



# Oil and Gas Security

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Sendai, 10 April – 5<sup>th</sup> APEC Oil and Gas Security Network Forum

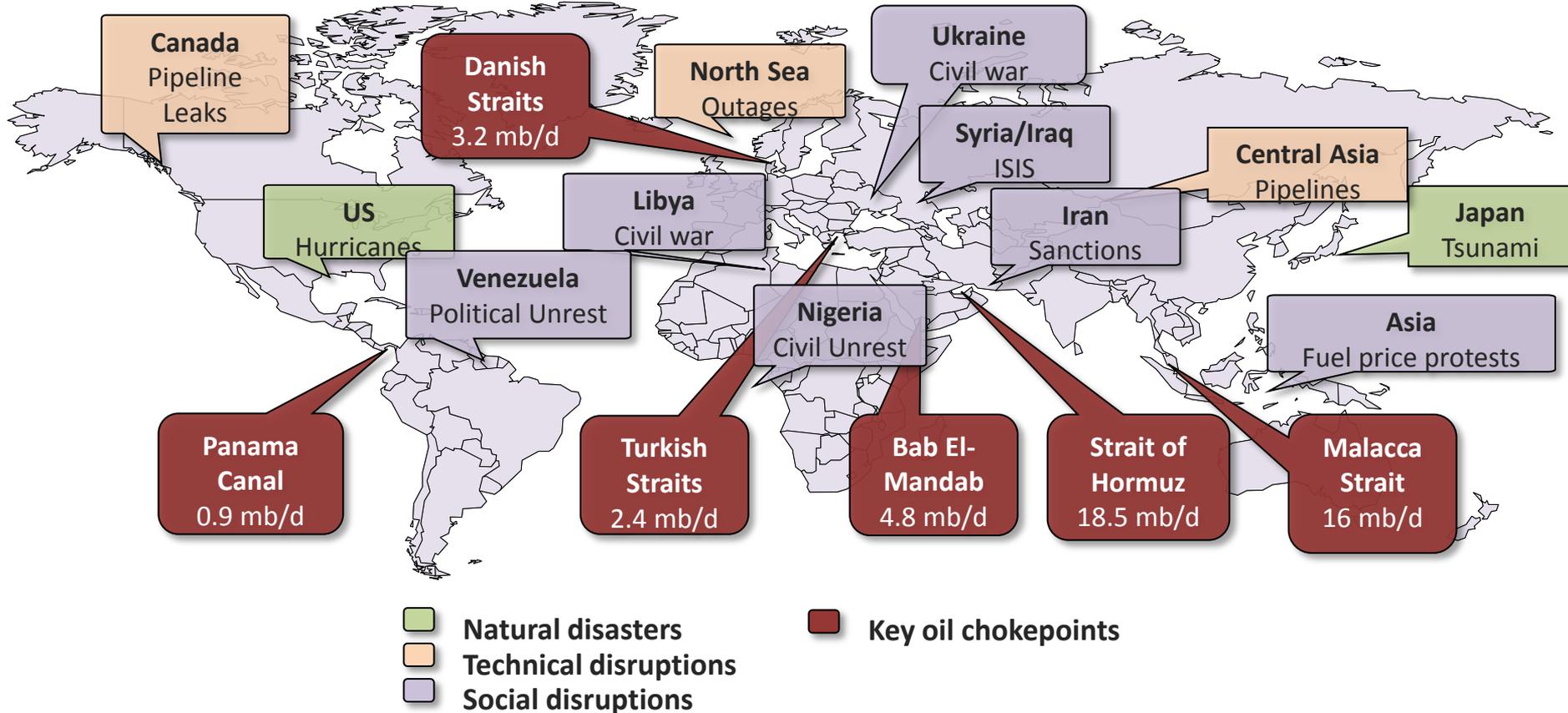


# IEA Oil Emergency Policy

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IEA's Role and Member Country Responsibilities

# Oil supply security remains key



# Economic costs of oil disruption

- Higher oil import costs, GDP losses
- Increased cost of production
  - More expensive petrol/diesel
  - But also more expensive goods
  - Less disposable income
  - Loss of jobs, businesses

Oil crisis, 70s



France (strikes)  
May 2016



Germany, Swiss, France  
(low Rhine river)  
October 2018

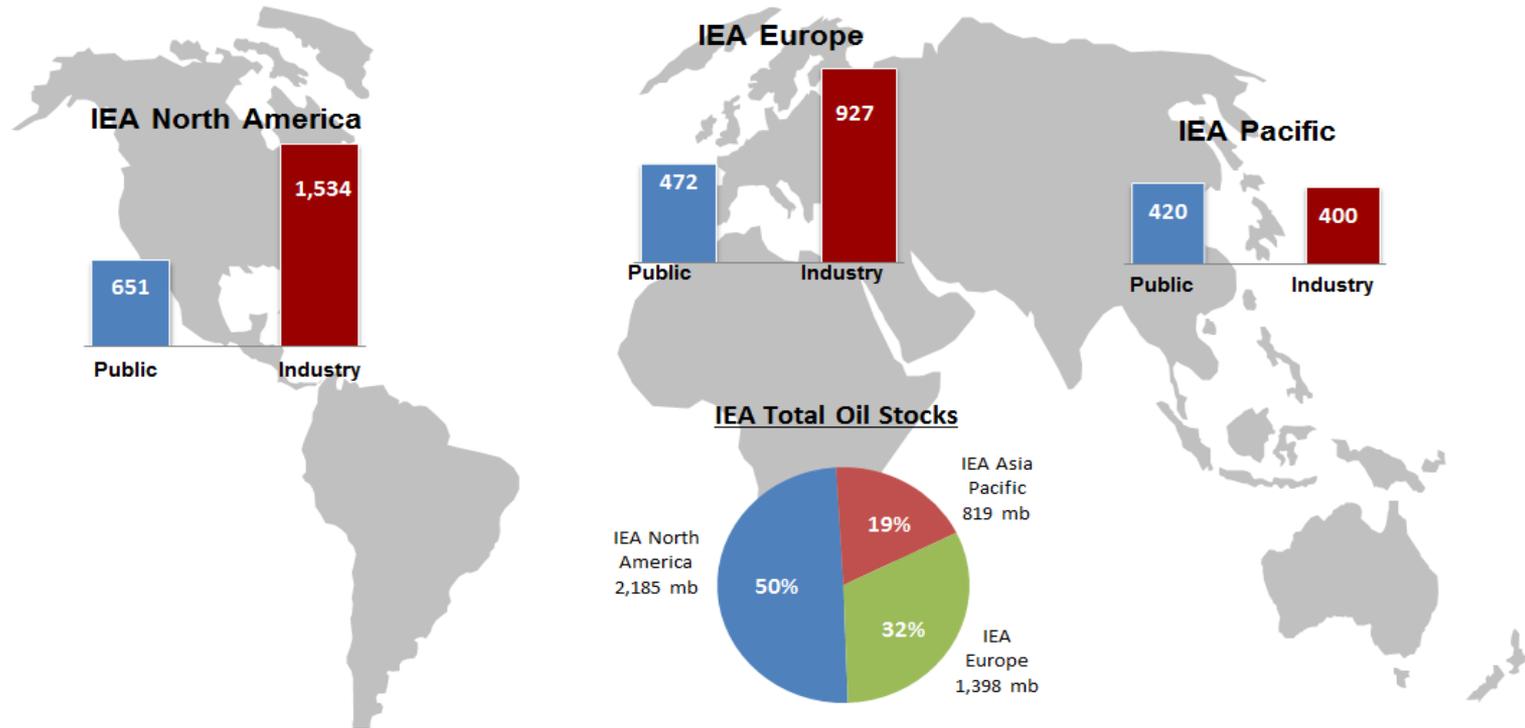


- **Emergency Response Reviews (ERRs)**
  - Peer reviews on emergency preparedness & policies
  - Focus on oil, gas, electricity security of supply
  - Emergency response procedures
  - Institutional arrangements to identify / improve weaknesses
  - Mostly member but also partner countries
- **Emergency Response Exercises (EREs)**
  - Biennial exercises testing processes, decision making, communication, data...
  - Workshops for new, complex issues
  - Tailored exercises for some partner countries
- **Global outreach**

- Legislation in place
- Emergency response team (NESO)
  - Interface with domestic oil industry & IEA emergency operations
- Data Collection
- Appropriate emergency measures
- IEA countries obligated to hold at least 90 days net-imports
  - In accordance with the founding treaty of the IEA: International Energy Program Agreement (I.E.P.)

- Powerful tool to mitigate oil supply disruption impact on the economy
  - Tangible, controllable and close to demand
  - Can be released quickly and visibly to calm oil markets
  - Sales to free market promotes efficient allocation
- Range of stockholding models
  - Government, Agencies, Industry

# IEA closing stocks at end-December 2018



**Total IEA closing stocks : 4,402 million barrels**

- By region: IEA North America accounts for half of the total stocks

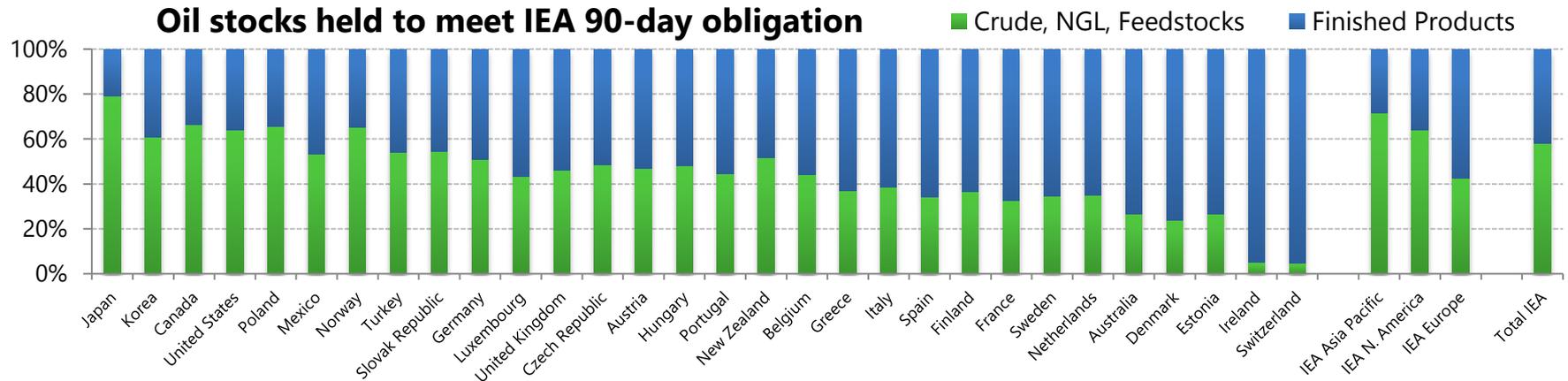
- By Industry VS Public: 65% - 35%

- **IEA obligation does not specify**

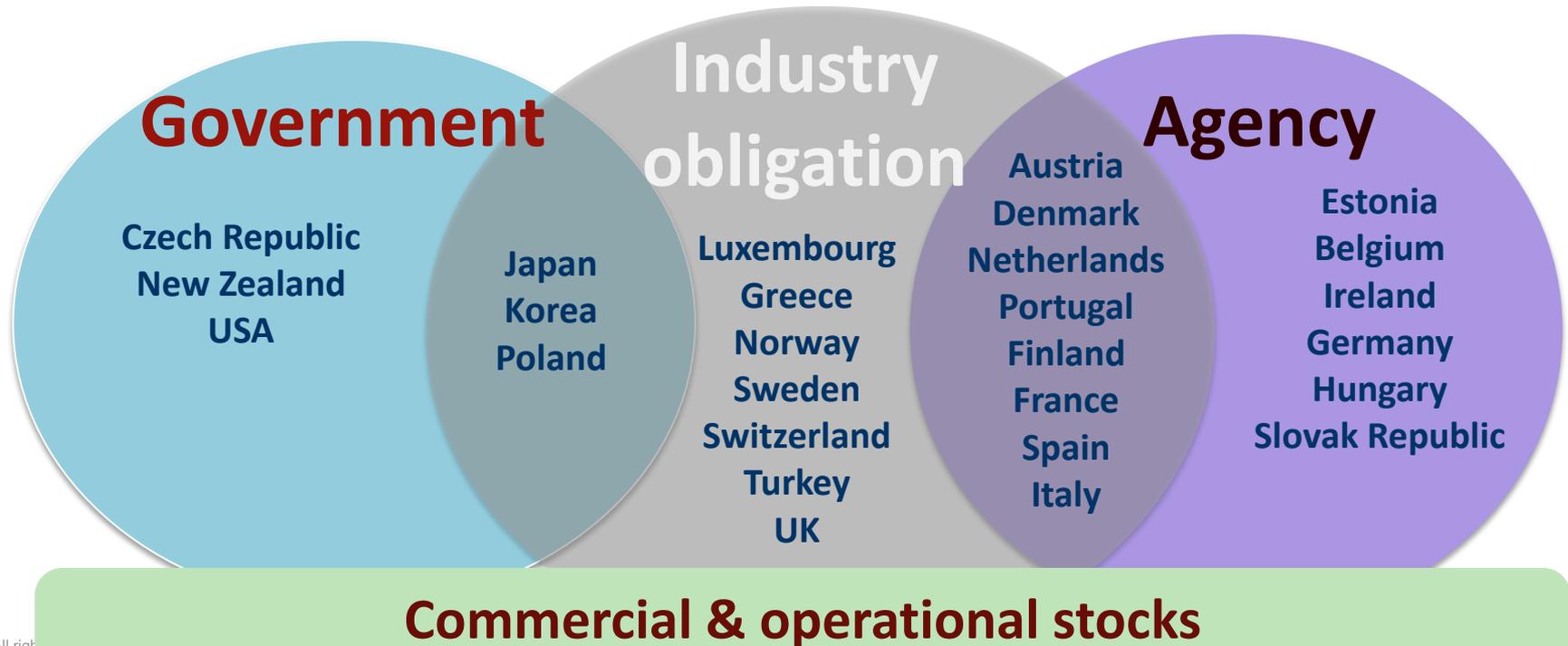
- EU leg. requires 1/3 of stocks held as products

- **Choice depends on several factors:**

- Price of storing products can be significantly higher
- Countries with large refining industry will store more crude for flexibility



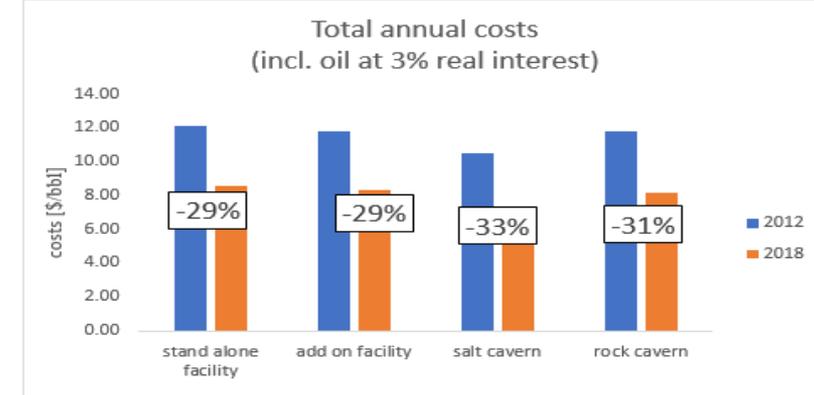
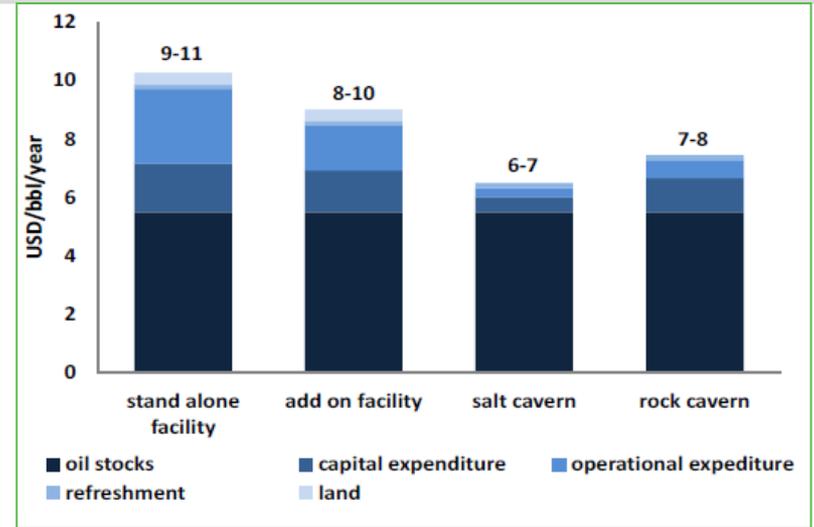
## Different stockholding structures in IEA countries *Varies by market structure, geography, & national policy*



# Stockholding costs

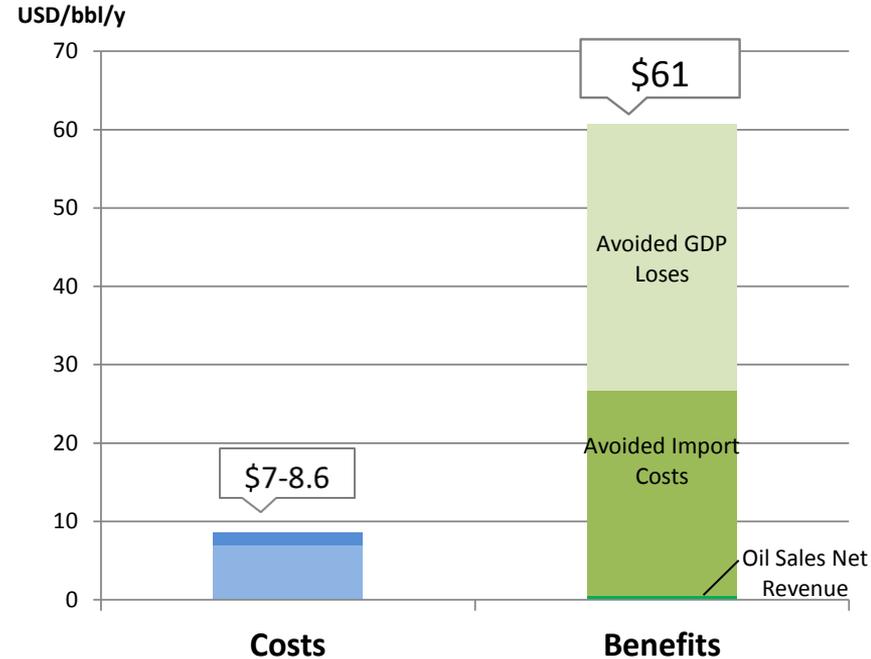
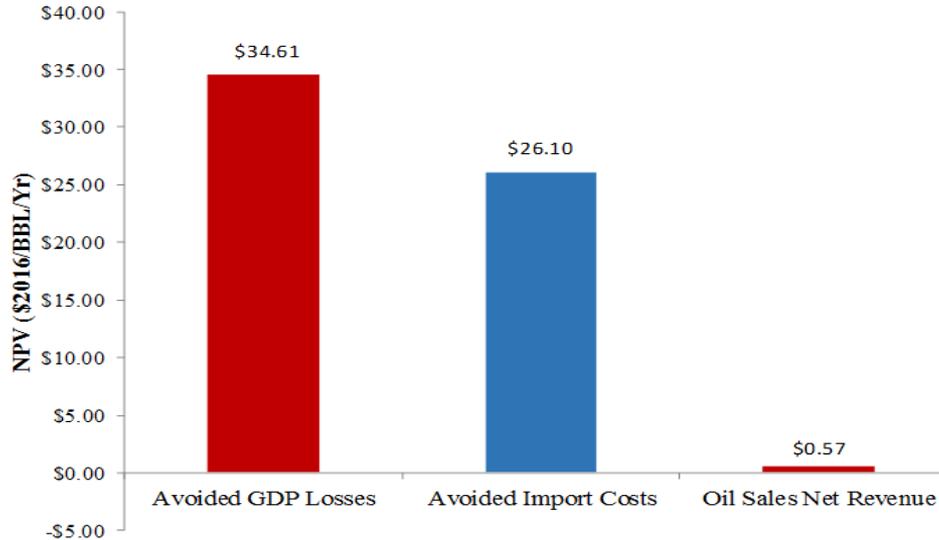
- **Set-up costs:**
  - Land costs: buying or leasing terrain
  - Construction of facility
  - **Purchase of stocks**
- **Operating costs:**
  - Maintenance
  - Staff
  - Utilities
  - Insurance etc.
- **Refreshment costs:** to ensure product quality

- Range from 7 to 8.6 USD/bbl/year
- 30% decrease in costs comparing 2012 and 2018, because of decrease in oil price
- Underground storage remains 20% cheaper compared to above ground storage



# Stockholding benefits: Payoff from “insurance”

Benefits by component (USD/bbl/y)

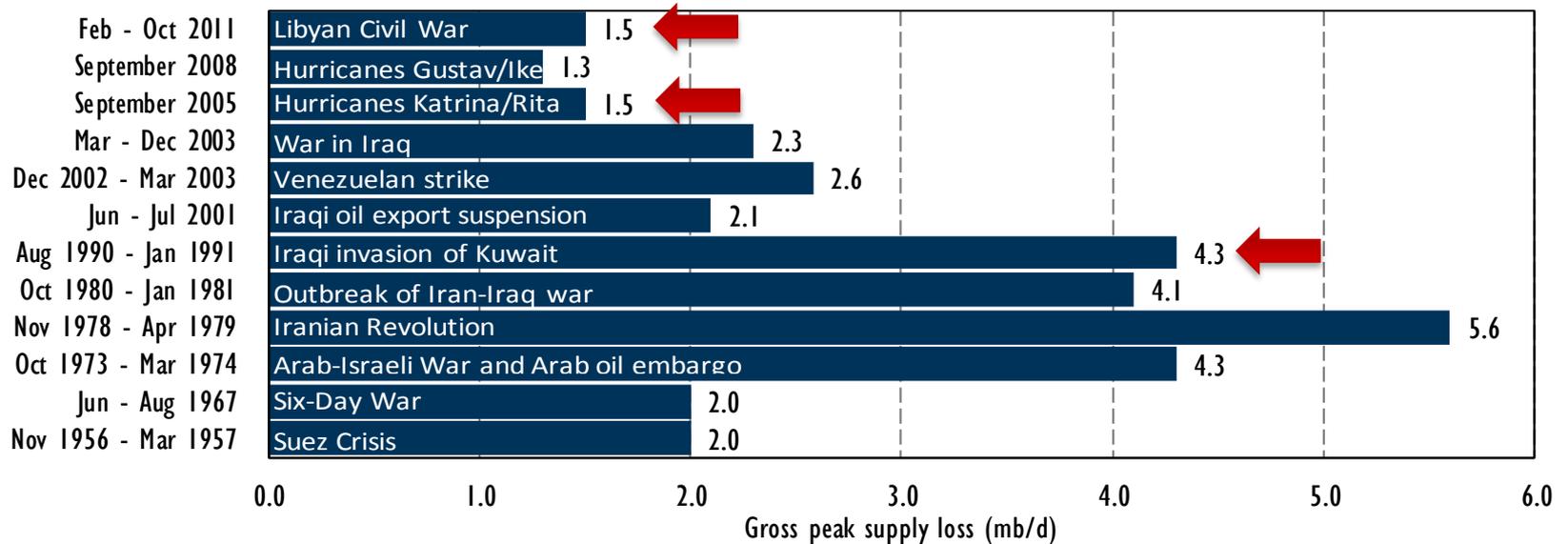


**IEA stocks provide total average benefit of 61 USD/bbl/year over 30-year horizon**

# IEA Oil Emergency Response Mechanism

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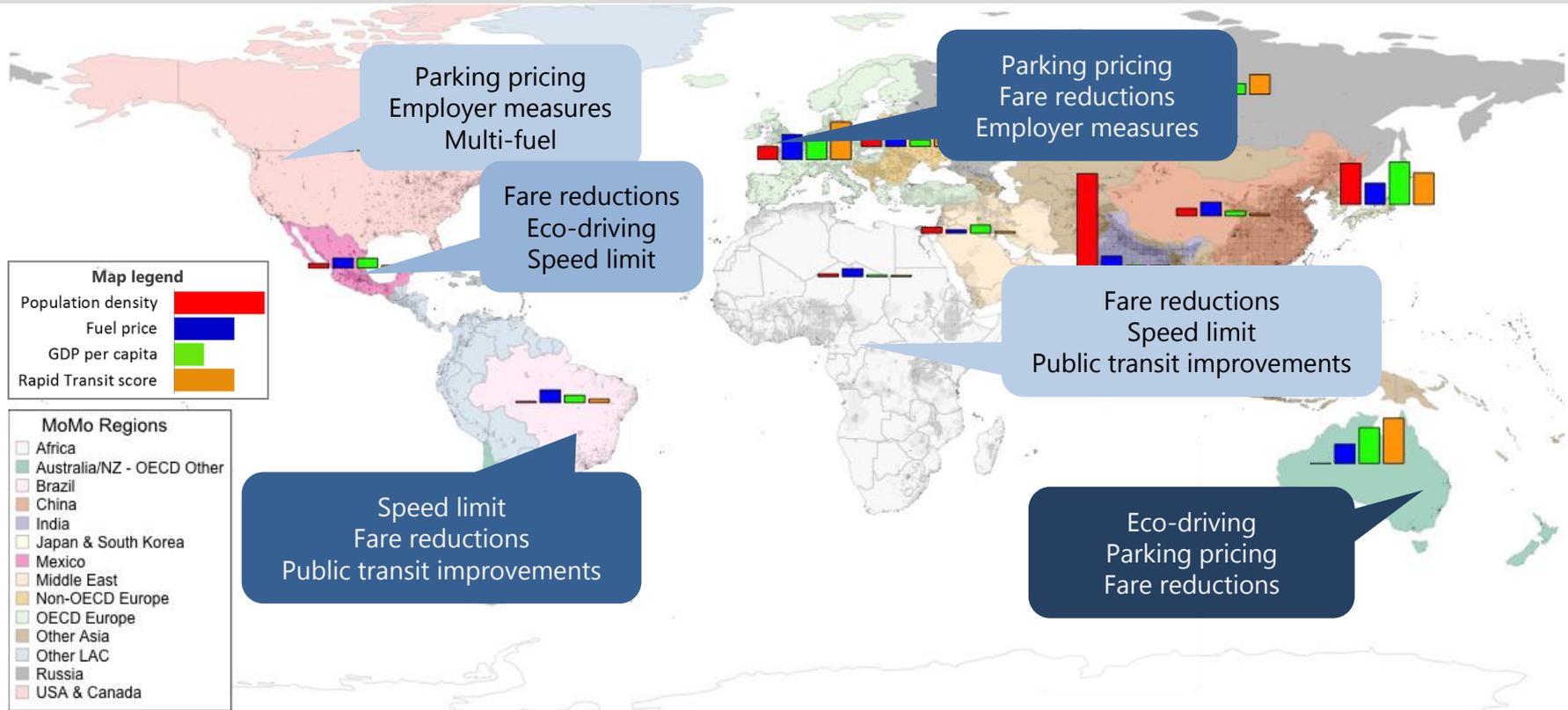
- Each disruption must be assessed individually
  - Market context critical
  - Severity of a disruption not only measured in oil lost



- **Continuous** assessment of oil market
  - Size of disruption; OPEC spare capacity; stocks in OECD
  - Necessity of IEA action, impact on market
- **Rapid** decision making framework
  - Need for fast and decisive response as market reaction is immediate
  - Timely and coordinated response avoids market confusion
- **Flexibility** in response measures
  - Stocks are key, but other measures possible
- **Communication**
  - Dialogue with Members, association countries and OPEC
  - Media strategy to deal with markets

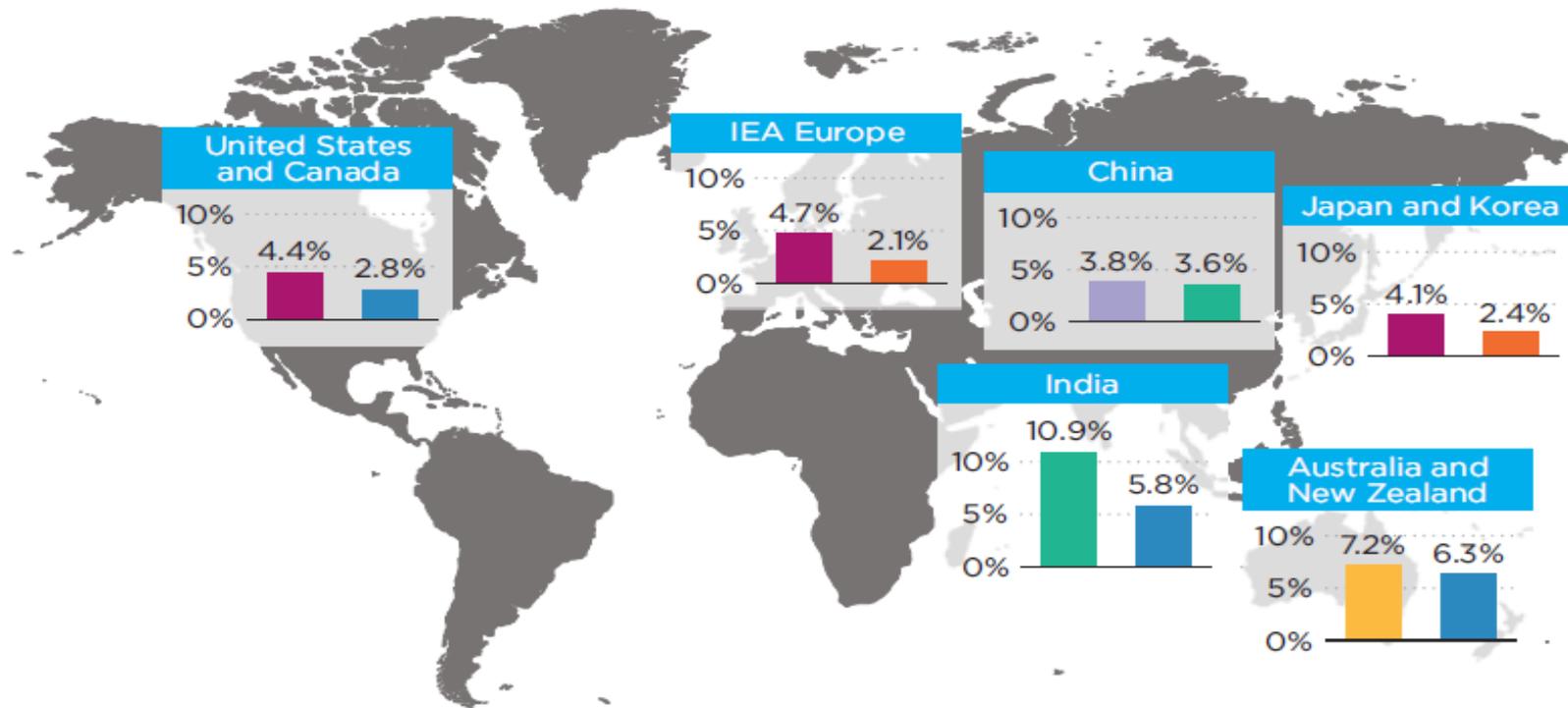
- Emergency oil stocks cannot effectively replace market mechanisms
  - Only mitigate short-term supply disruptions
  - Provide liquidity for markets to recover
  - Market still sets price & allocates
- Emergency stocks are not for price management
  - Should only be used to address acute supply shortfalls
  - Distorted market signals worsening long-term balance
  - High prices can be needed to trigger new investments

# Oil demand restraint measures



Source: IEA Saving Oil in a Hurry, 2018

# Potential percentage reduction in oil consumption by type of measures



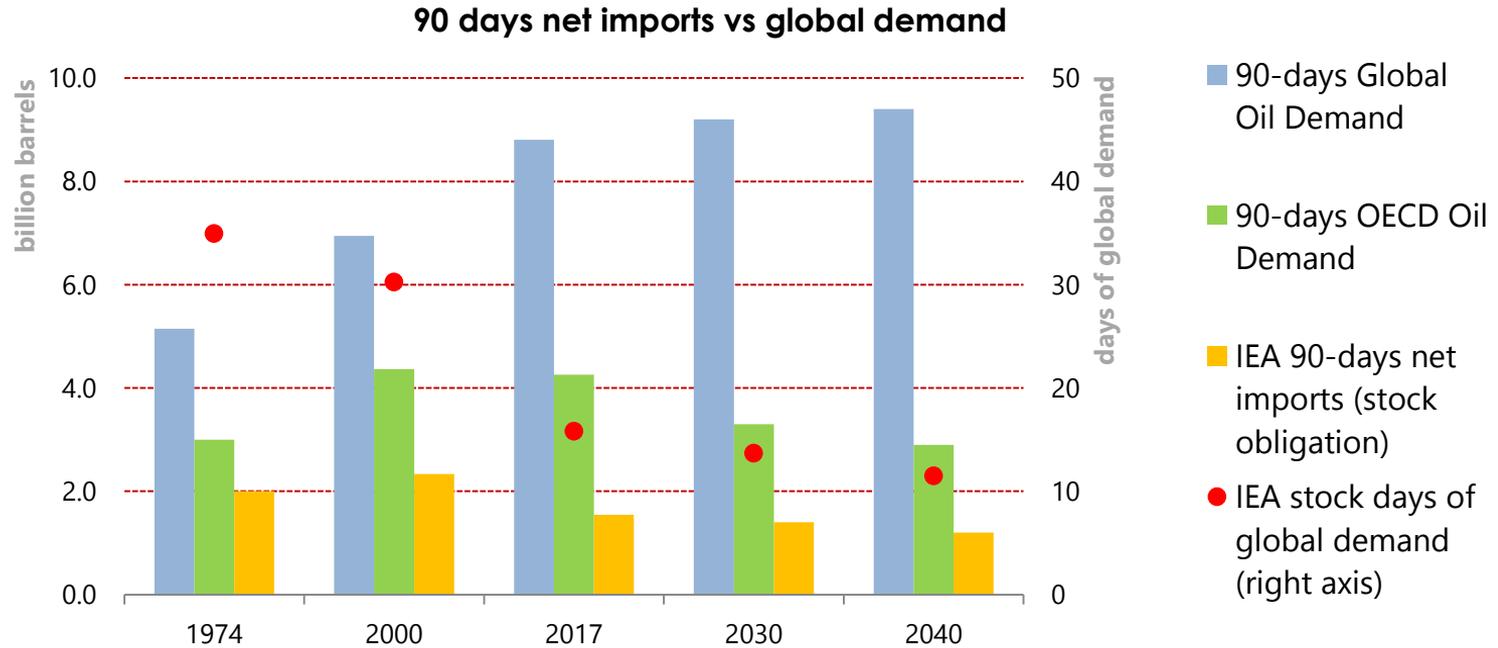
■ Change parking pricing   ■ Encourage flexible work schedule and teleworking   ■ Apply road pricing: congestion fee  
■ Support fuel efficiency measure: eco-driving   ■ Set fare reductions in public transport   ■ Promote fuel switching

Source. *Saving Oil in a Hurry*, IEA, 2018.

# Way forward

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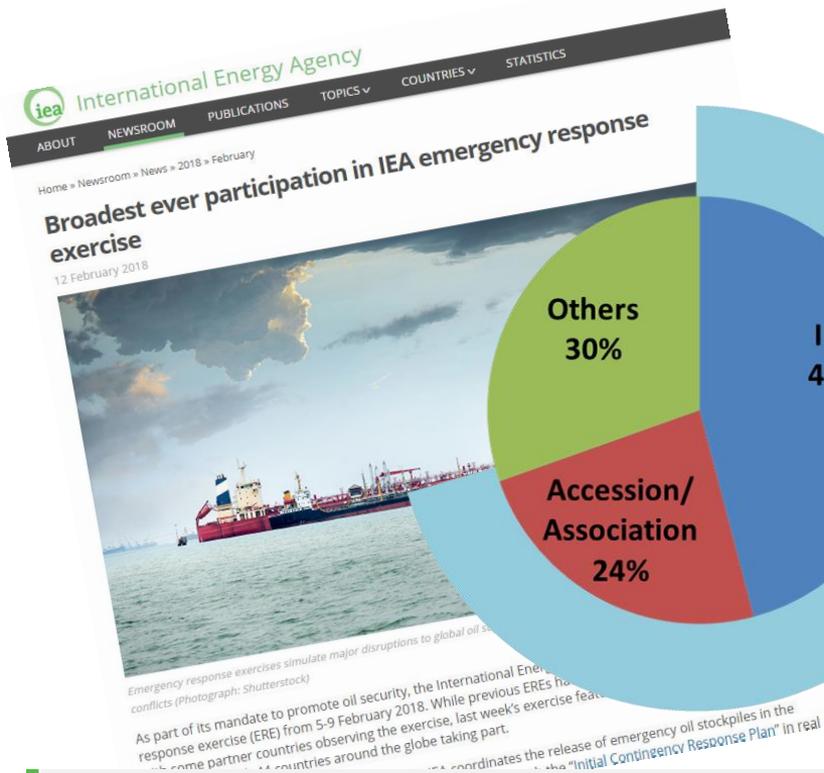
# The shift in oil demand to developing countries



**In the future, IEA stocks alone can no longer compensate for global supply shortfalls**

- **Shared priority to take common measures for oil supply emergencies**
  - By developing Emergency Response Systems
  - Coordinate with the IEA in the use of emergencies reserves
  - Collaboration with the IEA to test the level of energy security preparedness
- **Sharing knowledge and insights for capacity building**
  - IEA's participation to regional meetings, seminars, and workshops (G20, APEC, ASEAN, etc.)

***Opening doors to a new era of international energy cooperation***



-Largest-ever participation of **44 countries**

-Represented **70% of global oil demand** compared to 46% if limited to IEA Members

**Participation of IEA Partner countries marked concrete synergies between IEA Open-doors policy and our core mandate: enhancing energy security**

- Energy security as urgent as ever
- Oil Stock-draw proven powerful response mechanism
- Continually strengthen & adapt response measures
- Co-operation with partners key to address new challenges
- Demand restraint –country specific measures needed

# Information on IEA energy security

## Our work on energy security



Oil Security

One of the IEA's core activities is ensuring the security of oil supplies by setting oil stockholding requirements for member countries and coordinating the international response to supply shocks



Natural Gas Security

Gas security challenges are evolving. The current period of gas oversupply – driven by overcapacity in the LNG market – should not overshadow the critical importance of global gas security



Electricity Security

In May 2015, the Group of Seven (G7) Energy Ministers asked the IEA to help determine the best means of improving electricity security, including through increasing system flexibility



Member and Key Partner  
Emergency Policies

Since its founding in 1974, oil supply security has been a core mission of the International Energy Agency



Resilience

The energy sector has to withstand demand or supply shocks in global energy markets, natural disasters, explosions or cyberattacks and other extreme events



Emergency Response

In the event of an actual or potentially severe oil supply disruption, the IEA Secretariat first assesses its market impact and the need for an IEA co-ordinated response



Emergency Response of IEA Countries – 2014



INTERNATIONAL ENERGY AGENCY  
SIGHTS SERIES 2018

Costs and benefits  
of emergency  
stockholding



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



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

