

Hydrocarbon Exploration and Production in the East Mediterranean and the Adriatic Sea

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**Konstantinos Oikonomopoulos
Petroleum Geologist,
Research Associate, IENE**

Presentation Overview

- Production/Consumption in SE Europe
- Hydrocarbon E&P overview for:
 - Albania, Croatia, Cyprus, Egypt, Greece, Italy, Israel, Lebanon, Montenegro, Syria and Turkey
- General comments on Hydrocarbon E&P activities

| Country | Oil Production (bbl/d) <i>[2011]</i> | Oil Consumption (bbl/d) <i>[2011]</i> | Gas Production (bcf/y) <i>[2010]</i> | Gas Consumption (bcf/y) <i>[2010]</i> | Oil Refining Capacity (bbl/d) <i>[2009]</i> |
|----------------------|---|---|---|---|---|
| Albania | 15,500 | 44,000 | 2 | 1 | 26,000 |
| Bosnia & Herzegovina | 0 | 35,000 | 0 | 7 | 0 |
| Bulgaria | 1,000 | 134,000 | 0 | 77 | 115,000 |
| Croatia | 13,500 | 113,000 | 67 | 100 | 250,000 |
| Cyprus | 0 | 65,000 | 0 | 0 | 0 |
| Egypt | 564,500 | 697,000 | 2,369 | 1,630 | 726,000 |
| F.Y.R.O.M. | 0 | 19,000 | 0 | 3 | 50,000 |
| Greece | 1,800 | 336,800 | 0 | 135 | 423,000 |
| Italy | 99,200 | 1,455,500 | 293 | 2,930 | 2,337,000 |
| Israel | 100 | 237,000 | 114 | 129 | 220,000 |
| Lebanon | 0 | 88,000 | 0 | 0 | 0 |
| Montenegro | 0 | 4,000 | 0 | 0 | 0 |
| Romania | 86,900 | 217,000 | 374 | 455 | 517,000 |
| Serbia & Kosovo | 2,200 | 81,000 | 15 | 80 | 215,000 |
| Syria | 300,200 | 258,000 | 356 | 340 | 240,000 |
| Turkey | 45,700 | 679,900 | 24 | 1,346 | 714,000 |
| TOTAL | 1,130,600 | 4,464,200 | 3,614 | 7,233 | 5,833,000 |

Source: U.S. Energy Information Administration

Albania

- producer since early 20th century
- production peaked in 1974 (2.25 million tons/year)
- oil production in 2011: 15,500 bbl/d
- current gas production: 500 Mcf

Croatia

- production peaked in 1980s
- production has faced major decline 1994
- oil production in 2011: 13,500 bbl/d
- gas production in 2010: 67 Bcf

Cyprus

- first activity before World War II
- first seismic, in 1970-1974 (shallow, 200 m)
- mid-1980s, geological/geophysical by the Soviet Academy of Scientists, offshore
- in 2011 Noble Energy Inc. discovers Aphrodite in “Block 12” (estimated resources 5-8 Tcf)
- 2nd Licensing Round: 15 bids submitted by 29 companies

Egypt

- first production in 1885
- in 1938 first commercial discovery
- in 1973 the Ministry of Petroleum was formed
- proven reserves: 4.4 billion bbl
- declining oil production: 540,000 bbl/d
- gas reserves: 78 Tcf (3rd highest in Africa)
- gas production in 2010: 2.3 Tcf

Greece

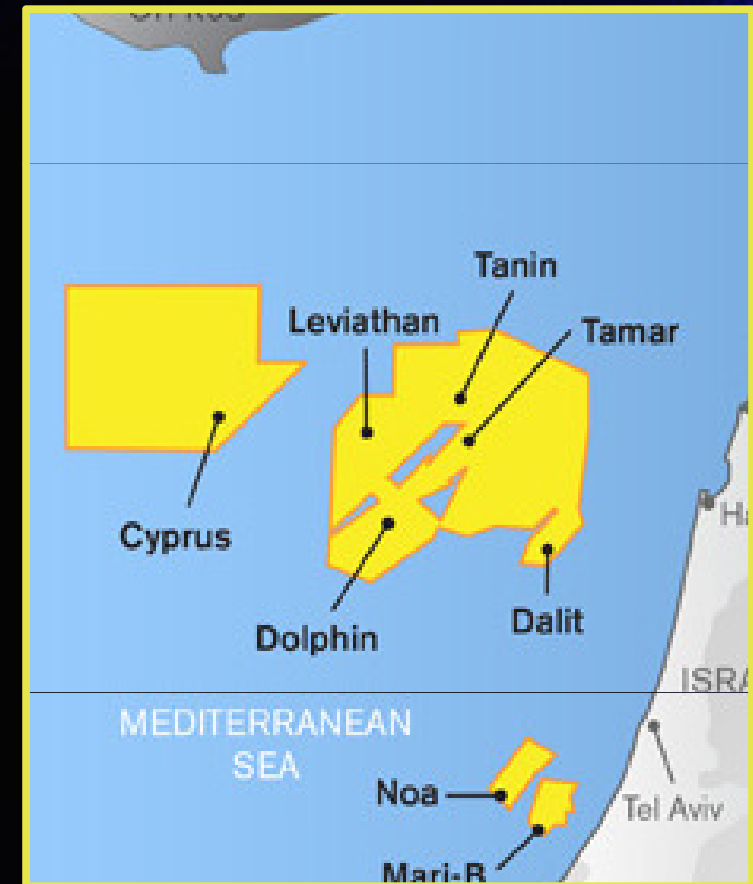
- first attempts in 1903 (some evidence show efforts in 1860)
- systematic exploration in the 1960s-1970s
- 1971 discovery of Prinos, offshore Thassos
- Prinos' production peaked in 1985 (28,000 bbl/d)
- 1st Licensing round in 1996
- today, "open door" procedure and international invitation for non-exclusive seismic

Italy

- first exploration in 19th century, poor results
- 1st sizeable gas field discovered in 1944 (Po Plain)
- discoveries where made ever since, but exploration has not reached a mature level
- proven oil reserves: 1 billion bbl
- proven gas reserves: 3 Tcf
- oil production in 2011: 99,200 bbl/d

Israel

- drilling began in 1947
- in January 2009, Noble Energy Inc. discovered Tamar (gross mean resources 5 Tcf)
- in March 2009, Noble Energy Inc. discovered Dalit (gross mean resources 500 Bcf)
- in June 2010, Noble Energy Inc. discovered Leviathan (gross mean resources 17 Tcf)



Lebanon

- no wells offshore Lebanon
- 7 wells onshore 1947-1967 (traces of gas and/or bitumen)
- no hydrocarbon production

Montenegro

- activity started after World War II
- 1949-1966, 16 wells onshore (900-4,600 m)
- 5 offshore wells, 1970s-mid 1990s
- total length of 6,500 km 2D seismic
- 311 km² of 3D seismic
- Data Room currently opened
- 1st Licensing round expected in 2012

Syria

- exploration started in the mid 1930s
- in 1968 first commercial discovery
- most significant producer in the Mediterranean Middle East
- oil reserves: 2.5 billion bbl
- in 2011, oil production: 300,200 bbl/d
- in 2010 gas production: 356 Bcf
- proven gas reserves: 8.5 Tcf

Turkey

- more than 3,000 wells since 1935 (mainly onshore)
- most of the reserves and major production is in SE Turkey
- oil reserves: 270 million bbl
- in 2011, oil production: 45,700 bbl/d
- in 2010, gas production: 24 Bcf

General comments on H/C E&P activities

- under-explored area (except Egypt & Syria)
- significant discoveries have opened new plays
- further exploration efforts will redefine the future

Thank you for your attention