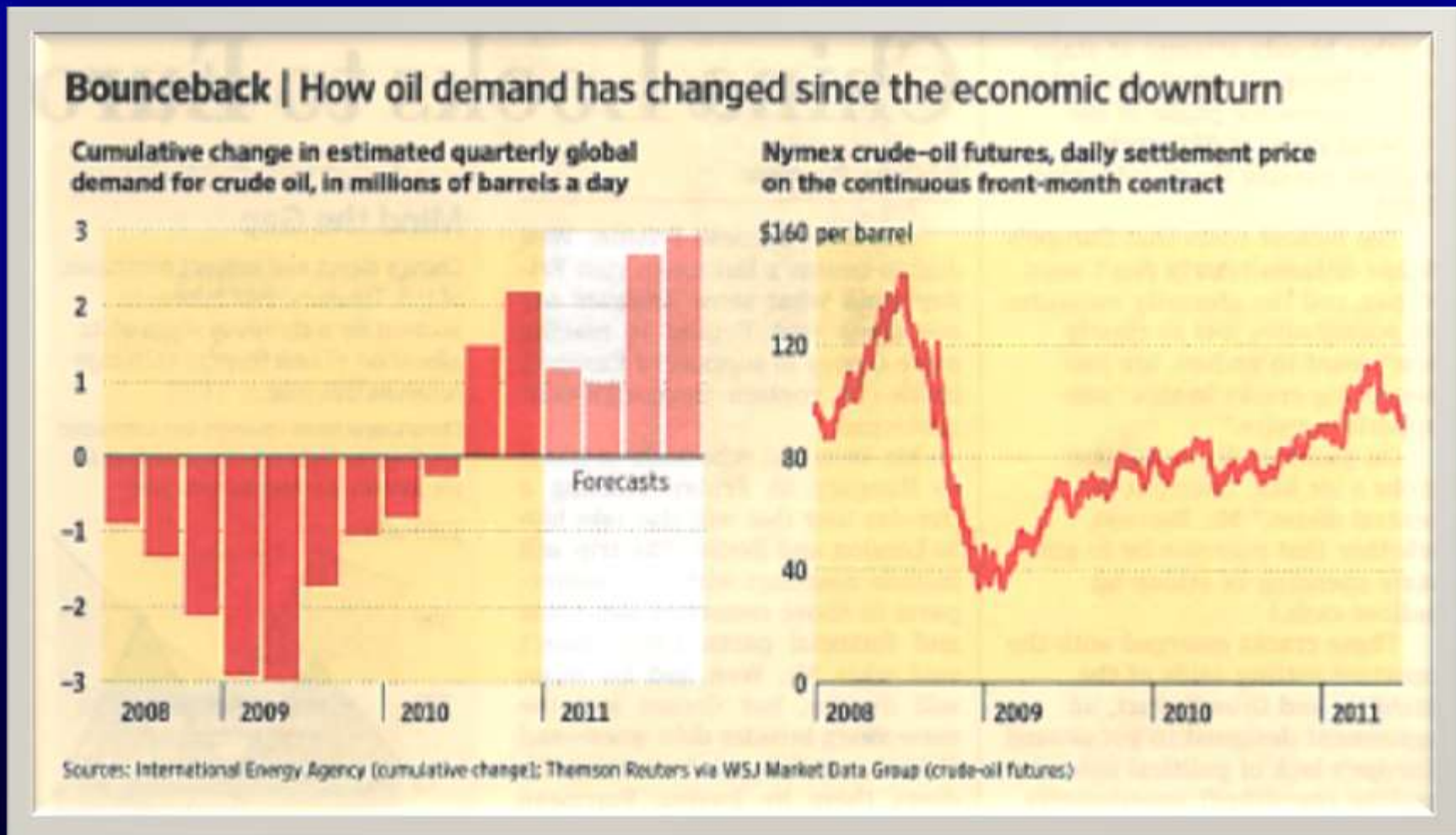
## WIDE-SPREAD CONFUSION

### WHAT EXACTLY, IS THE PRICE OF OIL?



Source: The Economist, 16th June 2011

# OIL PRICES FALL AS IEA OPENS RESERVES STOCK



Source: WSJ 24 June 2011



# CRUDE OIL AND PRODUCT PRICES ARE DESCRIBED BY FOUR TYPES OF FACTORS

## Trends

- Fundamental underlying factors
- Unidirectional
- Decades long-long term
- ✓ Economic growth
- ✓ Growth in oil demand

## Cycles

- Business cycle
- GDP fluctuation
- Investment cycles
- Years long-medium term
- ✓ Recessions
- ✓ Transient price elasticity

## Seasonality

- One year cycles
- ✓ Winter heating oil demand
- ✓ Summer driving season
- ✓ Hydropower availability

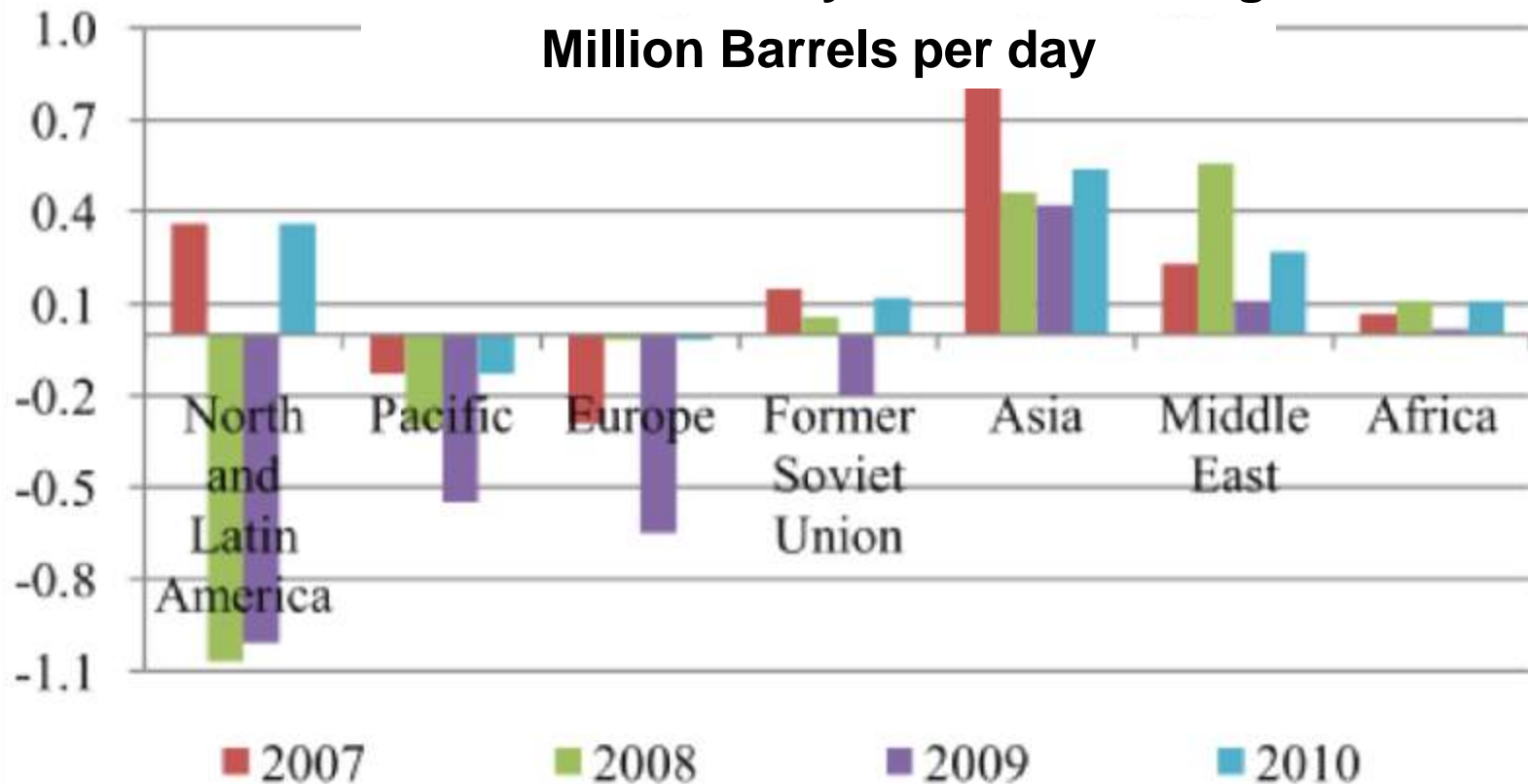
## Irregular Events

- Short term dislocations
- Duration can be from days to a few years
- ✓ Wars
- ✓ Political events
- ✓ Hurricanes
- ✓ Refinery outages
- ✓ Labor strikes

What type of factor is affecting prices at any point in time may not be clear

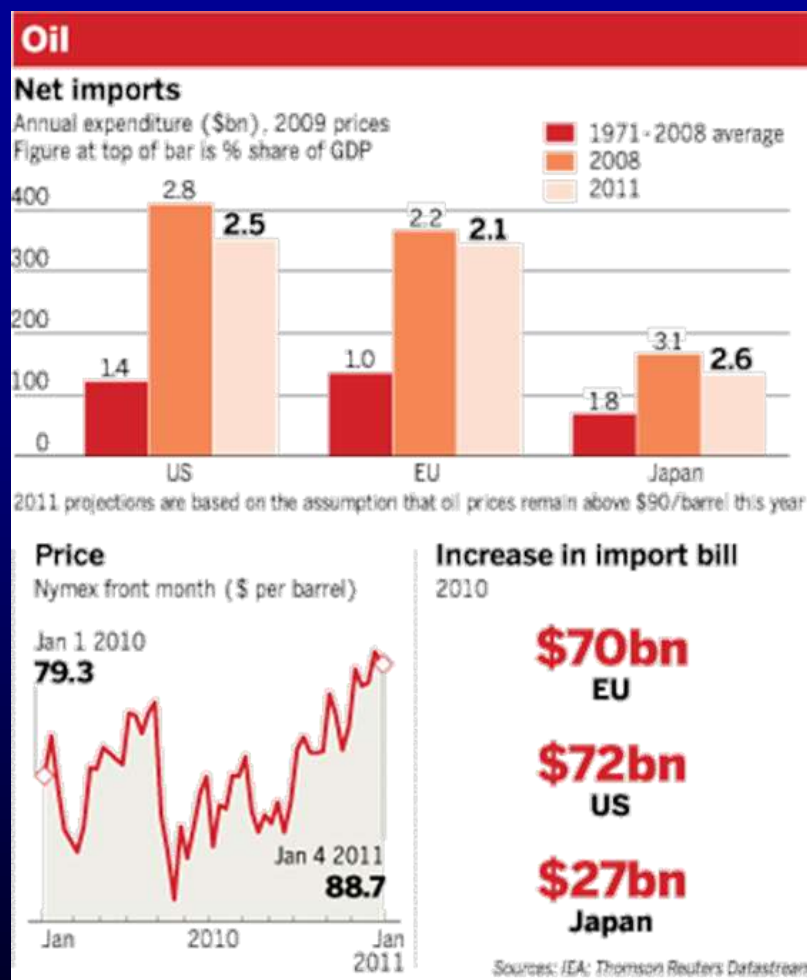
# OIL DEMAND

**Incremental Oil demand by selected Oil Regions**  
**Million Barrels per day**



Source: Oil Market Report, International Energy Agency, 10 September 2009

# Rising Oil price threatens fragile recovery



WHY CURRENT HIGH OIL PRICES	
FACTORS	EVIDENCE
Tight Supply/Demand Balance	<ul style="list-style-type: none"> <li>• Continuous trend of high prices.</li> <li>• OPEC's abandonment of price range.</li> </ul>
Erosion of OPEC Extra-Capacity	<ul style="list-style-type: none"> <li>• Inability of OPEC to control the prices.</li> <li>• Inability to respond to world demand.</li> </ul>
Change in World Pattern Demand	<ul style="list-style-type: none"> <li>• No seasonal effects in 2004/2005</li> <li>• Fastest growth in demand in China/India</li> <li>• High consumption in USA.</li> </ul>
Lack of Investment in E&D Activities following 1998 Crisis	<ul style="list-style-type: none"> <li>• Inability of producing countries to respond to growing demand.</li> </ul>
Lack of Flexibility in Terms of Production Alternatives	<ul style="list-style-type: none"> <li>• Decline in production in North Sea and Alaska.</li> </ul>
Geopolitical Factor	<ul style="list-style-type: none"> <li>• Instability in Iraq, Venezuela and Nigeria.</li> <li>• Terrorist threats in Saudi Arabia, Qatar and Kuwait.</li> </ul>

***GEOPOLITICS OF MINERAL RESOURCES***  
***THE CONTROL OF STRATEGIC COMMODITIES:***  
***THE RARE-EARTH METALS CASE***

- Group of 17 elements used in applications such as:
  - High performing magnets
  - Light-emitting diodes
  - IPADS
  - Rechargeable batteries
  - Wind turbines
  - Electronic Industry of high precision
  - Catalytic converters
- China accounts for about 90% of global production



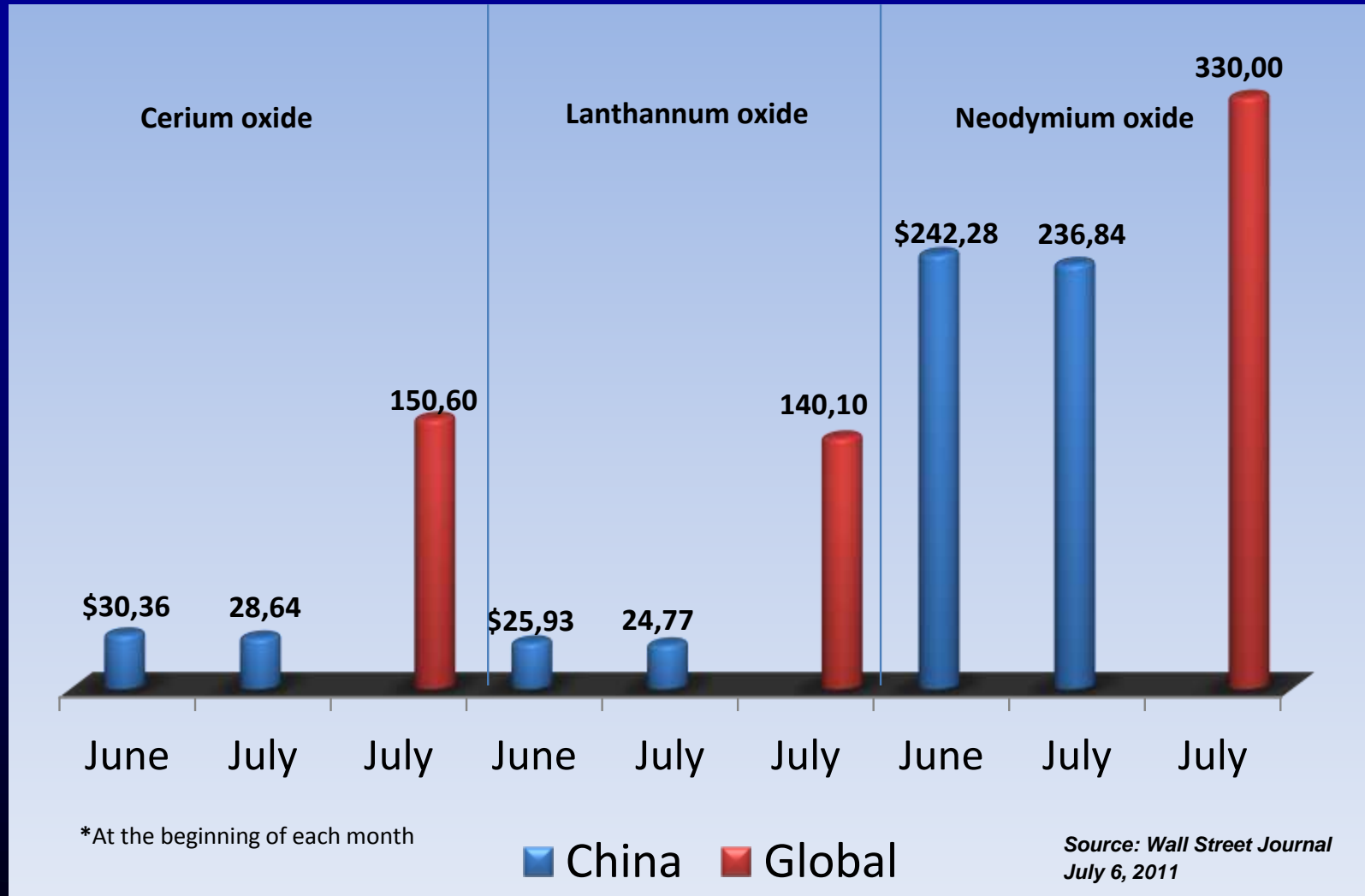
***GEOPOLITICS OF MINERAL RESOURCES***  
***THE CONTROL OF STRATEGIC COMMODITIES:***  
***THE RARE-EARTH METALS CASE (Cont.)***

- October 2010: crisis China/Japan
  - Chinese fishermen captured by Japan
  - Senkoku Islands (oil and gas)
  - China cutted exports of rare-earth elements to Japan
  - Japan capitulated in 24 hours
  
- Early July 2011 China cutted its second-half export quota by nearly 75%
  - Prices jumped significantly in the global market
  - Prices within China dropped indicating that supply and demand are coming into line in the country

# CHINA vs. WORLD TRADE ORGANIZATION

## RARE-EARTH PRICES IN CHINA AND GLOBAL

Prices of key rare-earth metals on Chinese domestic and global markets, in U.S. dollars per kilogram\*



## **CHINA vs. WORLD TRADE ORGANIZATION**

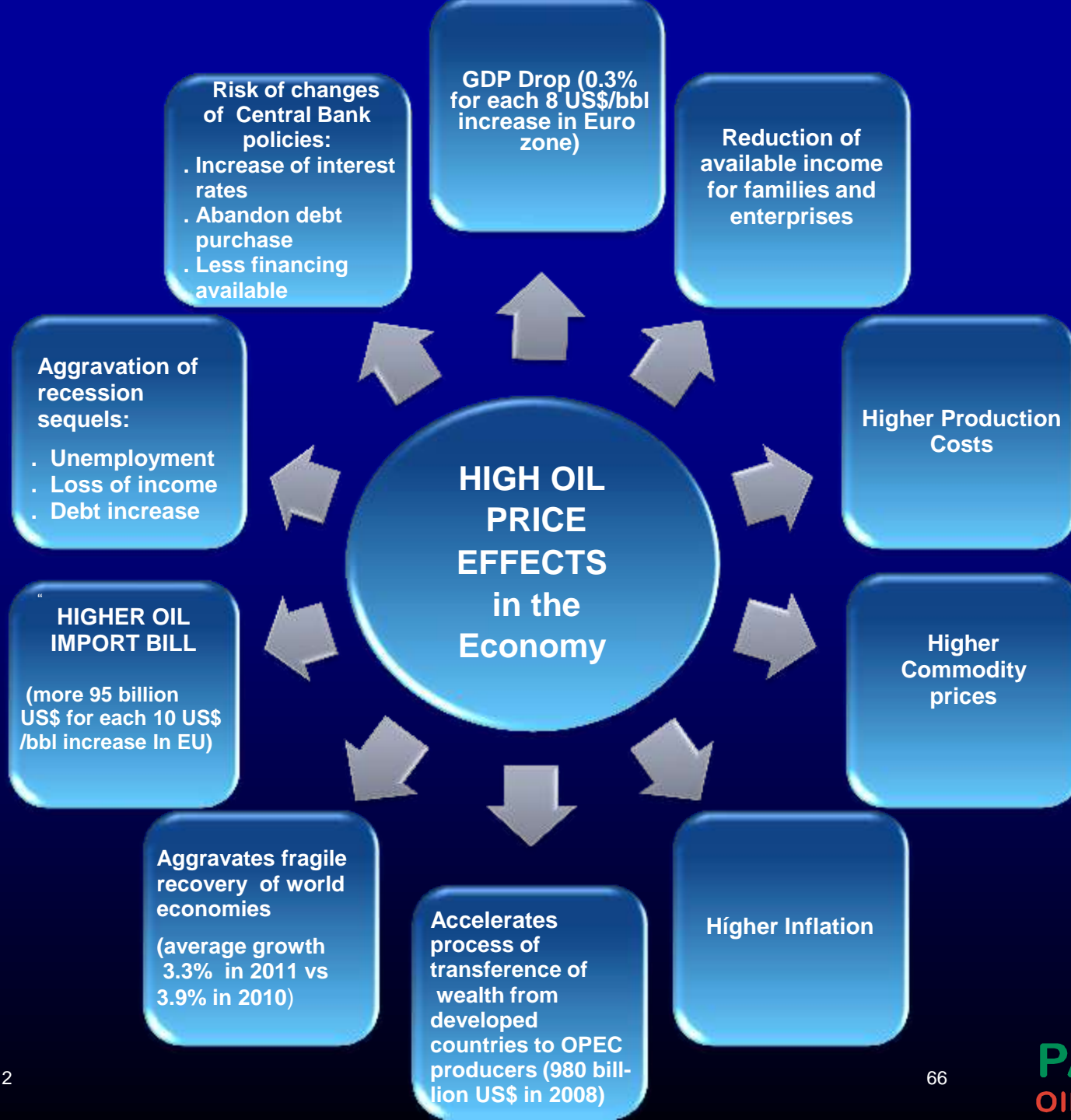
- China restricted exports of nine industrial raw materials in the first half of 2011
- Materials in question:
  - Bauxite
  - Coke
  - Fluorspar
  - Magnesium
  - Zinc
  - Manganese
  - Silicon Carbide
  - Silicon Metal
  - Yellow phosphorous

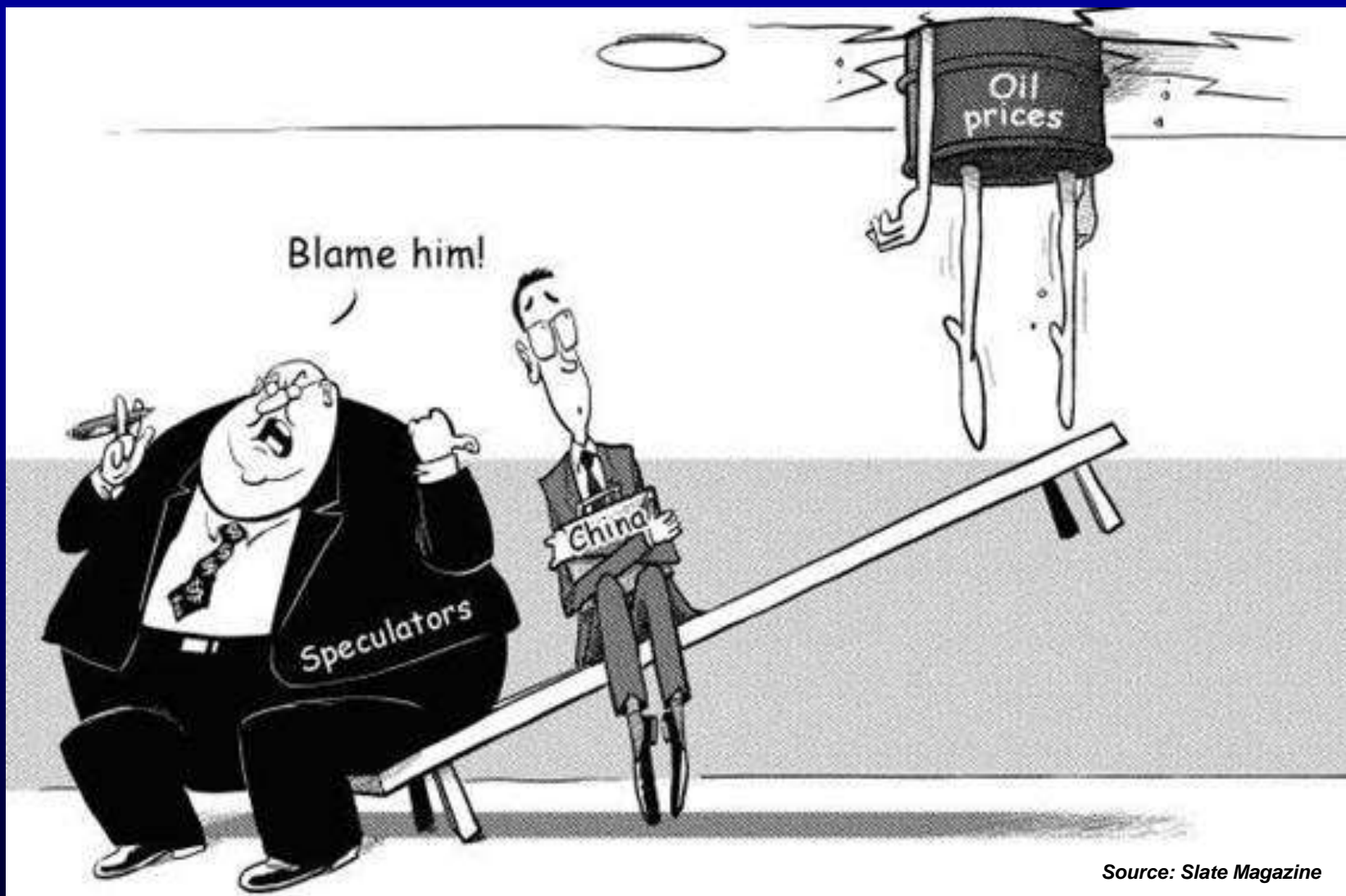
## **4. CENÁRIOS FUTUROS e o IMPACTO na ENERGIA**

# EVOLUTION OF OIL PRICES

SCENARIOS	PRICES	FEATURES	PROBABILITIES
Libya unrest kept oil prices high	100-120 USD/bbl	<ul style="list-style-type: none"> <li>▪ Unrest confined to Libya, no spills to Middle East supply</li> <li>▪ Disruption of Libya supply</li> <li>▪ Ongoing internal conflict</li> </ul>	HIGH
Libya unrest spills over the Arabian Peninsula	120-150 USD/bbl or more	<ul style="list-style-type: none"> <li>▪ More producing countries affected</li> <li>▪ Oil output drops</li> <li>▪ Further push on crude prices</li> <li>▪ Fragile economic recovery affected</li> <li>▪ Supply disruption and threat of contagious to other producing countries keep oil prices high and volatile in the short term</li> <li>▪ Further erosion of OPEC's spare capacity is likely to result in a new surge in oil prices</li> </ul>	MEDIUM
Libya unrest stopped, no spills over Arabian Peninsula, geopolitical risk downgraded, market back to normal and economic slowdown	80-90 USD/bbl	<ul style="list-style-type: none"> <li>▪ OPEC Extra-capacity still high</li> <li>▪ Demand is growing</li> <li>▪ Stocks at high level</li> <li>▪ Investment plans to produce at high level (11% increase in 2011)</li> <li>▪ Market driven by fundamentals, not by geopolitical fear</li> <li>▪ OPEC role crucial to stabilize prices</li> </ul>	MEDIUM/HIGH







Source: Slate Magazine

# OBRIGADO