



# LEBANON OFFSHORE PETROLEUM EXPLORATION

H.E. MINISTER OF ENERGY AND WATER  
REPUBLIC OF LEBANON

Eng. Gebran BASSIL





# Lebanon First Offshore Licensing Round Preparation:

## ✓ Legislative

- ✓ **Offshore Hydrocarbon Law** (Aug. 2010)
- ✓ Petroleum Activity Regulations
- ✓ Regulatory Decrees for the Hydrocarbon Law implementation
- ✓ Exploration and Production Agreement (EPA)

## ✓ Administrative

- ✓ Organization 's structure and regulations of the **Petroleum Administration** (recruitment process underway)
- ✓ Establishment of Permanent **Data Room** at MEW (Nov. 2010 – present)

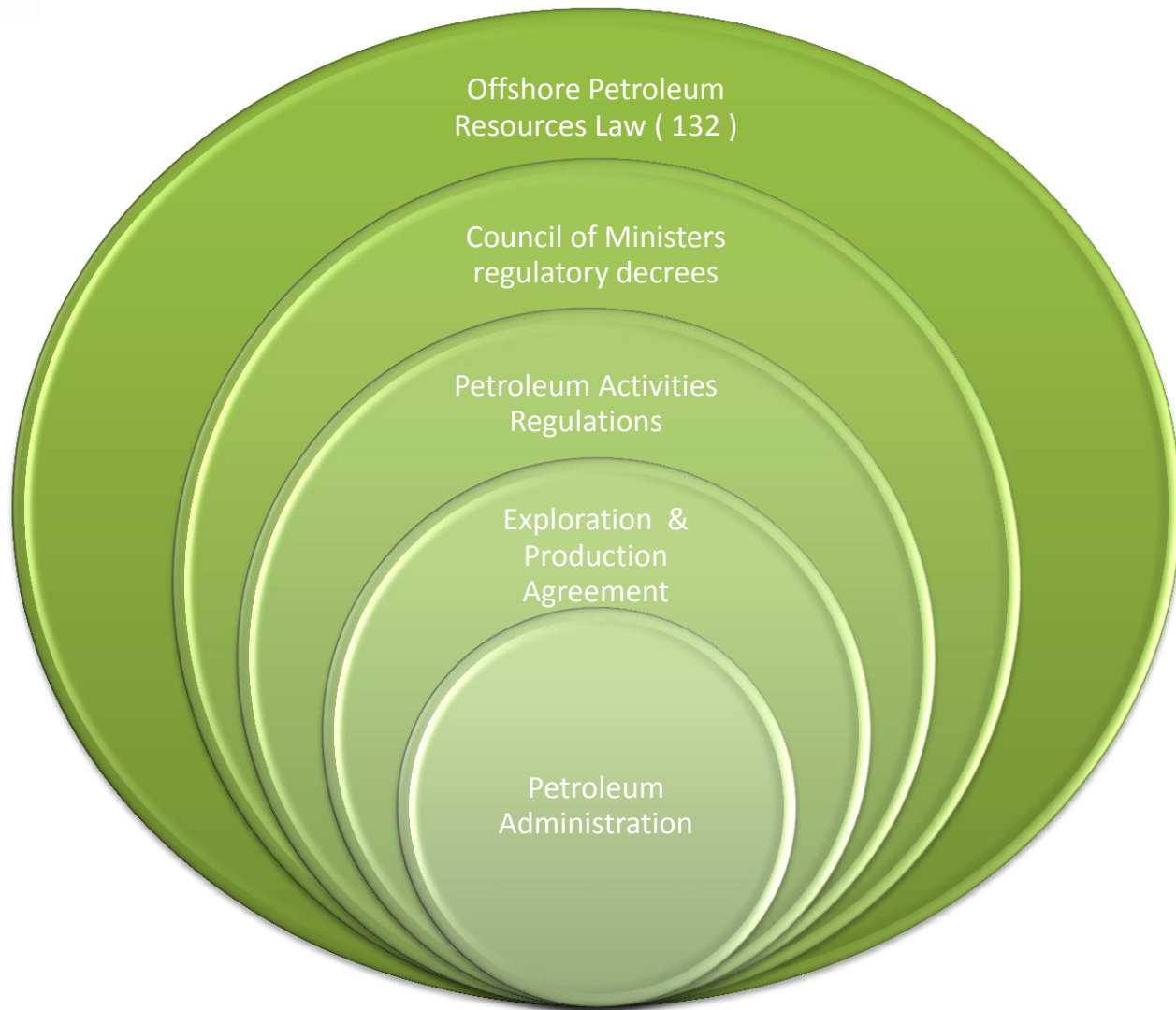
## ✓ Technical

- ✓ Seismic Data Acquisition and Interpretation (2D/3D)
- ✓ Economic Modeling and Simulation
- ✓ Strategic Environmental Assessment (April 2012)





# Lebanese Offshore Hydrocarbon Legal and Institutional Frame Work





# Offshore Petroleum Resources Law (132)

## ✓ **Levels of Governance**

- ✓ 1- Council of Ministers
- ✓ 2- Minister of Energy and Water
- ✓ 3- Petroleum Administration

## ✓ **Un-incorporated Joint-Venture of Minimum THREE Companies /EPA**

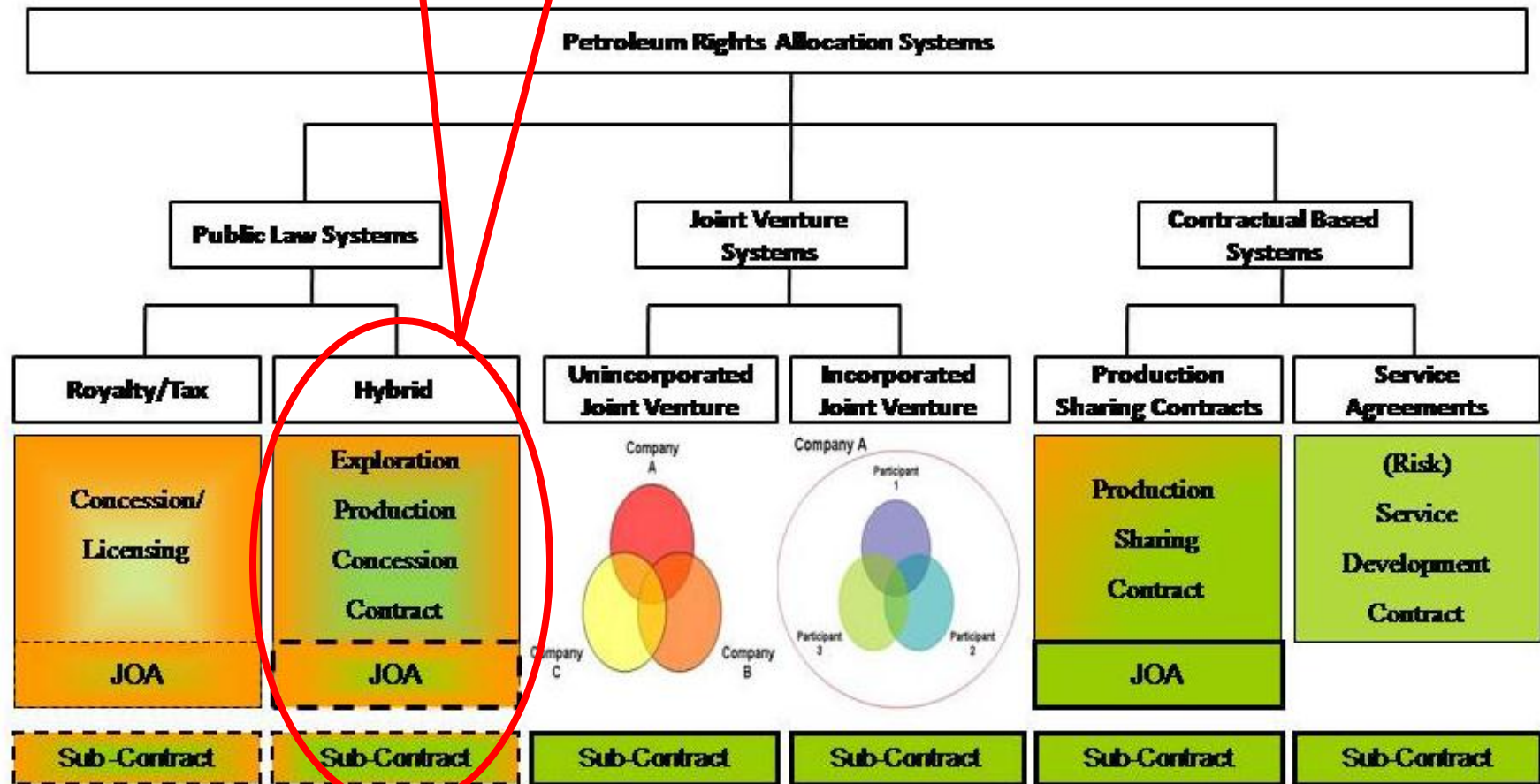
## ✓ **EPA Conditions:**

- ✓ Exploration phase of Max. 10 years
- ✓ Min. 50% Relinquishment upon First Exploration Phase Extension
- ✓ Production period of Max. 30 years



# Elements of the Lebanese PSA

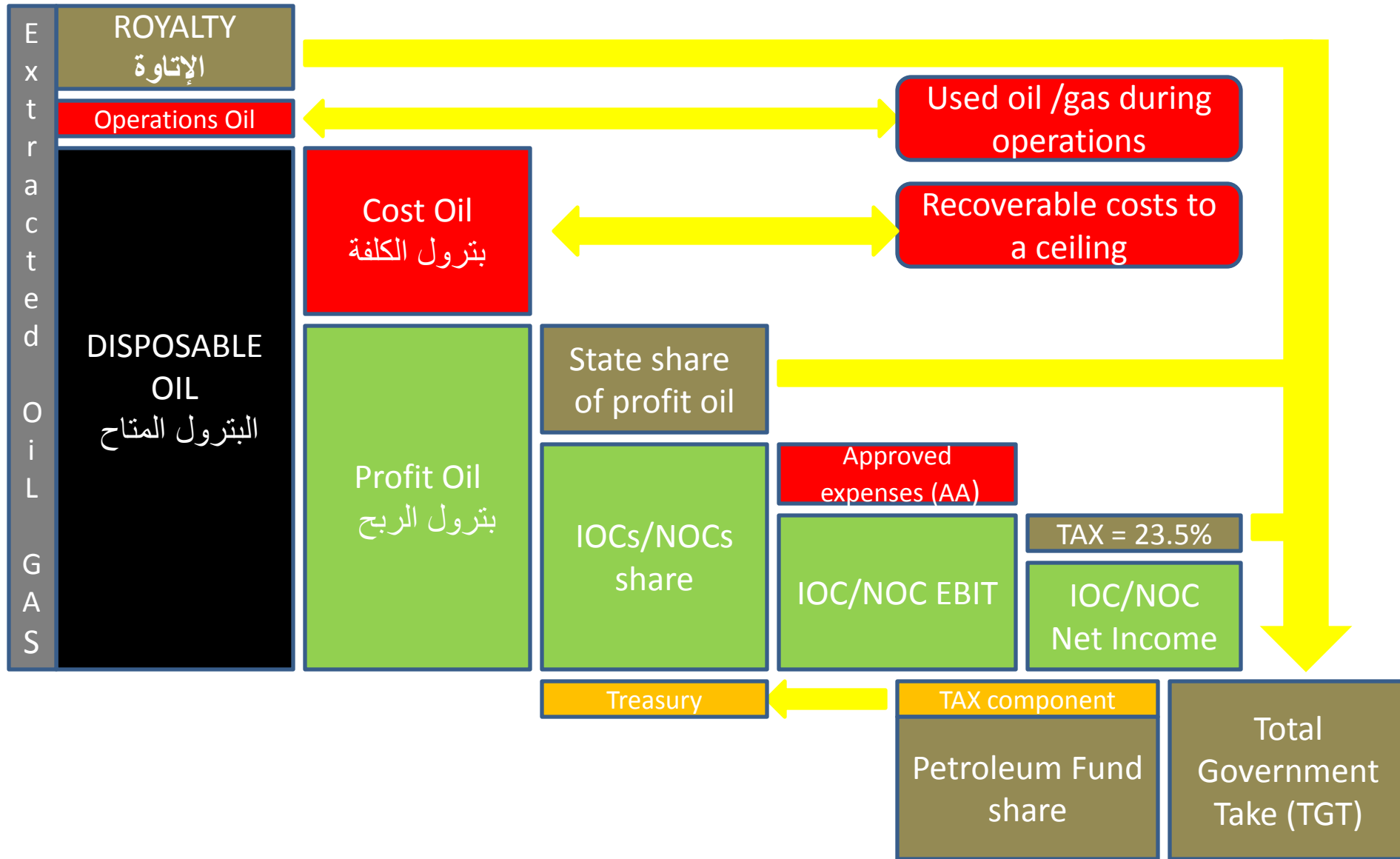
Lebanon Exploration and  
Production Agreement (EPA)





# Petroleum Activities Regulations:

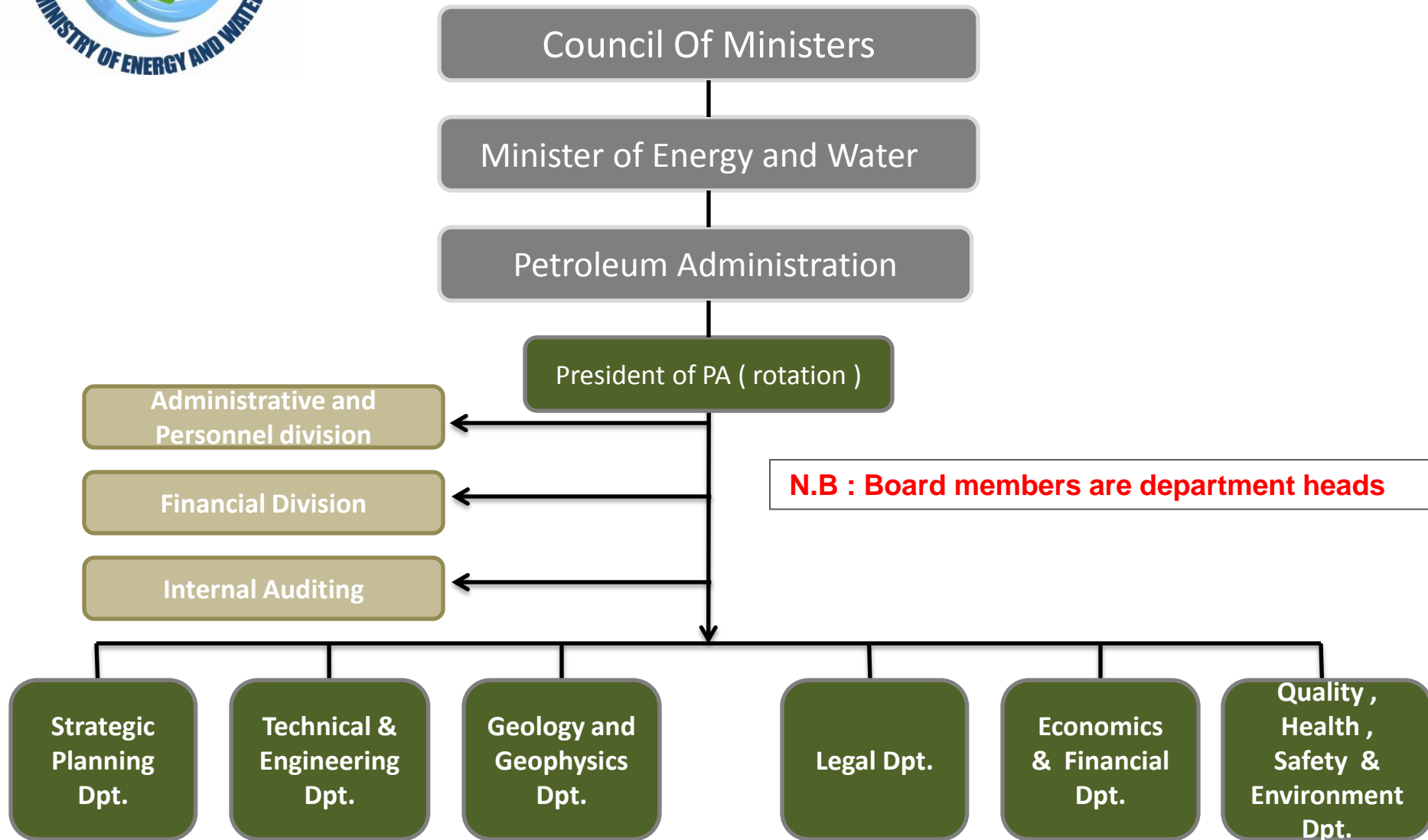
## *Fiscal System and Economic Terms*







# Lebanon Petroleum Administration





# Technical progress and achievements

## ✓ 2D Seismic Data Acquisition

- ✓ Overall >14,000 km
- ✓ 460 km Geco-Prakla 1993
- ✓ 5,000 km Spectrum (2000, 2003) – reprocessed recently
- ✓ 8,800 km PGS (2008, 2011)
- ✓ **ONSHORE: 500km (via Spectrum; soon)**

## ✓ 3D Seismic Data Acquisition:

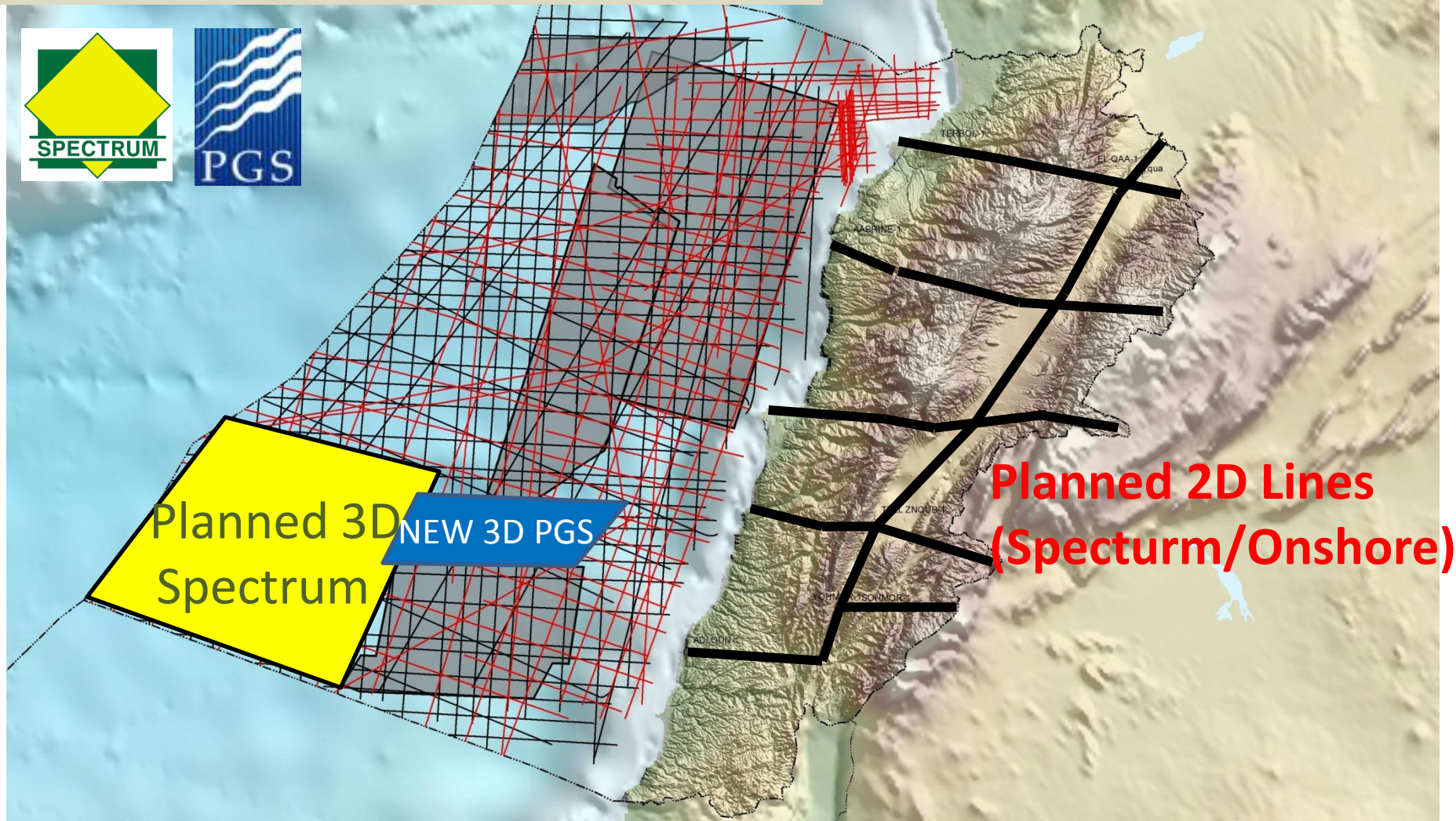
- ✓ Overall >7,000 sq. km (PGS; 2006, 2007, 2011, 2012)
- ✓ About 3,000 sq. km (Spectrum – soon, 2012)

## ✓ Interpretation, Studies and Assessment:

- ✓ Regional Baseline Interpretation Report (covering 10,000 km 2D)
- ✓ 3D Interpretation, Prospects Definition /Volumetrics
- ✓ Basin Modeling – based on Regional Baseline Study



# Geophysical Data Set



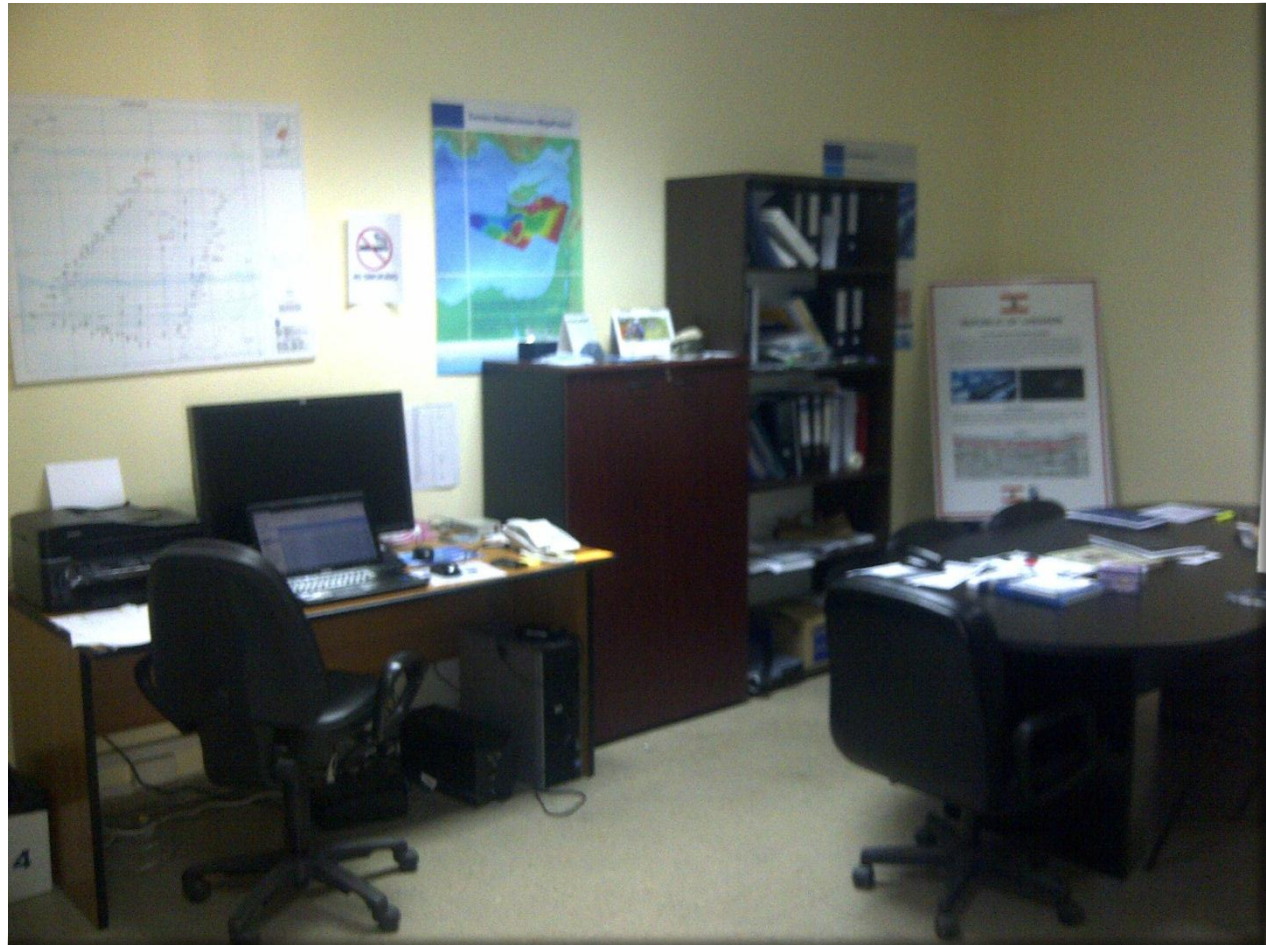
2D: 5,000km Spectrum / 8,800 km PGS

3D: 6,400 (+600) sq. km PGS / 3,000 sq. km Spectrum



# Data Base – DATA Room (MEW)

- Seismic Data Collection and Database Elaboration
- Geological Data
- Meeting IOCs
- Field Trips
- Web Site



[www.lebanon-exploration.com](http://www.lebanon-exploration.com)



# MEW Data Interpretation

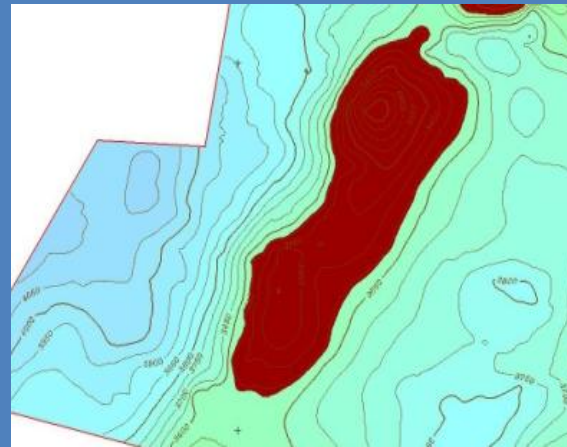
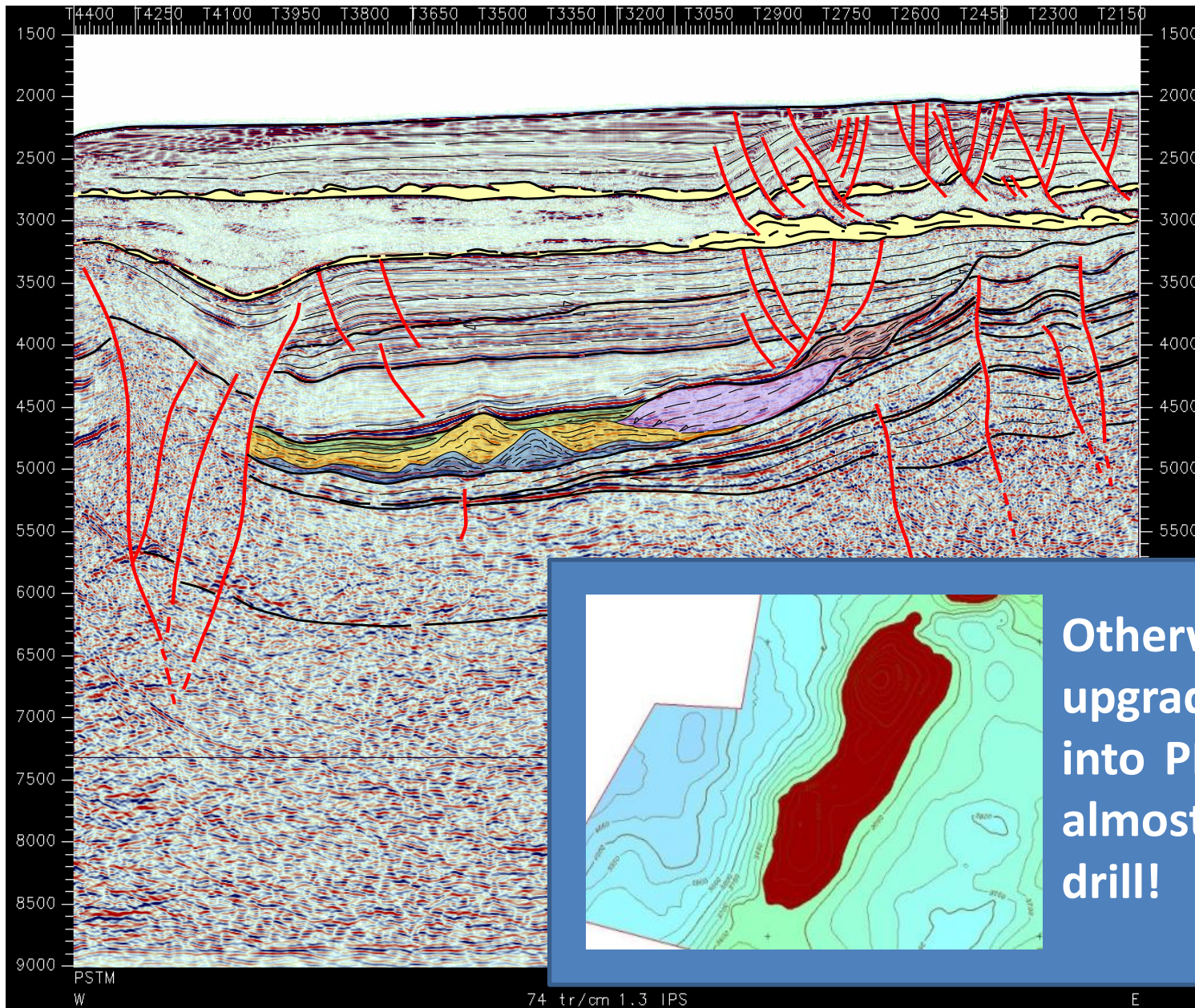
REGIONAL BASELINE INTERPRETATION REPORT – Oct. 2011

- Regional Geological Overview
- Integrated Interpretation of Regional 2D Seismic Surveys (Spectrum 2000/02, and PGS 2008)
- Plays and Play Fairways Analysis
- Leads Identification
- Quantitative Estimation of the Main Leads, Risk and Prospectivity Assessment

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FORUM 2011



# 3D SEISMIC INTERPRETATION: NEW (CARBONATES) PLAYS/LEADS

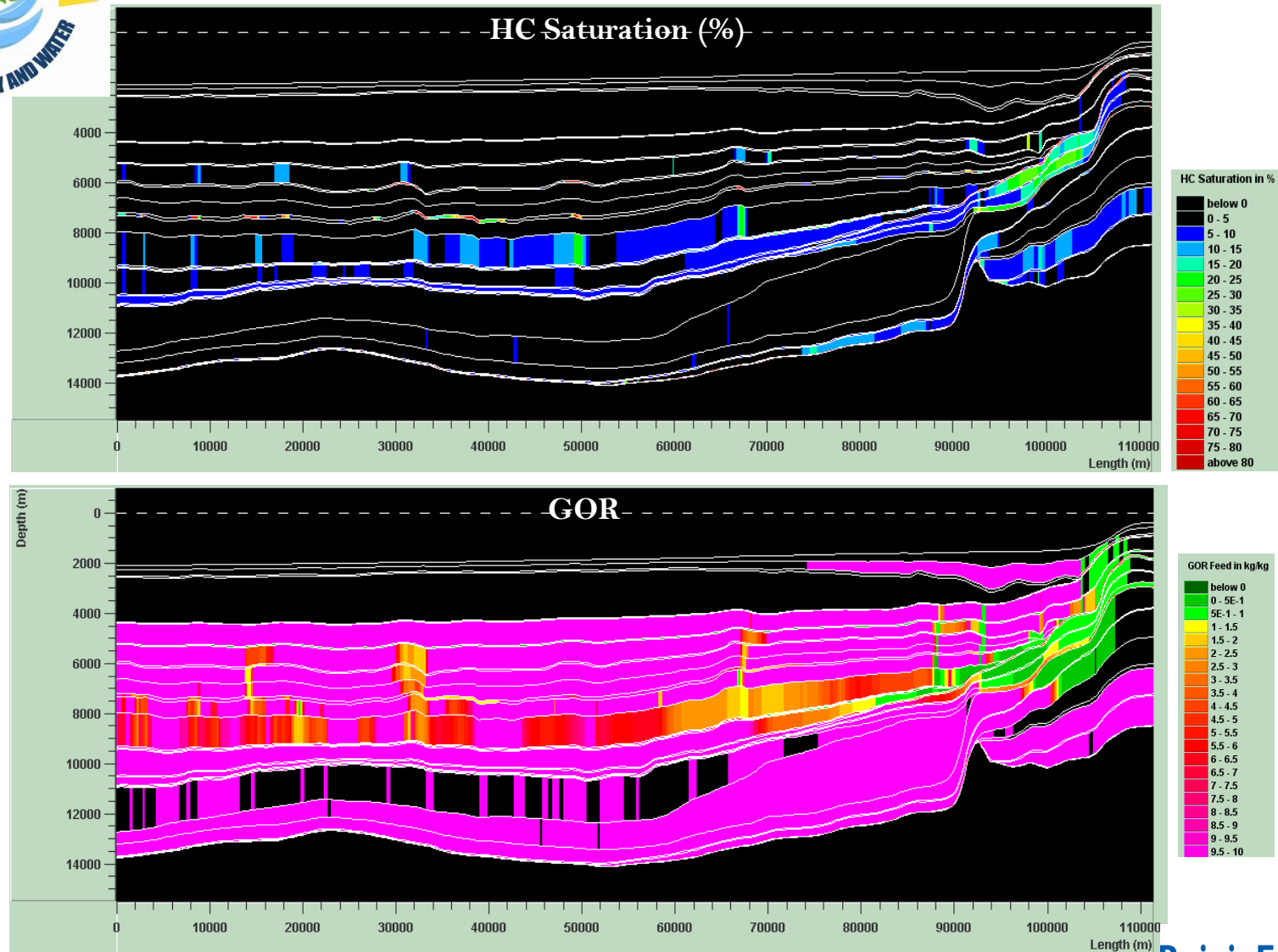


Otherwise,  
upgrading Leads  
into PROSPECTS –  
almost ready to  
drill!

# BASIN MODELING: GOR AND SATURATION AT PRESENT DAY



## Simulated migration of Oil and Gas







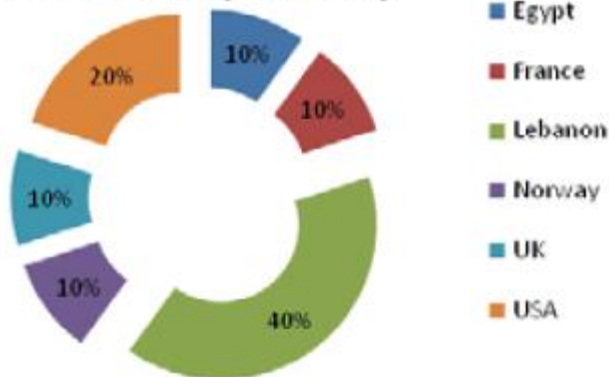
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FORUM & EXHIBITION 2012

# Lebanon International Petroleum Exploration (LIPE) Forum & Exhibition – July 3 to 5, 2012

Check on: [www.lebanon-exploration.com](http://www.lebanon-exploration.com)

## LIPE 2011

Exhibitors by country







# Lebanon: Location advantages

