



International  
Energy Agency

Secure • Sustainable • Together

# IEA Emergency Response Policies

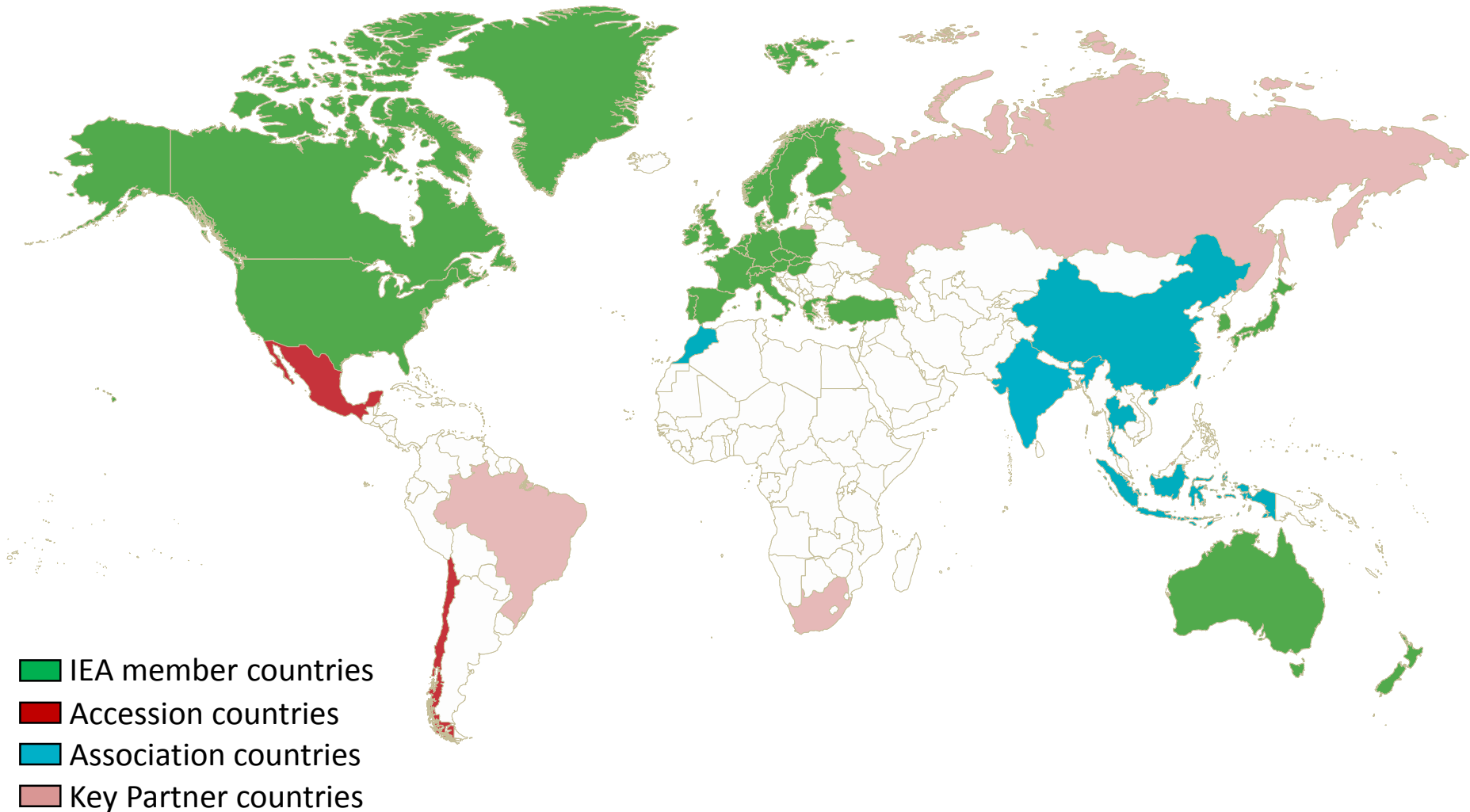
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The 3<sup>rd</sup> APEC Oil & Gas Security Network Forum  
29 & 30 June 2017, Irkutsk, Russia

[www.iea.org](http://www.iea.org)

# “Opening the Doors” of the IEA



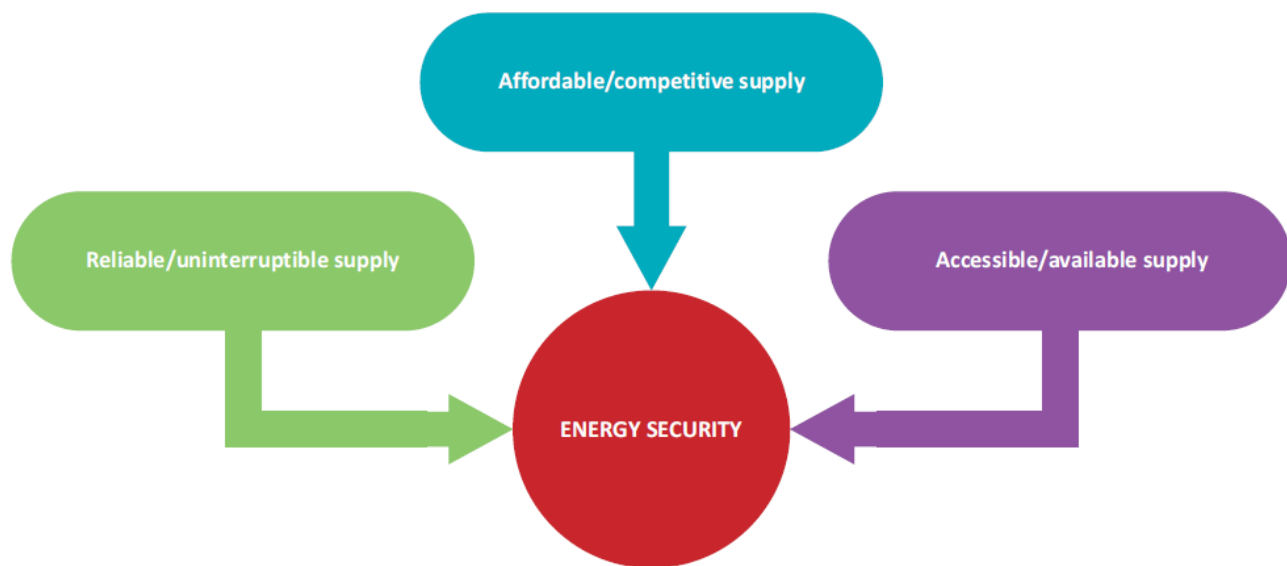
*This map is without prejudice to the status of sovereignty over any territory, to the delimitation of international frontiers and boundaries, and to the name of any territory, city or area.*

# Establishment of IEA

- **IEA established against backdrop of 1973-1974 oil crisis**
  - Avoiding competition for limited resources
  - Coordinated mechanisms for response
  - Safety net
- **Today, energy security as urgent as ever**
  - Oil security remains cornerstone
  - IEA move to a more comprehensive approach beyond oil

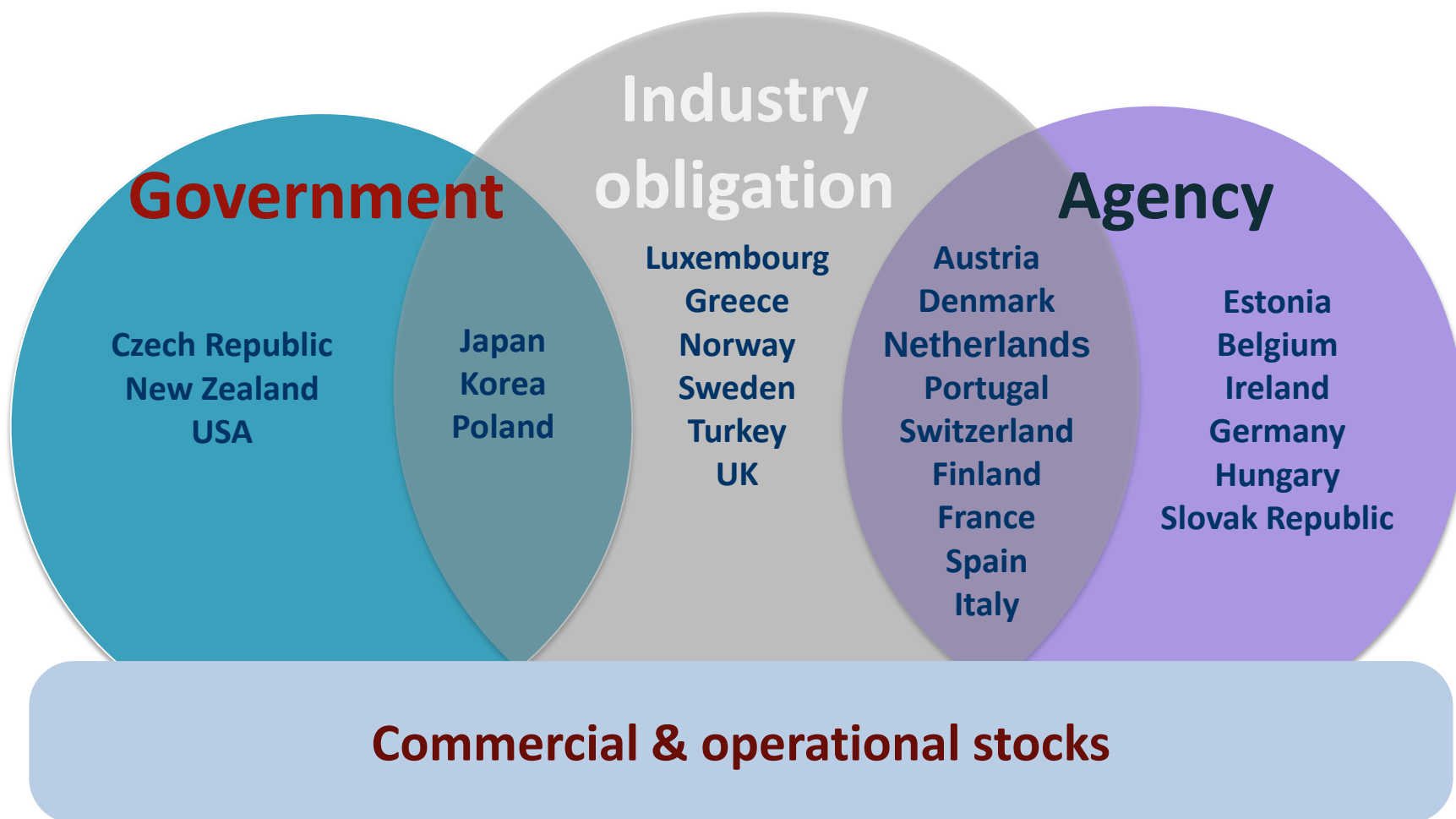
## **IEA definition of Energy Security**

*“Uninterrupted  
availability of  
energy sources at  
an affordable price”*



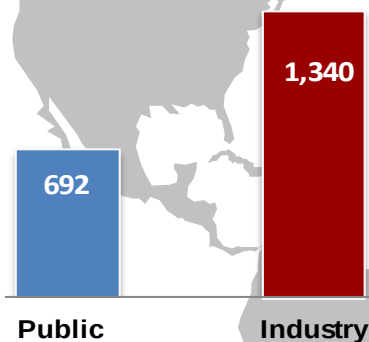
# Stockholding options

## Different stockholding structures in IEA countries

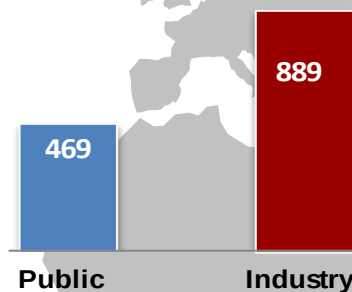


# Total IEA stocks

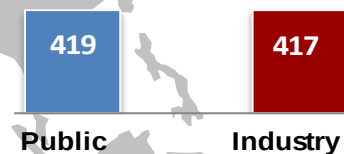
## IEA North America



## IEA Europe



## IEA Pacific



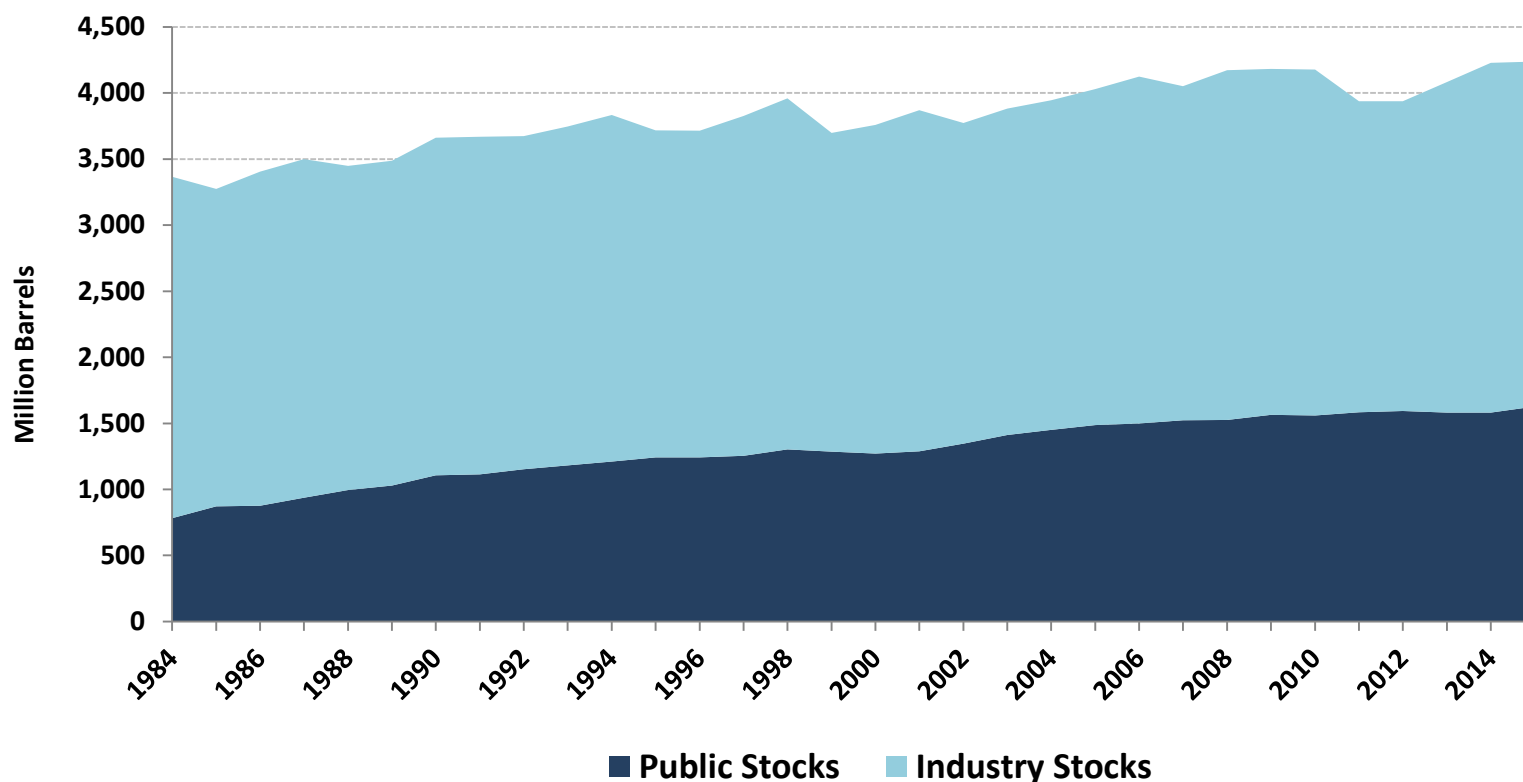
 Public  Industry

**Total IEA: 4.6 billion barrels**

Note: data as of end-March 2016; figures in million barrels

# Evolution of stockholding

- Increase in total stocks
- Increase in share of publicly held stocks



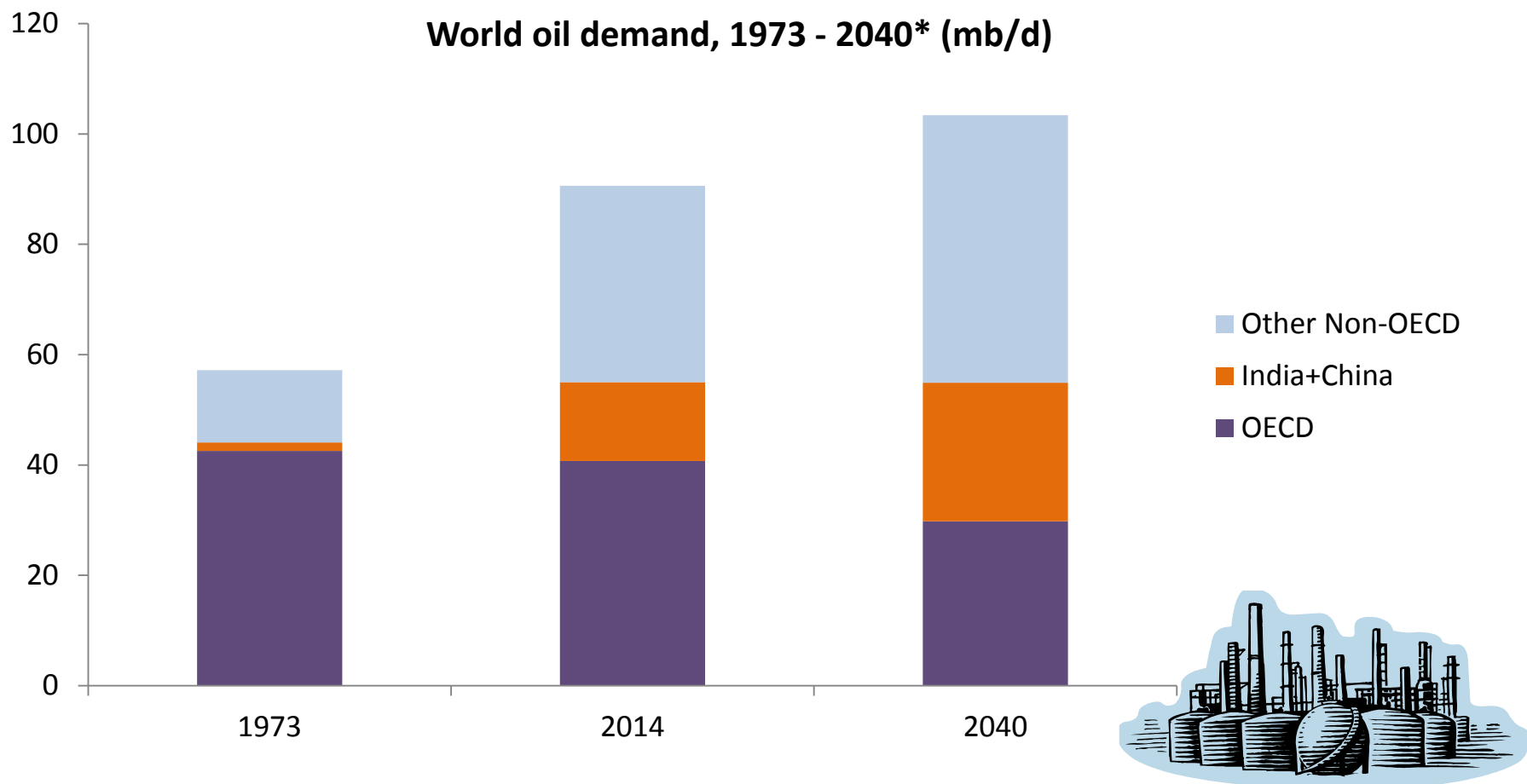
# Emergency stockholding

- **Powerful tool to mitigate the impact of an oil supply disruption on the economy**
  - Tangible, controllable & close to demand
  - Release can be implemented quickly & visibly to calm consumers & oil markets
  - Release via sales to free market promotes efficient allocation
  - Can provide time for orderly demand management & fuel switching in extended disruption

# Stock Release Mechanisms

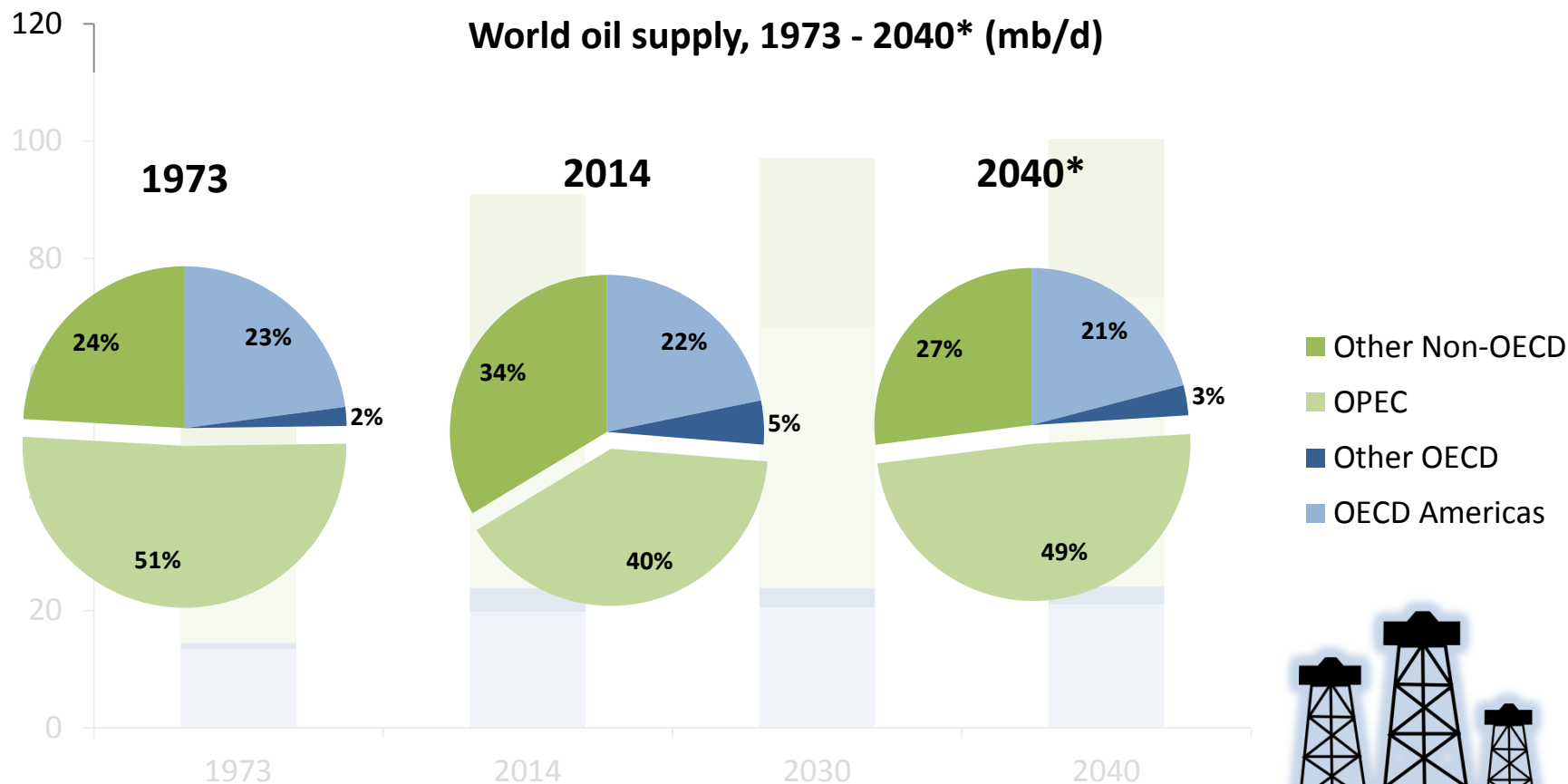
- **Release of stocks varies by system:**
  - Industry obligations reduction by % or specified number of days
    - Volumes made available through regular market channels
    - Possible exceptions: government can allocate to priority customers or set pricing
  - For government/agency stocks:
    - Tender bidding process
    - Sell at market price
    - Government sets price
    - Loan

# Growing importance of non-OECD

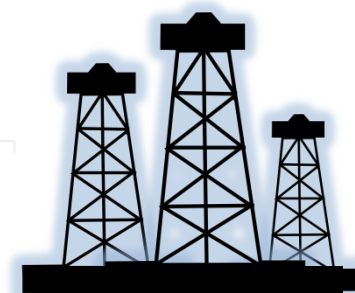


\* Based on World Energy Outlook 2015 "New Policies" Scenario

# Shifting supply



\* Based on World Energy Outlook 2015 "New Policies" Scenario



# Emergency Response Exercise

- **Emergency Response Exercise (ERE)**
  - biennial program to train participants in IEA emergency response policies & measures
  - open to delegates from IEA and partner countries upon invitation only
  - 70-80 participants
- **Joint ERE in partner countries**
  - IEA offer such exercises also to partner countries (e.g. China, India), to train a larger number of people of that country

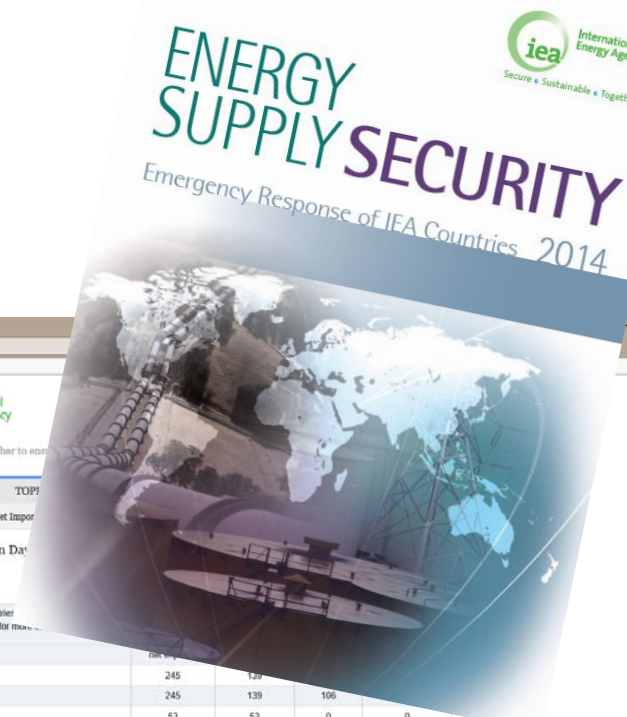
# Conclusions

- **Energy security as urgent as ever**
- **Oil security remains cornerstone**
  - Stock-draw proven powerful response mechanism
- **Continually working to strengthen and adapt response measures**
  - IEA expanding focus beyond oil
- **Exercises and co-operation with partners are key to addressing new and emerging challenges**

# Information on IEA energy security

[www.iea.org](http://www.iea.org)

The screenshot shows the IEA website's 'Energy security' topic page. The header includes the IEA logo and navigation links. The main content area features a large image of oil storage tanks and a headline: 'Beyond energy security: IEA study measures economic benefits of oil stocks'. Below this, it states: 'Cumulative gains valued at more than USD 3.5 trillion, mainly from limiting a supply disruption's effect on the world economy'. A sidebar on the left lists various sub-topics like 'Energy security emergency response' and 'Member country emergency policies'. A 'Publications' section on the right lists recent reports.



<http://www.iea.org/topics/energysecurity/>

|            |     |     |     |    |    |
|------------|-----|-----|-----|----|----|
| Germany    | 140 | 140 | 140 | 0  | 0  |
| Greece     | 113 | 113 | 0   | 0  | 0  |
| Hungary    | 175 | 65  | 110 | 0  | 0  |
| Ireland    | 108 | 19  | 90  | 0  | 36 |
| Italy      | 124 | 124 | 0   | 19 | 0  |
| Luxembourg | 90  | 90  | 0   | 74 | 0  |

# Thank you!

[www.iea.org](http://www.iea.org)

iea

Twitter: @IEA

YouTube: IEAEnergy

Facebook: InternationalEnergyAgency



# Back up slides

# What is the IEA?

- Autonomous agency linked to Organisation for Economic Co-operation & Development (OECD)
- Acts as energy policy advisor with some 250 staff based in Paris

## Goals:

- *Energy security*
- *Environmental protection*
- *Economic growth*
- *Engagement worldwide*

## Activities:

- *Co-ordinates efforts to ensure energy security*
- *Conducts policy analysis*
- *Links research activities & governmental directives*
- *Compiles energy statistics*
- *Reviews energy policies and programs*
- *Convenes, mobilizes science & technology experts*
- *Promotes co-operation with key non-member countries*

# Role of the IEA Secretariat

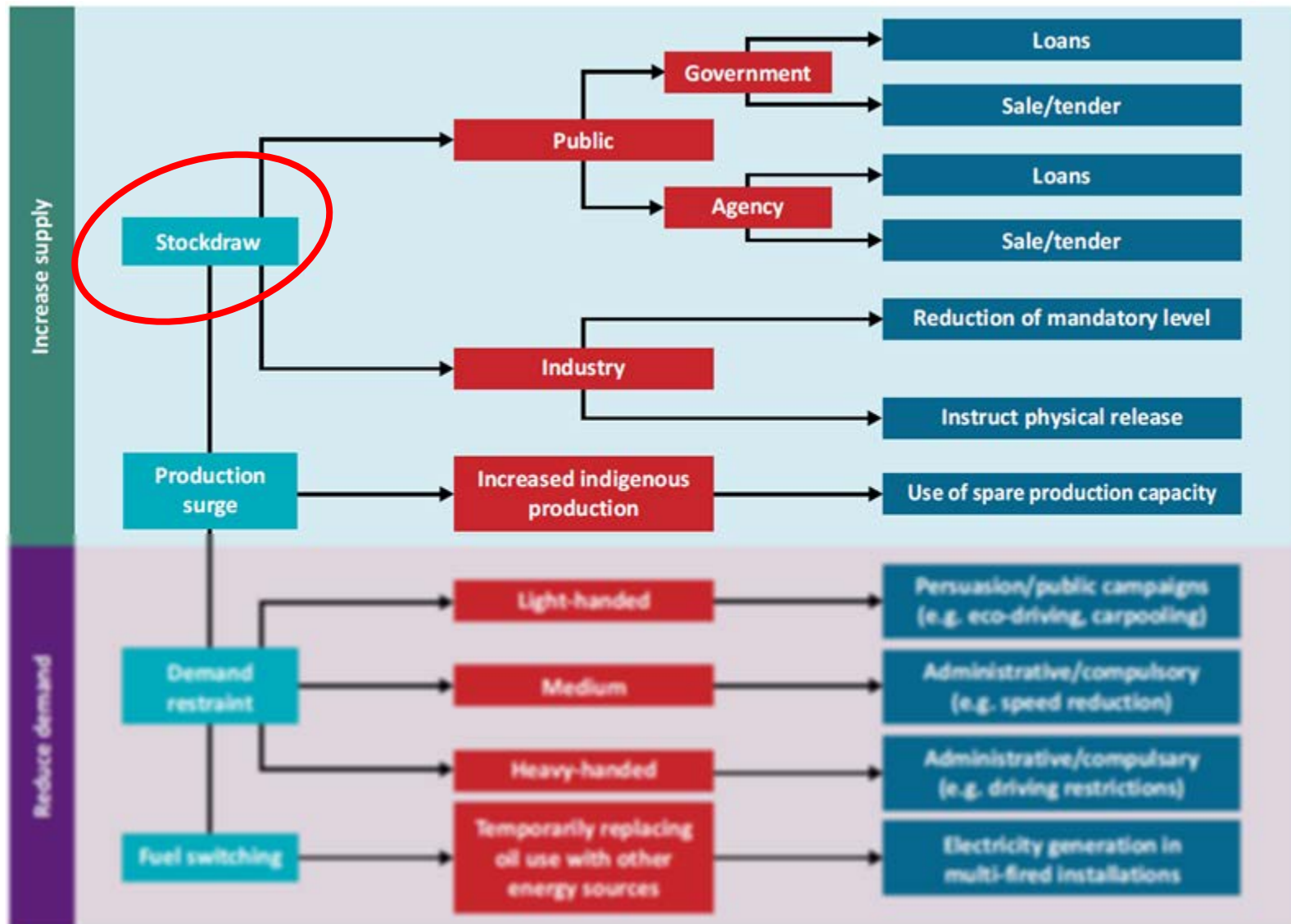
- **Emergency response to oil supply disruptions is *raison d'être* for IEA & remains core mission**
- **Strengthening emergency response systems**
  - **Emergency Response Exercises (ERE)**
    - Training opportunities for delegates
  - Emergency Response Reviews (ERR)
    - Ensures membership obligations are being met
  - Broadening of energy security concept
    - Moving beyond simply oil & petroleum products
- **Global outreach**

# Emergency Response Exercise

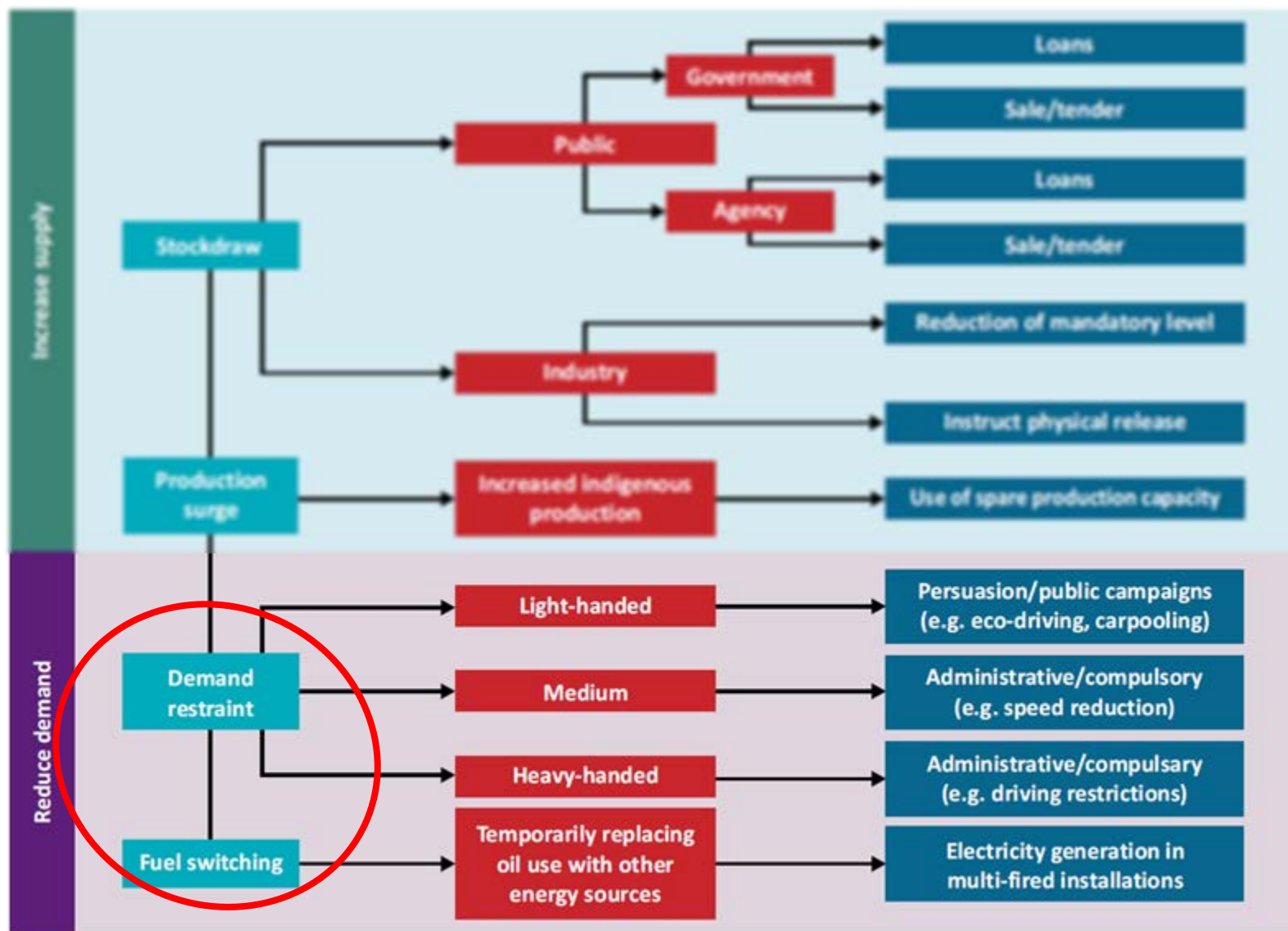
## ■ Components of the Exercise:

- Tests communications & emergency data reporting
- Assessing impacts of disruption scenarios in small break-out groups, discussion in plenary
- Complexity of scenarios depending on experience of participants

# Supply-oriented response measures



# Demand-side response measures



# Demand-side measures

## ■ Demand restraint

- Most policies focus on transportation sector
  - Wide range of measures, from light to heavy
  - **Danger of further strangling economy!**
  - Short-term can lead to long-term behavioral changes & fuel efficiencies (car-pooling, smart truck logistics etc.)
- Some potential in reduced heating

## ■ Fuel switching

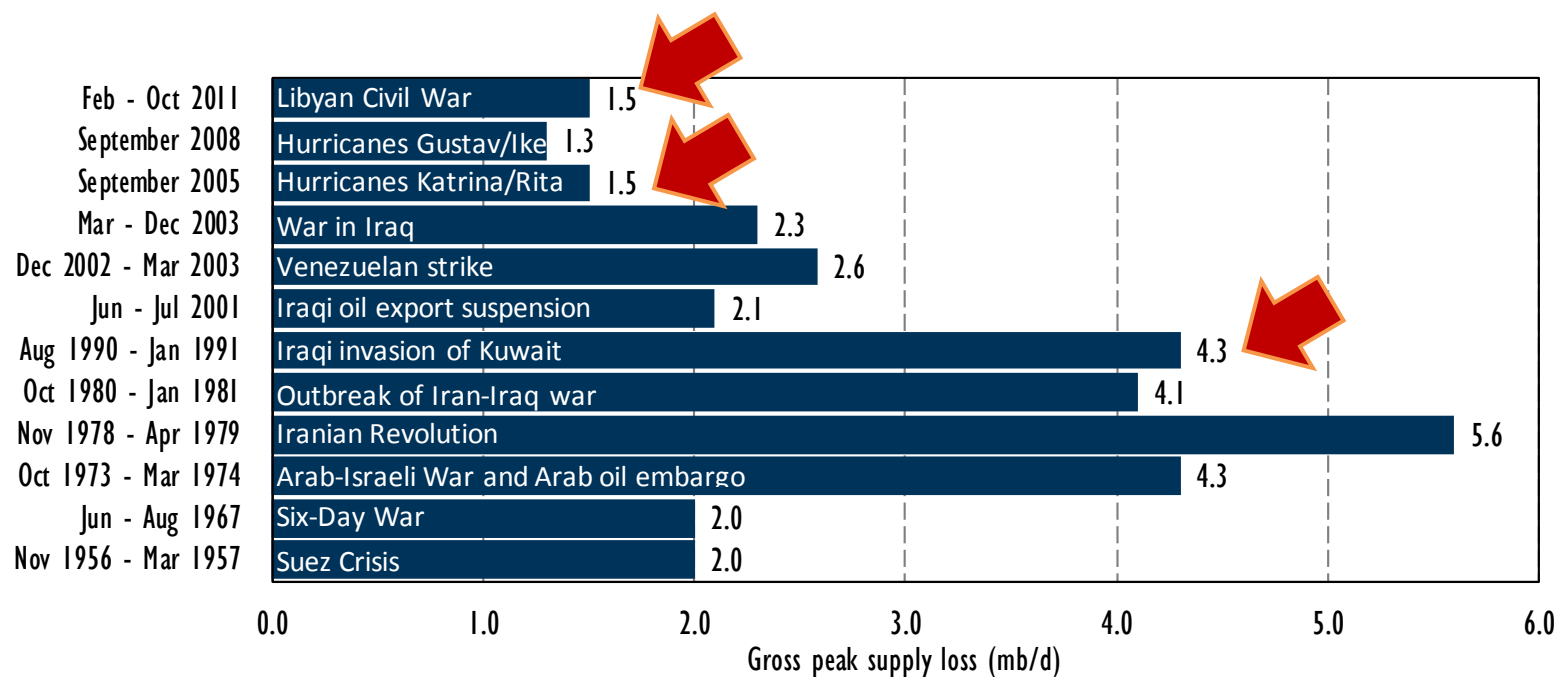
- Significant decline since 1970s
- In 2015 only 2% oil in electricity generation (25% in 1973)
- Virtually no potential for short-term switching in transport

## ■ Other

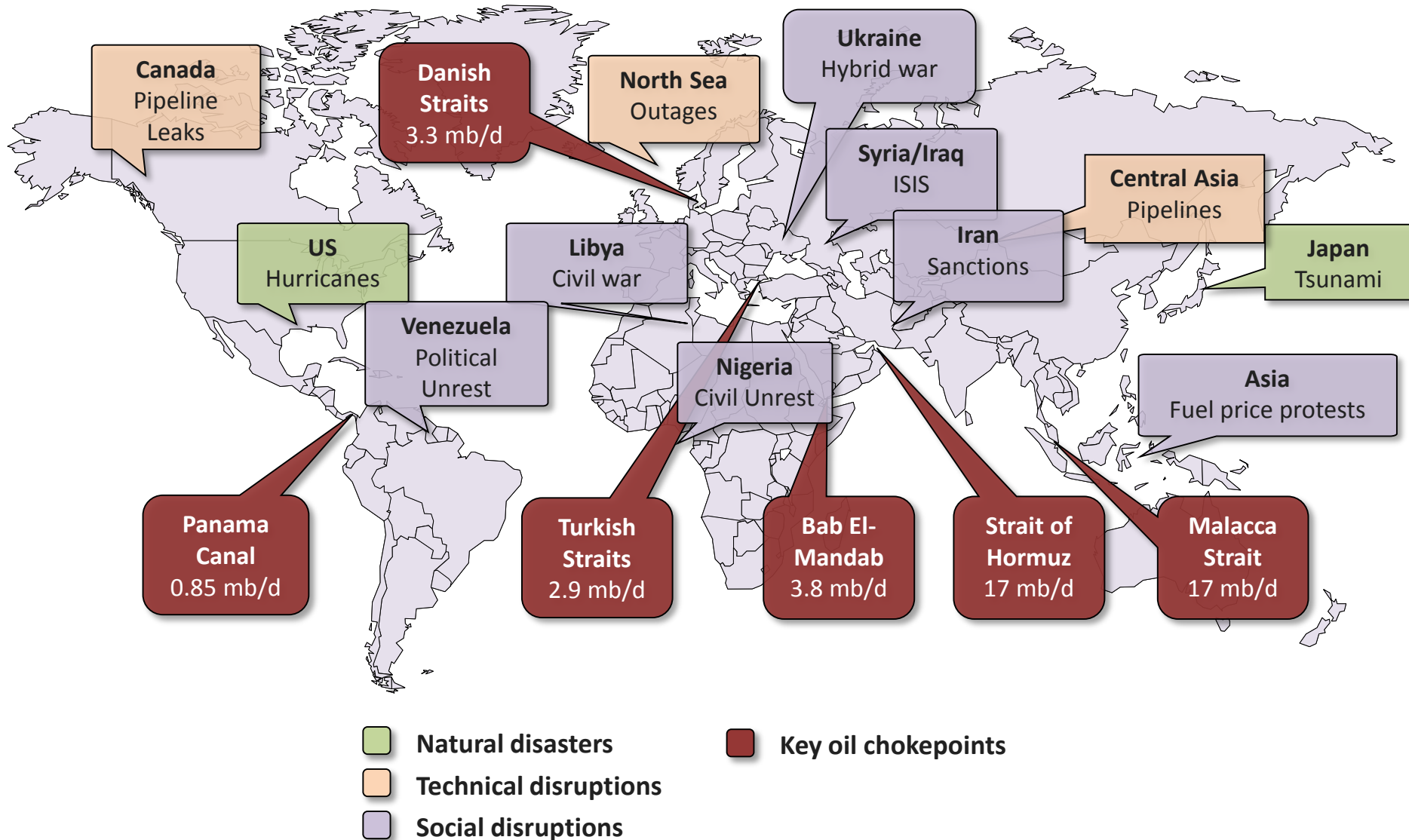
- Relaxation of regulation, e.g. on fuel quality specifications

# Major oil supply disruptions

- Three coordinated stock releases since IEA established
- Each disruption must be assessed individually
  - Market context critical
  - Severity of a disruption not only measured in oil lost



# Oil supply security remains key



# Energy security wider than oil (1)

- **Share of oil in world energy mix declining but will still remain most important fuel in foreseeable future**
  - Regional industry changes impacts on energy security?
    - E.g. European refining sector restructuring
    - Shale gas & oil story in USA – new “market-driven” OPEC for emergencies?

# Energy security wider than oil (2)

## ■ Natural gas has increasing role

- Gas markets more integrated; more shipped via long pipelines & LNG -> increasing distances lead to increased potential for vulnerabilities

## ■ Electricity: demand is set to grow faster than any other final form of energy

- Increased share of variable renewable generation must be integrated without jeopardizing security
- Natural gas gaining prominence in providing base load flexibility & peak power = gas & electricity market intertwined in security, cost & reliability