



**Emerging Threats to Energy Security and Stability**  
**NATO Advanced Research Workshop**  
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# **“Responding to Emerging Threats to Energy Security and Stability”**

**(Luncheon Speech, January 24th)**

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# ENERGY SECURITY

***ENERGY SECURITY*** = sustainable, reliable, environmental-friendly supplies at reasonable cost (including cost of externalities).

***ENERGY SECURITY*** has many dimensions, but several are very important:

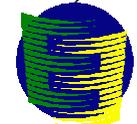
1. Security of supply *vis à vis* particular type of energy (e.g. oil, gas);
2. Security of supply in the short run (diversification, system “hardening”, stocks, management, etc.) of the existing energy system;
3. Security of supply in the long run (“running out” of oil – its new alternatives, global warming, shifts in primary energy by type –and for new types... a whole new world) of the developing new energy system.

The greatest risks are in the third area (long-run), since the instruments deployed in the first two are not sufficient to resolve insecurity of the third type...

***ENERGY SECURITY INSTRUMENTS*** evolve over time – alongside with energy markets development!

As energy interdependence (globalization) grows, international law becomes a more effective instrument (relatively cheap per unit of supplies/final consumption) for providing *energy security*.

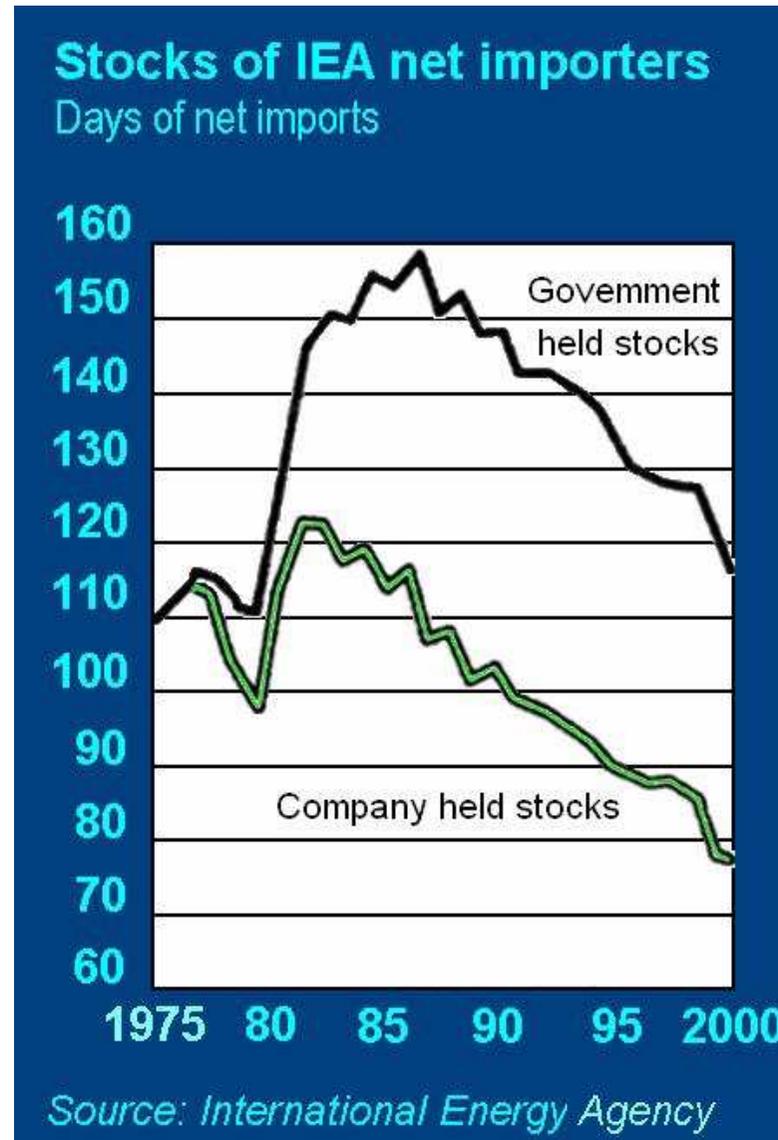
Figure 1



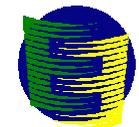
## PARTICULAR MECHANISMS OF DIMINISHING VOLUME AND PRICE RISKS UNDER DIFFERENT ENERGY SECURITY INSTRUMENTS

<b>Mechanisms of diminishing:</b>	<b>Concession system</b>	<b>Strategic reserves + stocks</b>	<b>International law</b>
- volume risk	Traditional & modernized concessions, PSAs, risk-service contracts (direct control of supplies via LTC for duration of agreement between host-country & foreign company)	Producer states production & export quotas + strategic reserves + stocks in both producer and consumer states (idle producing capacities, float tanker storage vs. SPR, government & company owned commercial stocks) + LTCs	Diversified energy supply infrastructure (multiple supplies concept) + consumers with switching (competitive supplies)
- price risk	Stable & low posted prices + transfer pricing + cost-plus (isolated projects)	Spot + forward pricing = unstable prices; increased price volatility to be compensated by producers export quotas (major exporters = swing producers) + consumers stocks regulation policy + escalation formulas	Exchange pricing = futures + options = unstable prices; increased price volatility to be compensated by hedging (derivatives)
Basis for pricing (traded item)	Physical energy (oil, gas)	Physical energy (oil, gas)	Paper energy (oil, gas contract)
Driving force of market development	Monopoly (individual consumer states/cartel of private companies)	Monopoly (cartel of producer states/state companies)	Competition

**Stocks go down .... Security is not necessarily impacted, if markets work**



**Figure 3**



# ENERGY CHARTER AND RELATED DOCUMENTS

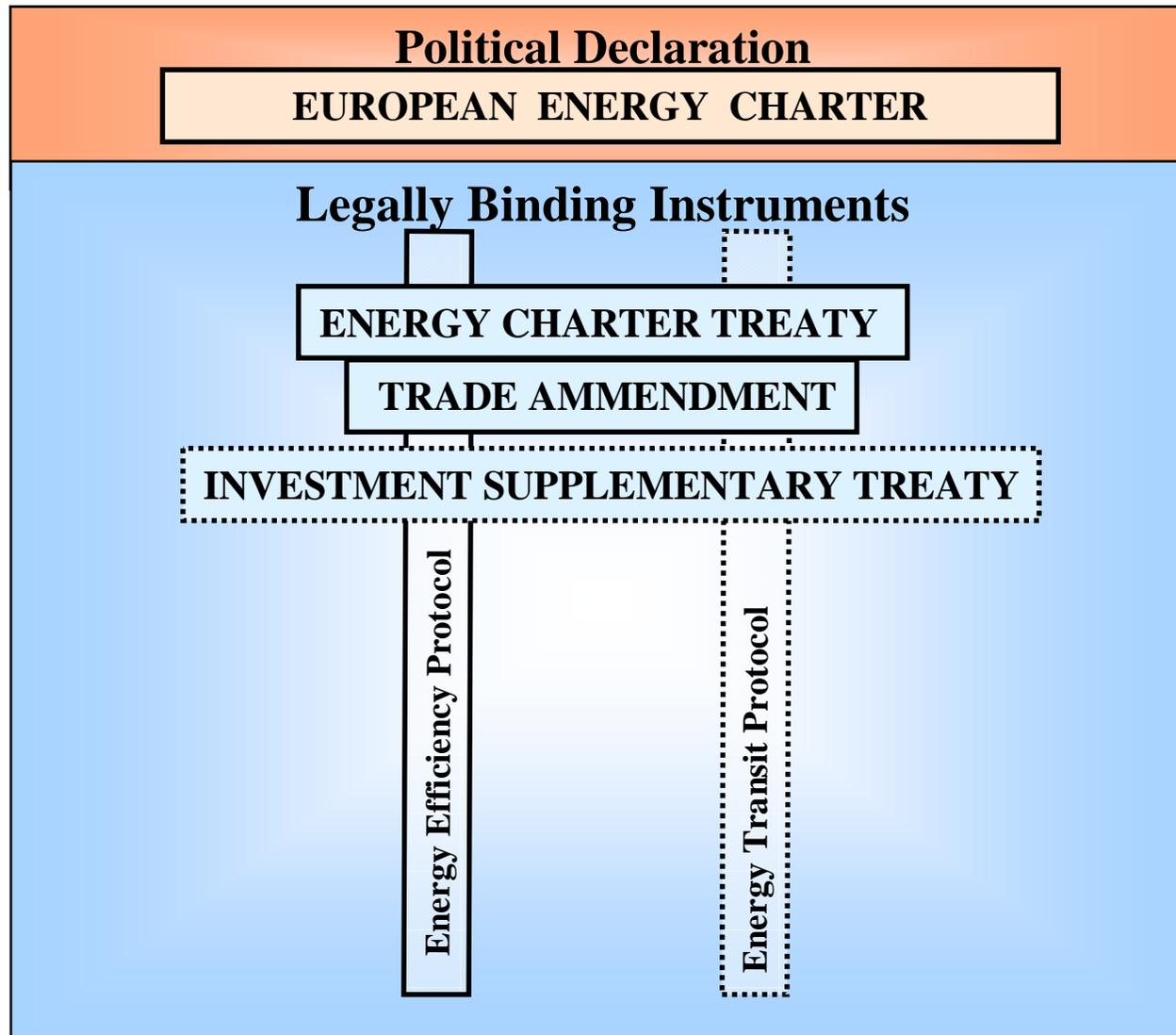
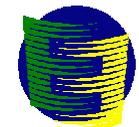


Figure 4



# DEVELOPMENT OF ENERGY MARKETS AND MECHANISMS FOR INVESTOR PROTECTION / STIMULATION

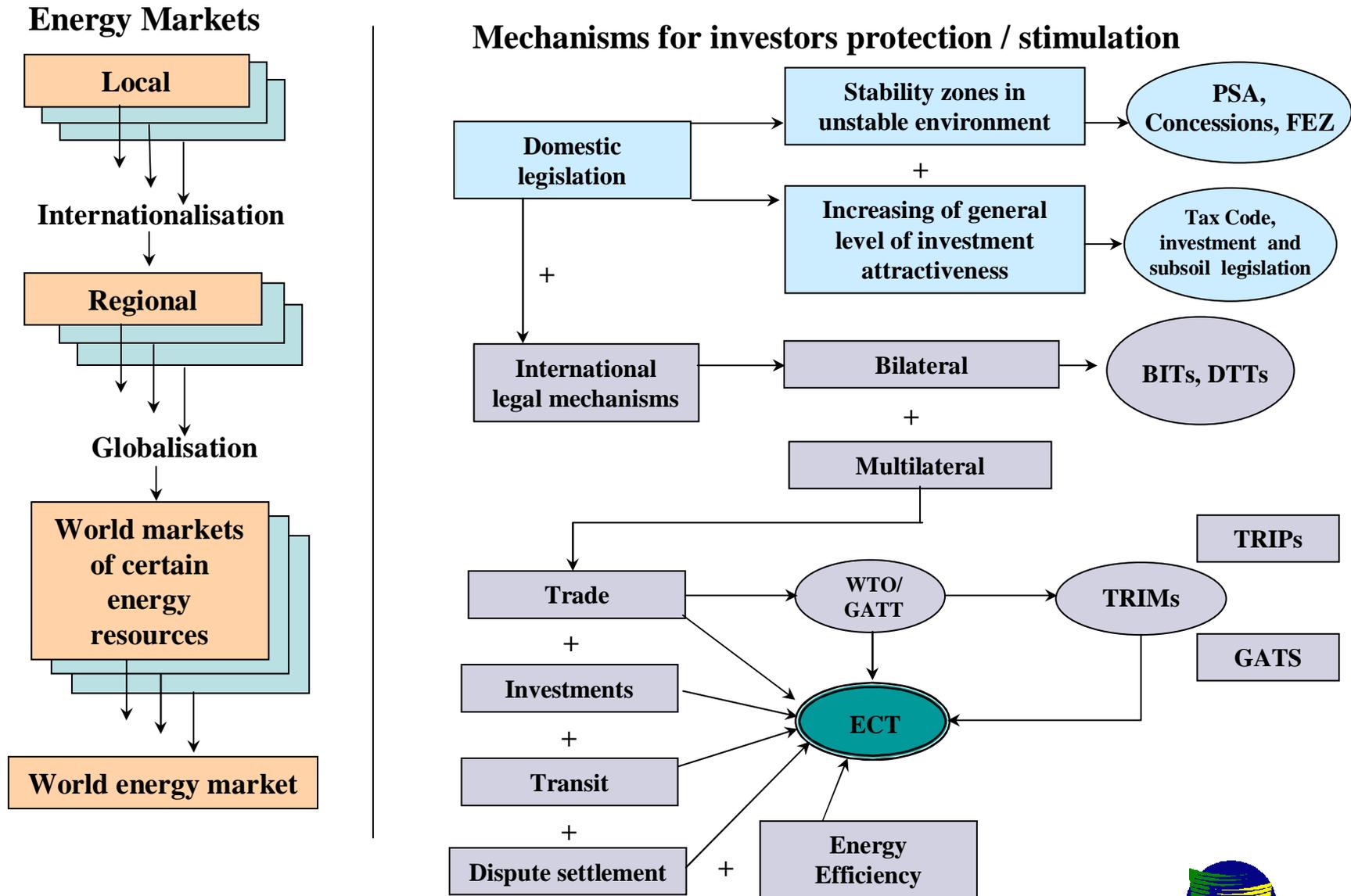
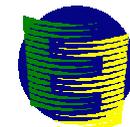
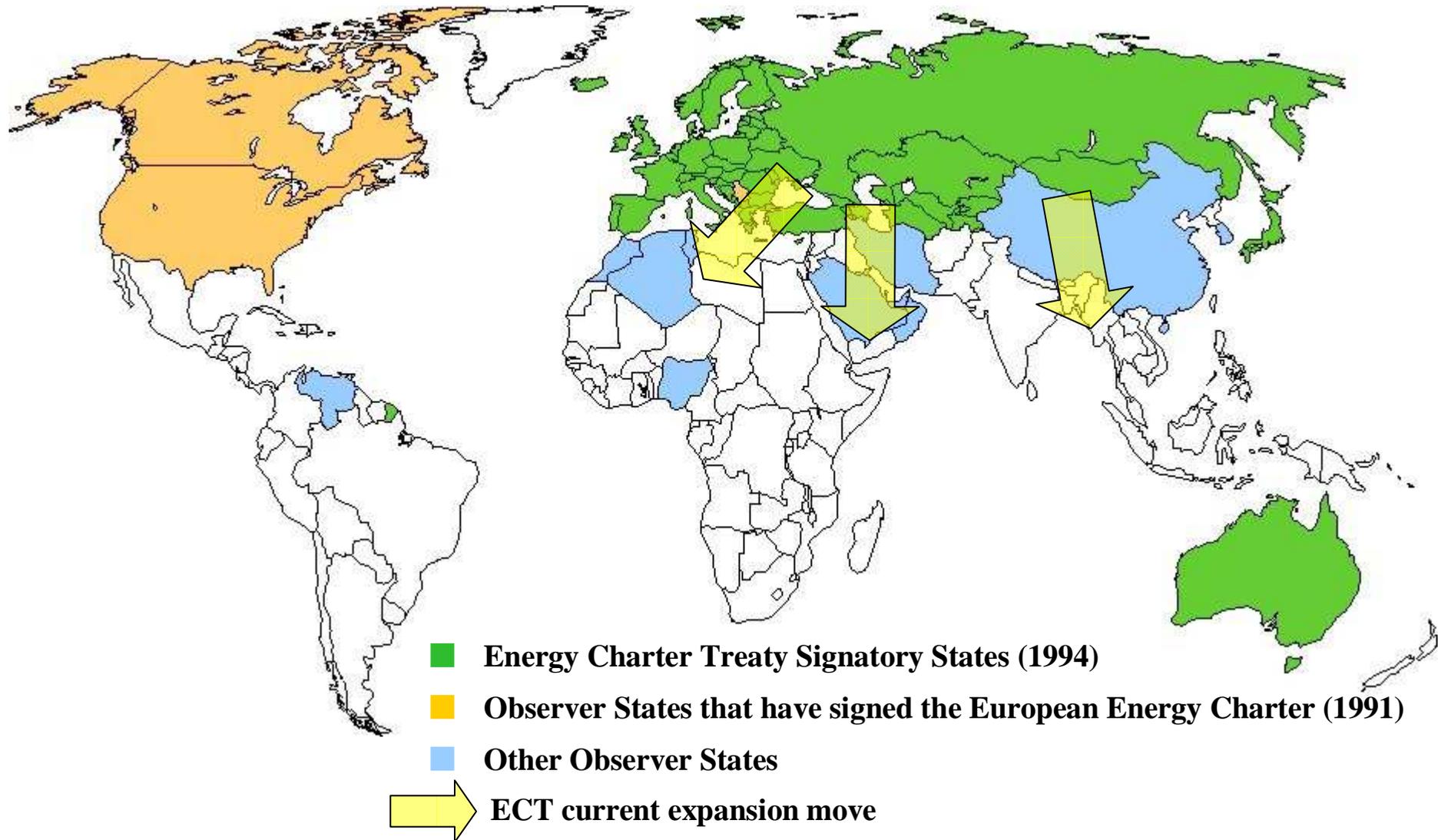


Figure 5

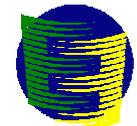


# ENERGY CHARTER TREATY: GEOGRAPHY



1. From trans-Atlantic political declaration to broader Eurasian single energy market
2. ECT expansion is an objective and logical process based on economic and financial reasons

Figure 6





## VARIUOS FACETS OF ENERGY SECURITY

- **Energy security = diversified energy mix, many suppliers, many routes and shippers, many destinations, etc.**
- **Energy security means investing, at both consumer and producer end, and within the whole energy chain**
- **Energy security means risk minimization as a constant process (addressing changing risks composition), and minimizing political risks helps energy investment most strongly**
- **Manageable risks mean greater competitiveness, less cost, more diversified investment with higher ROR**
- **In terms of cost-benefits ratio, international law instruments are among the most efficient**
- **The Energy Charter Treaty is the only multilateral international law instrument specific to the energy sector with its specific risks**

Figure 7

