Security Dimension of the Maritime Energy Management: A Naval Perspective

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Economic activities of mankind are intertwined with sea and energy.
No security for the seas

No trade

Lifeline of global economy
Maritime Security

Global trade security

Basic and complementary requirements

Energy supply security
Maritime Trade

50,000 merchant ships registered in over 150 nations

15 billion tons cargo

%90 of the world's global trade

Carried throughout 20,000 ports worldwide
Energy Supply and Maritime Security

Primary energy goods to be carried over the seas

Crude oil & by-products
Pipelines

Crude Oil & Natural Gas Transportation

- Natural gas: % 95
- Crude oil: % 35
Crude Oil Production in 2015

82 million barrels (daily)

4 billion tons of crude (annually)
Crude Oil
(Daily Move in 2015)
55 mn barrels

%65 of oil (36 mn barrels) carried by 4300 tankers
%35 via pipelines
%50 of the world crude oil & by-products was exported from Middle East and FSU geographies.

%50 of the world crude oil & by-products were imported by USA & Europe.

The majority of the other half was imported by China, Japan, and other Asia Pacific Countries.
The Maritime Shipping

Cheaper than

3 times

7 times

22 times
Ultra Large Crude Carriers (ULCC)

ULCC’s (550,000 DWT) are able to carry almost 3 million barrels of crude oil.
Maritime Transportation Advantages

Largest container ship (123,000 DWT) (aircraft carrier size) 18,000 containers

- Low cost
- Productivity
- Flexibility
The securities of energy supply and maritime domain, particularly the safety and security of the offshore oil rigs, seaborne pipelines and terminal ports connecting sea lanes of communications crossing through straits, canals and choke points play very important role.
The Strait of Hormuz

- It connects Persian Gulf to Arabian Sea and Gulf of Oman.
- 17 million barrels of crude oil is on daily move.
The Strait of Hormuz
(Iran-Iraq War)

- 240 tankers of different flags were attacked.
- 55 tankers were sunk or very heavily damaged.
- The maritime traffic was decreased up to % 25.
- The insurance costs and oil prices skyrocketed.
The Daily Moves of Crude Oil & By-products

- To Japan 4 mn barrels per day.
- To Europe 3 mn barrels per day.
- To USA 2.2 mn barrels per day.
- To China 1.5 mn barrels per day.
- To Asia Pacific 6.8 mn barrels per day.
Malacca Strait

- It connects Indian Ocean to the Pacific Ocean, interconnecting India, China, and Indonesia.
- It is 1.7 nm wide at the narrowest point.
- Annually, 50,000 ships pass through the strait.
- 11.7 million barrels of crude oil and its by-products are on daily move.
4.5 mn barrels of crude oil are on daily move.
3 mn barrels are transported via Sumed Pipeline.
The closure of Suez Canal after 1967 Arab-Israeli war

The tanker traffic was diverted to The Cape of Good Hope

Additional 6000 nm
Annually 20 thousand ships pass.

3.3 mn barrels of Persian Gulf origin crude oil & by-products are on move toward the ports of Europe and USA.
Bab El Mendeb Strait
Region has security shortcomings

USS Cole (2000)
Limburgh (2002)
- It connects Pacific Ocean to Caribbean Sea and Atlantic Ocean.
- Daily 0.6 mn barrels US origin crude oil & by-products are carried through the canal to Central and North American Ports.
Panama Canal & Trans Panama Pipeline

If closed by any reason, detour course through Magellan Strait

Adds further 8000 nm
Other important Sea Areas
For Crude Oil & Natural Gas

- Gulf of Guinea & Niger Delta
- Caspian Sea
Other Important Choke Points

Strait of Gibraltar

Sicilian Strait
Arctic Passages

Connecting Pacific and Atlantic Oceans, as a result of ice melt downs in the Arctic Region due to global warming.
Arctic Passages

9000 nm Long Seattle-Rotterdam course through Panama Canal becomes 7000 nm with 2000 nm saving.
Arctic Passages

11200 nm Rotterdam-Yokohama course through Strait of Gibraltar and Suez Canal becomes 6500 nm with 4700 nm saving.
Arctic Passages

Distance cutdowns might cause revolutionary effects in maritime industry

%20 savings
Major causes for disruption of energy flow over the seas

Wars

Terror attacks

Piracy
The closure of Suez Canal

The disruption of oil flow from the Persian Gulf via Strait of Hormuz

Important experiences
Terror Attacks

Limburgh Attack (6 Oct 2002)

- 90 thousand barrels of oil dispersed to the sea.
- One crew member was dead with many wounded.
Yemeni Government has lost $4 million of monthly revenues.
3000 Yemenis have lost their jobs.
The insurance costs of maritime shipping have tripled.
Piracy constitutes threat and risk to the energy supply security over the seas.
Piracy
Sirius Star Case (2008)

- 320 thousand tons super tanker. (VLCC)
- Carrying 2 mn barrels of crude oil.
- The value of the tanker with cargo was $256 mn.
- The biggest ship ever hijacked in the maritime shipping history.
The security of world coastlines adjacent to major sea lanes of communications necessitate the sustainment of maritime security.
Post 11 September Period

Revolutionary developments have taken place in maritime security

Deter & Disrupt
The maritime security operations conducted in different maritime regions of the globe
Basic Elements of Maritime Security Operations

Maritime Domain Awareness
Soft Power

Maritime Interdiction Operations
Hard Power
Maritime Domain Awareness

- The real time surveillance
- The detection of entire ship movements

ACTIONABLE INTELLIGENCE
INTRA&INTER GOVERNMENTAL INFO&INTEL SHARING
INDISPENSABLE
The Maintenance of Maritime Security

No state or alliance has reach + capability to establish and maintain maritime security alone.
Keeping the sea lanes of communications along with important choke points

OPEN-SAFE-SECURE

esential necessity, leaving geopolitical competitions aside.
Regional Cooperation

The global partnership of regionally provided securities

to make world oceans and seas ever secure and safe for everybody and to deter those conducting illegal activities at sea.
"Not a taken for granted right for states" in an era of global interdependence
Maritime Security

"Once lost"

It takes long and difficult process to restore and maintain.
The maritime security is "sine qua non" in the energy supply security

National and international cooperation & coordination