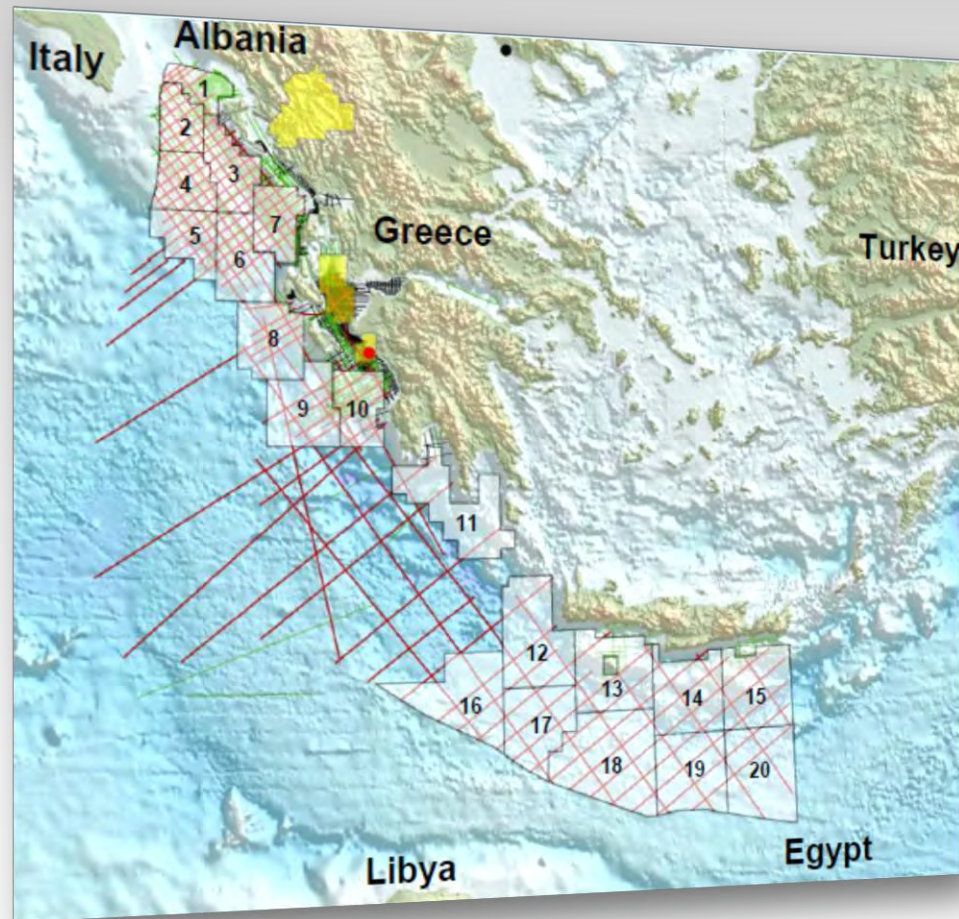


New developments on Greek hydrocarbons' exploration and production - **New challenges**



Sofia Stamatakis, Professor, NTUA



Open Door 2012



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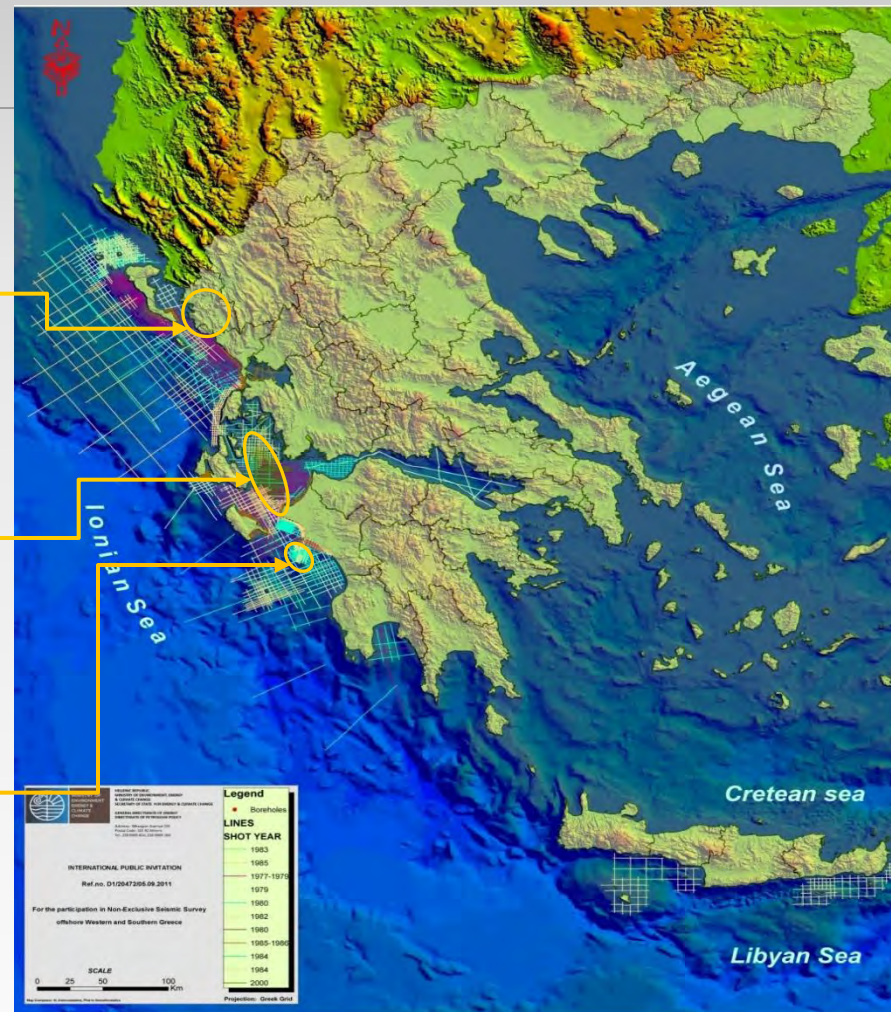


Lease Agreements
have been signed by
the Minister & ratified
by the Parliament

**Ioannina (onshore)
Energean, Petra**

**Patraikos Gulf
Helpe, Edison, Petroceltic**

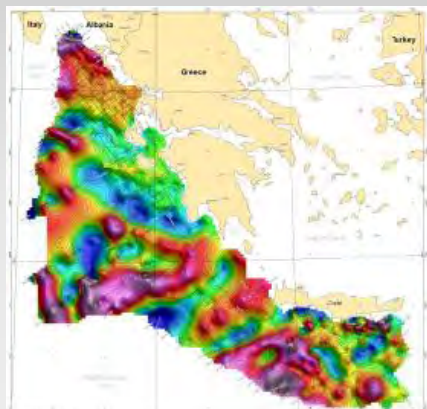
**Katakolo (offshore)
Energean, Trajan**



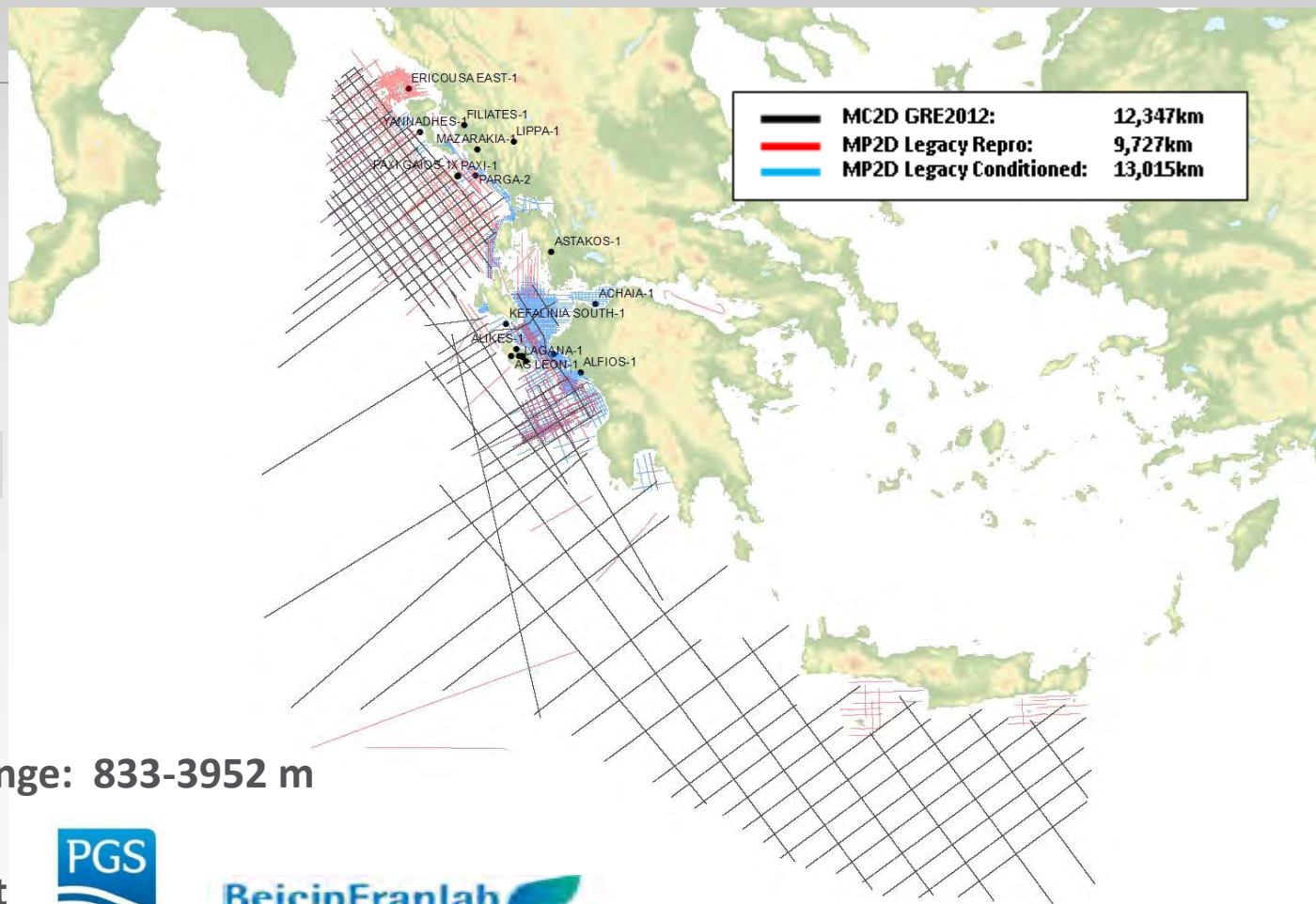
Greece Mega-Project

New Data Acquisition - Updated & Consistent Legacy Data

35,000 line km 2D



Mag data



19 Wells of Depth range: 833-3952 m

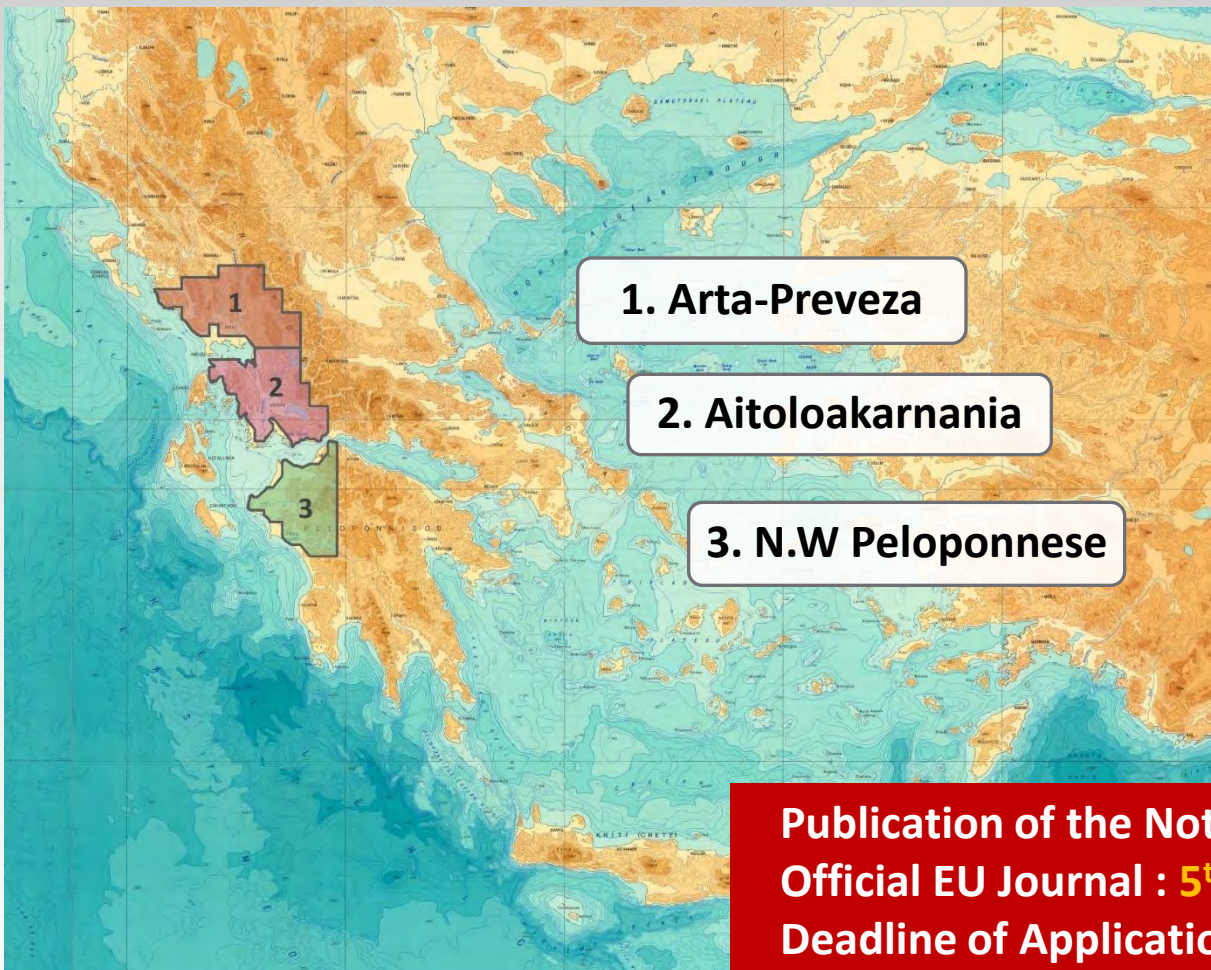
Interpretation Report



Western Greece **Onshore** Licensing Round



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All three areas are aligned along the prolific Ionian Zone

A dedicated Data Room operates in Athens

Data packages comprise of vintage data up to year 2000

Publication of the Notice of the Call for Tender in the Official EU Journal : **5th November 2014**
Deadline of Application submission : **6th February 2015**

2nd Licencing Round 2014



International Tender
Notification to the EU Journal pending
Deadline for expression of interest still
open

Call for Tenders

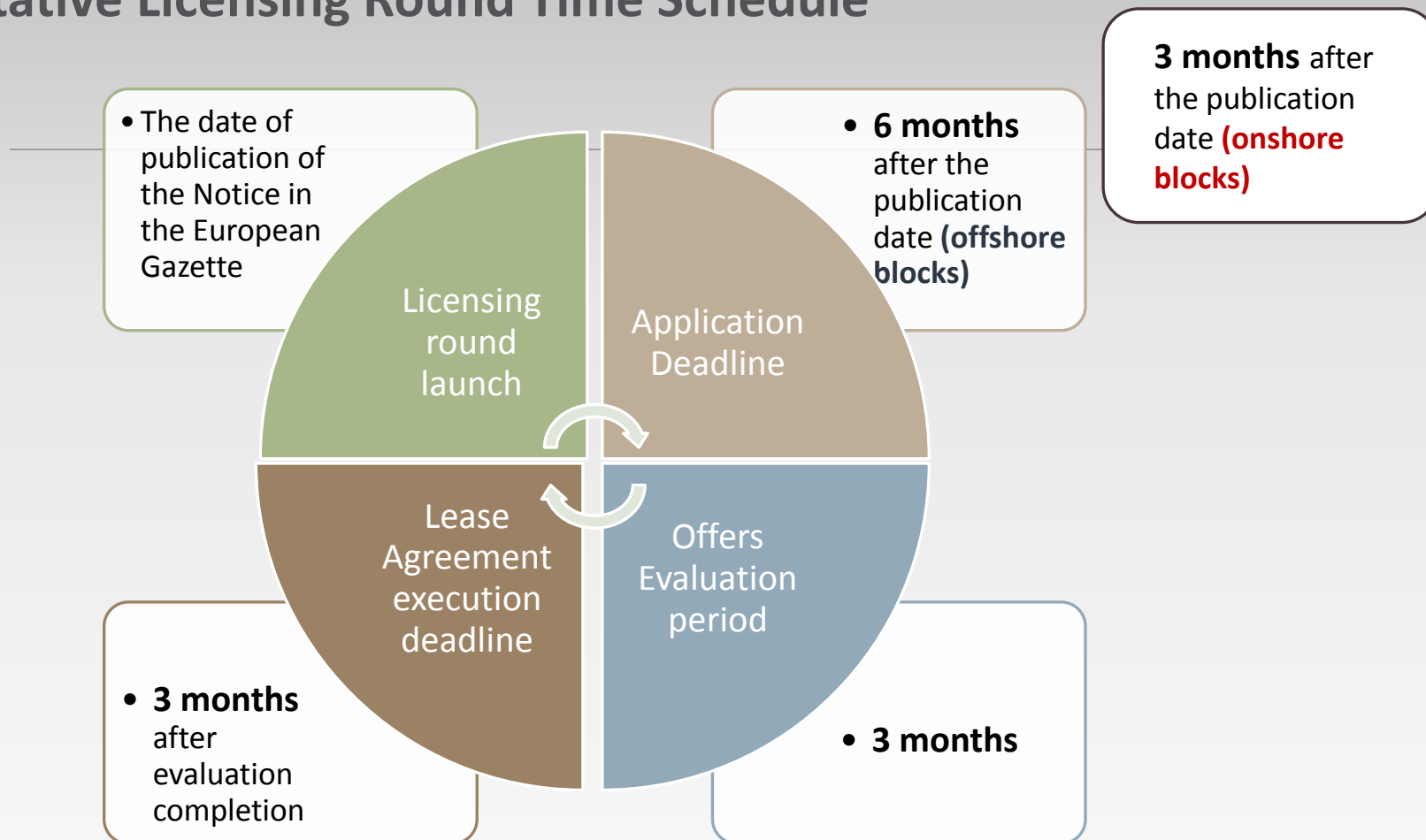
Invitation – Legal Framework

The Licensing Round is subject to the provisions of **Law 2289/1995** as amended by **Law 4001/2011**

The Hellenic Republic shall enter into a **Lease Agreement** with each Selected Applicant on the basis of **Royalty/Tax** arrangements

Call for Tenders

Tentative Licensing Round Time Schedule



Call for Tenders

Administrative Requirements

Application Fee & Bid Guarantee

- Applicants shall pay the Ministry an Application Fee for each Application (2,000 euros)
- Bid Guarantee valid at least until the last day of the Application Validity Period (100,000 euros - reimbursable amount)

Validity of Applications

- Applications must be unconditional and remain valid for a period of **180** days starting from the day following the Application Deadline

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Participation Prerequisites - **Onshore**

a. Application Fee

b. Bid Guarantee

c. Data Purchase

- Each Applicant must purchase the Data Package (DP) for each block (s) area applied for
- DP for “Arta-Preveza” : 20,000 euros
- DP for “Aitolokarnania” : 25,000 euros
- DP for “NW Peloponnese”: 25,000 euros

The money paid for (a) and (c) will not be reimbursed under any circumstances

Call for Tenders

Participation Prerequisites - Offshore

a. Application Fee

b. Bid Guarantee

c. Data Purchase

- Purchase all PGS MC2D-GRE2012 seismic data within the block(s) applied for and no less than a minimum amount of 1500 line-km of the PGS MC2D-GRE2012 seismic data. In case of 2 members a price reduction of 10% is valid, of 3 or 4 members, 20% or 30% respectively

d. Interpretation Report Purchase

- Purchase the 2D Interpretation Report of 2014 *“New Exploration Opportunities - Offshore Western Greece & South Crete”*

Where the Applicant is a Consortium, the requirements (c) and (d) must be fulfilled by each Consortium Member. The money paid for (a), (c), and (d) will not be reimbursed under any circumstances

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Submission of Applications



Applicants are allowed to submit Applications for more than one Blocks. In such case, **separate and independent** Applications in separated envelopes are required for each Block

Application
Letter

Sub folder A
Legal Capacity
Documentation

Sub folder B
Financial
Capacity
Documentation

Sub folder C
Technical
Capability
Documentation

**Sealed Sub
folder D**
Biddable Items

Call for Tenders

Technical Capability Documentation (Operator)



Key oil/gas fields (or areas) that are currently operated or developed by the Applicant. The role and level of responsibility in each actual project should be stated (Operator or Participant).

Operatorship experience in deep and ultra deep water areas (**offshore**)

Countries in which the Applicant has been active in E&P operations in the last 5 years

Proven & Probable reserves during the last 5 years

Acreage holding (in sq km) for the last 5 years

Average production of hydrocarbon (MMboe) for the last 5 years

Experience of operating in environmentally sensitive areas. Operator's qualification on HSE, QA-QC etc

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Technical Capability Documentation

Any lack of efficiency and responsibility or non-performance displayed by the Applicant on obligations under licenses previously granted.

Details of any fines or other punitive measures issued by any regulatory body with respect to environmental damage, rehabilitation and protection of nature and the environment concerning any of the Applicant's activities

Experience of key personnel in exploration and production operations

The in-house capabilities of the Applicant



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Fiscal regime- Biddable & Negotiable Terms



Minimum exploration work program for each exploration phase

Financial Guarantee (euro commitment corresponding to the estimation of the work program)

Royalties: imposed on a sliding scale
tax-deductible

based on the ratio R/C (R Factor) of gross cumulative revenues to cumulative costs

- Royalties will range from a lower limit of **4%** of the quantity of Hydrocarbons and By-Products Produced and Saved in the Contract Area, in cash or in kind, when **$R \leq 0.5$**
- Tranches escalation: **$0.5 < R \leq 1.0$, $1.0 < R \leq 1.5$, $1.5 < R \leq 2.0$ & $R > 2.0$**

Depreciation escalation 40% - 70% (*Capital expenditure not recovered in any fiscal year during the lease and may be carried forward to the subsequent fiscal years*)

Signature and Production bonus (not recoverable)

Relinquishment ranging from 20-50% of the original contract area at the end of each exploration phase

Annual Training & Support of human resources of the public administration



Biddable & Negotiable
Terms

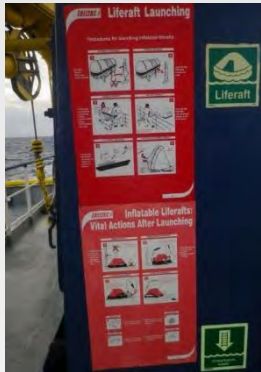
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Standards & Regulations – **Non Negotiable...**



Greece as a EU Member State is:

- Committed to all relevant international protocols, agreements and EU legislation
- Adapting the new 2013/30/EC Offshore Safety Directive. A Working Group is already preparing a draft of the relative transposition law
- Activities must comply with generally accepted best oil practices, in full compliance with European energy and environmental legislation
- Licensees are bound to follow the recommendations and comply with the results of the SEAs
- Each E&P project will require EIA according to the Law 4014/2011 and may commence only after the relevant EIA license is granted



Minimum Exploration Work Program Description



A minimum exploration work program must be submitted for each Exploration Phase.

The quality of the work program and the timeframe for evaluating the full potential of the area applied for is of great importance.

Regional geology approach within the Block Area

Brief hydrocarbon geological analysis - Prospectivity of the Block Area (stratigraphic, sedimentology, structural framework, basin development etc)

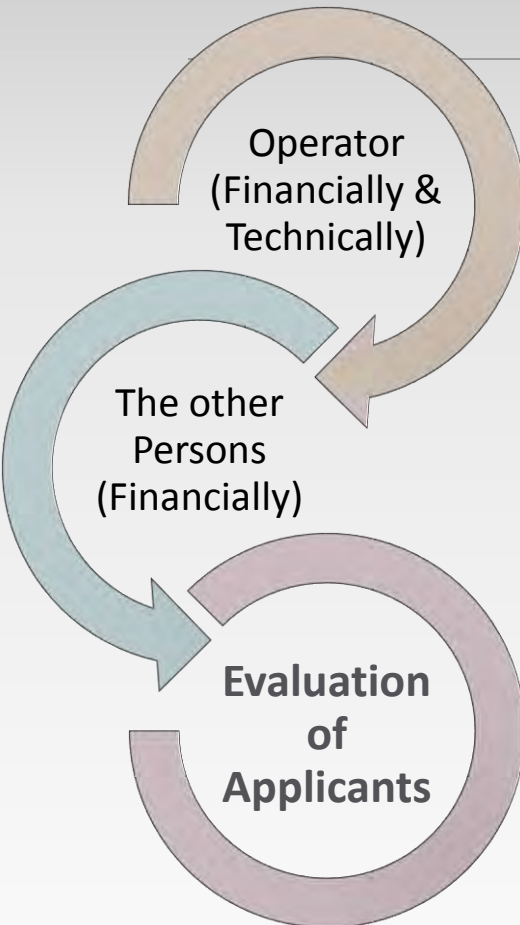
Leads & play models

Exploration strategy, obligatory work commitment and time schedule for the various exploration phases

Environmental plans and systems and their implementation



Evaluation Criteria



The Financial capacity, Technical capability & Professional expertise of the Applicant

The proven experience of the Operator

The Applicant's geological understanding of the area in question, **the quality of the work programme** and the timeframe for evaluating the full potential of the area

The biddable technical & fiscal terms

The experience of carrying out drilling works in the presence of HP and H2S

The experience of operating in environmentally sensitive areas and in areas where tourism is an important earner

Past compliance with licencing frameworks in other countries

Evaluation Procedure



Evaluation Committee

1 Application Envelopes shall be unsealed and submitted documentation shall be recorded at a public meeting of the Evaluation Committee (within 10 days after the Applications deadline). Sub folder D remains sealed

2 The Evaluation Committee shall convene to examine whether Application Envelope's content fulfills :



Applicants typically qualified

Evaluation Procedure

- 3 The Evaluation Committee shall thoroughly examine and evaluate the content of each Application submitted by **Applicants typically qualified**



- 4 Evaluation Committee shall convene to unseal subfolder C and Applicants' scoring and ranking will be conducted according to the evaluation mark scheme. Applicants will be invited by the Evaluation Committee to negotiate competitively for the block applied for. Negotiations will be conducted on the basis of the biddable items



- 5 After the conclusion of negotiations, the Evaluation Committee shall submit in writing to the Minister the ranking list, followed by a proposal to the Minister to nominate the Selected Applicant.



Call for Tenders - Evaluation Mark Scheme



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Criteria	Items for Evaluation		Mark (Up to)	Weight (%)
Technical	First Exploration Phase (3 years)	2D seismic survey (km)	40	40
		3D seismic survey (sq. km)	60	
		Other surveys	10	
		Exploration wells	150	
		Financial commitment	100	
	Second Exploration Phase (3 years, 2 years -onshore)	2D seismic survey (km)	5	
		3D seismic survey (sq. km)	25	
		Exploration wells	70	
		Financial commitment	50	
	Third Exploration Phase (2 years)	2D seismic survey (km)	5	
		3D seismic survey (sq. km)	15	
		Exploration wells	60	
		Financial commitment	50	
Financial	Royalties		250	60
	Bonuses	Signature Bonus	100	
		Production Bonus	20	
	Training	During Exploration	20	
		During Production	5	
	Depreciation		10	
	Relinquishment		5	



Call for Tenders

Elements for the Design of Blocks

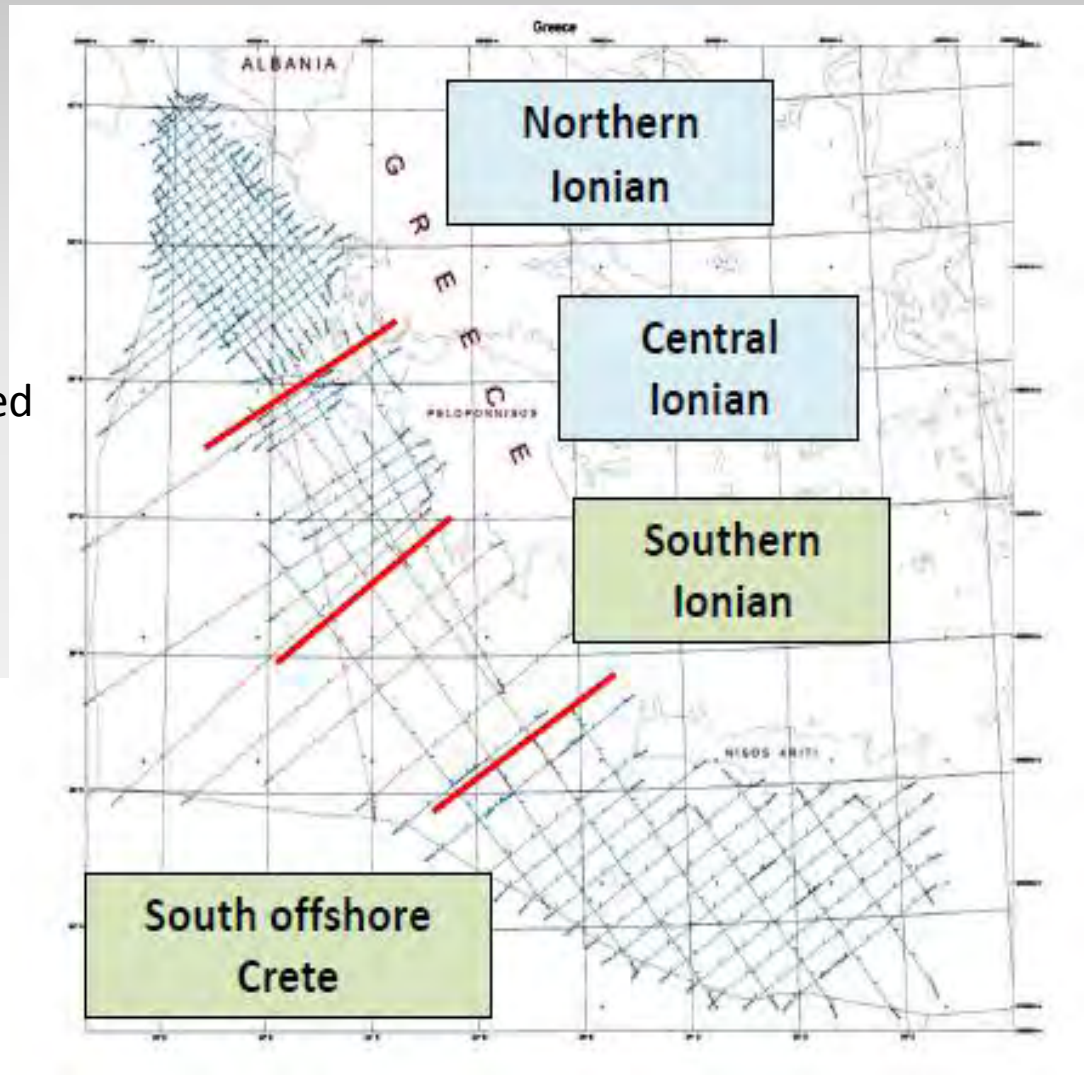
Exploration Maturity

Potential Prospectivity:

- Plays/leads/prospects identified
- Estimated risks
- Depth of potential objectives

North Ionian & Central Ionian are proven petroleum provinces (reservoir, traps)

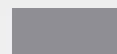
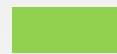
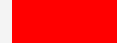
South Ionian & South of Crete are frontier areas with hydrocarbon indications

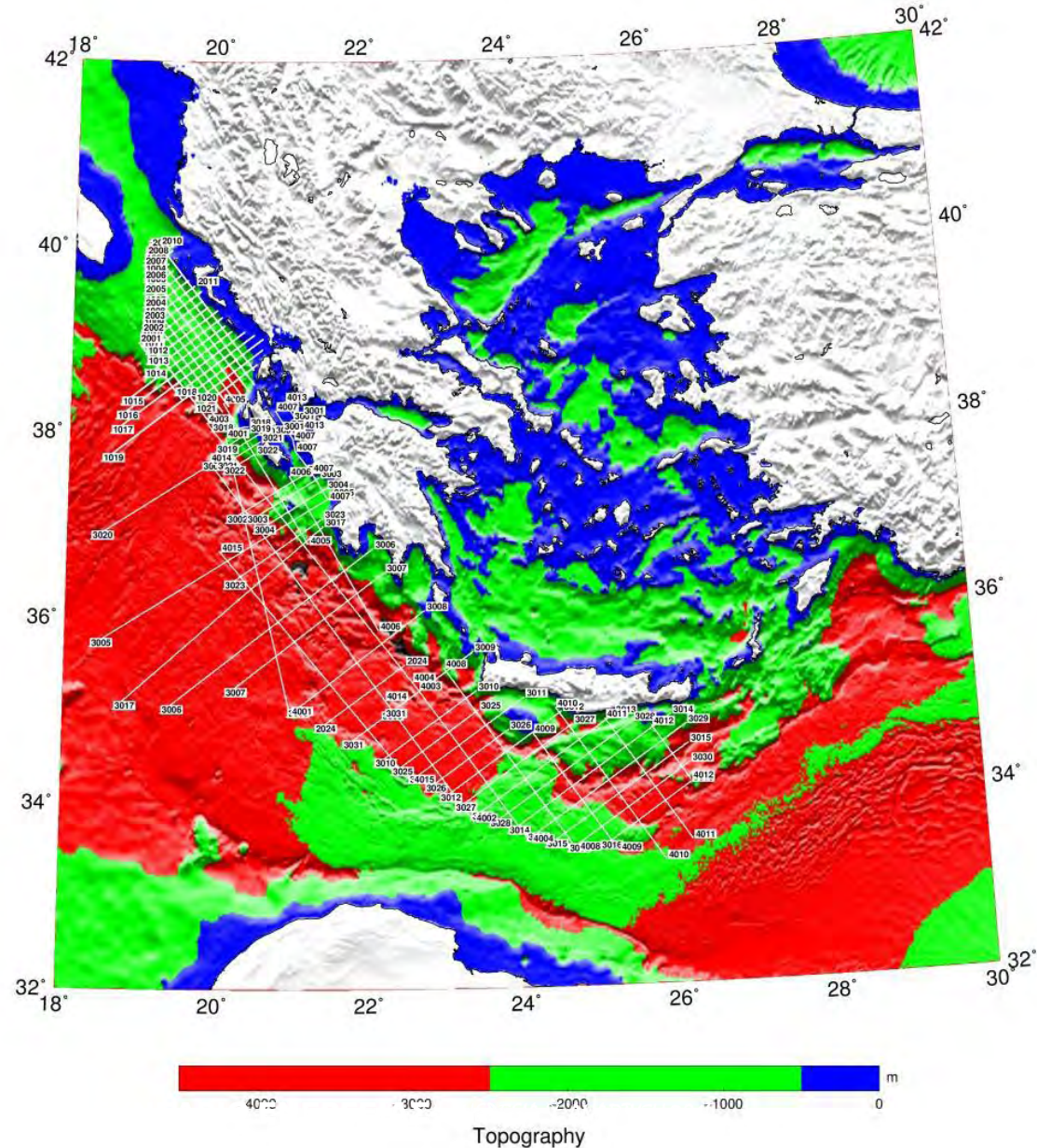


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Elements for the Design of Blocks

Water Depth

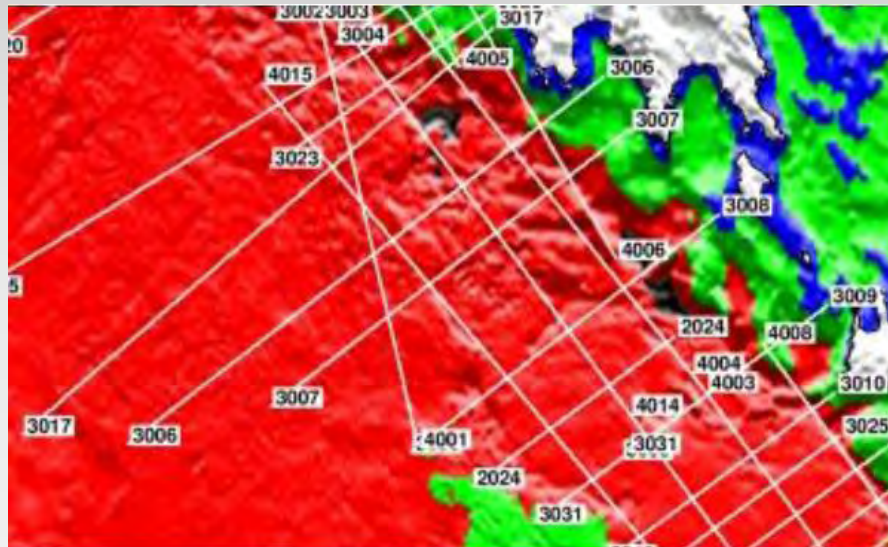
-  : between the coast line and 500m
-  : between 500 and 2500 m
-  : beyond 2500 meters



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Elements for the Design of Blocks

Data Density

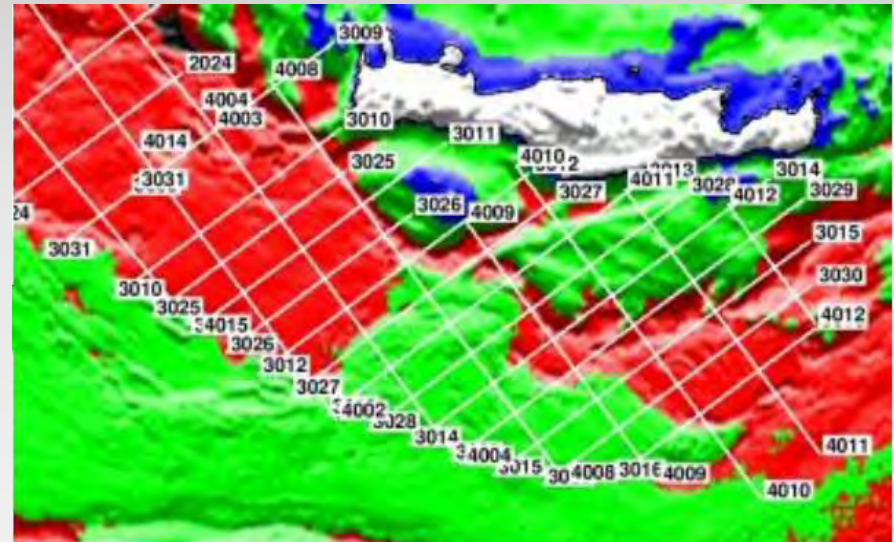


Southern Ionian

Area: 70 000 sq km

PGS 2D seismic lines: 2300km

Legacy 2D seismic lines:
550 (R) + 150 (C) km



South offshore Crete

Area: 70 000 sq km

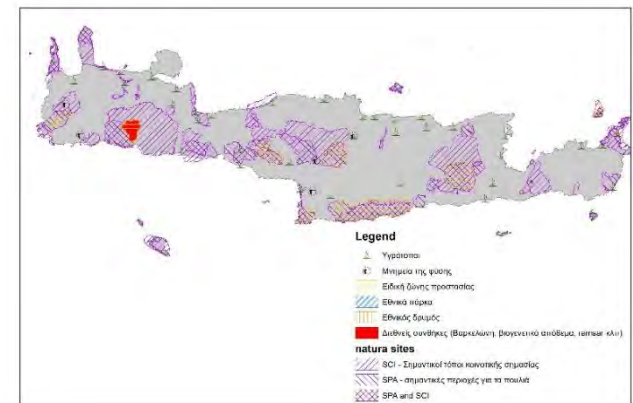
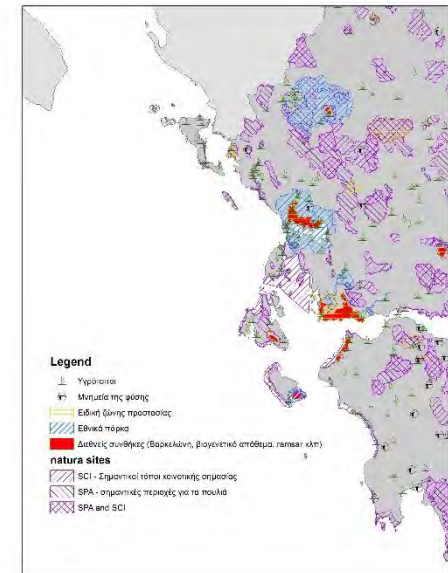
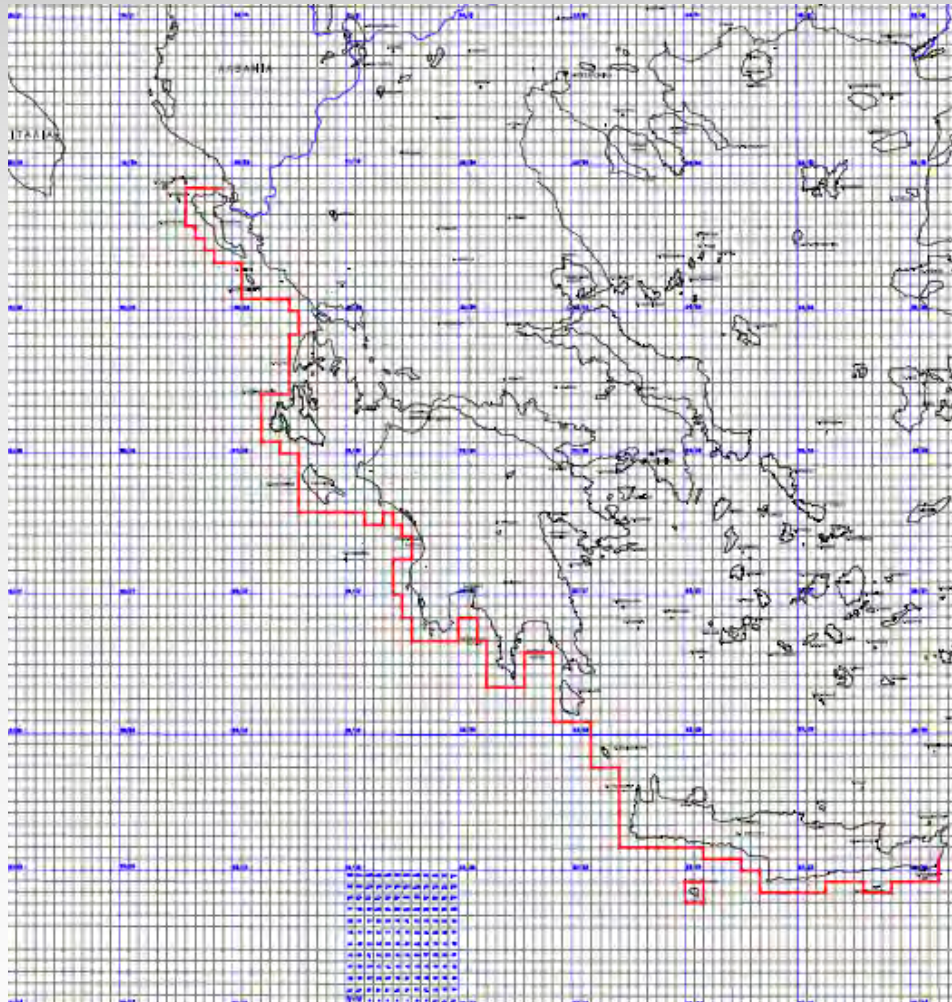
PGS 2D seismic lines: 4000km

Legacy 2D seismic lines:
700 (R) km

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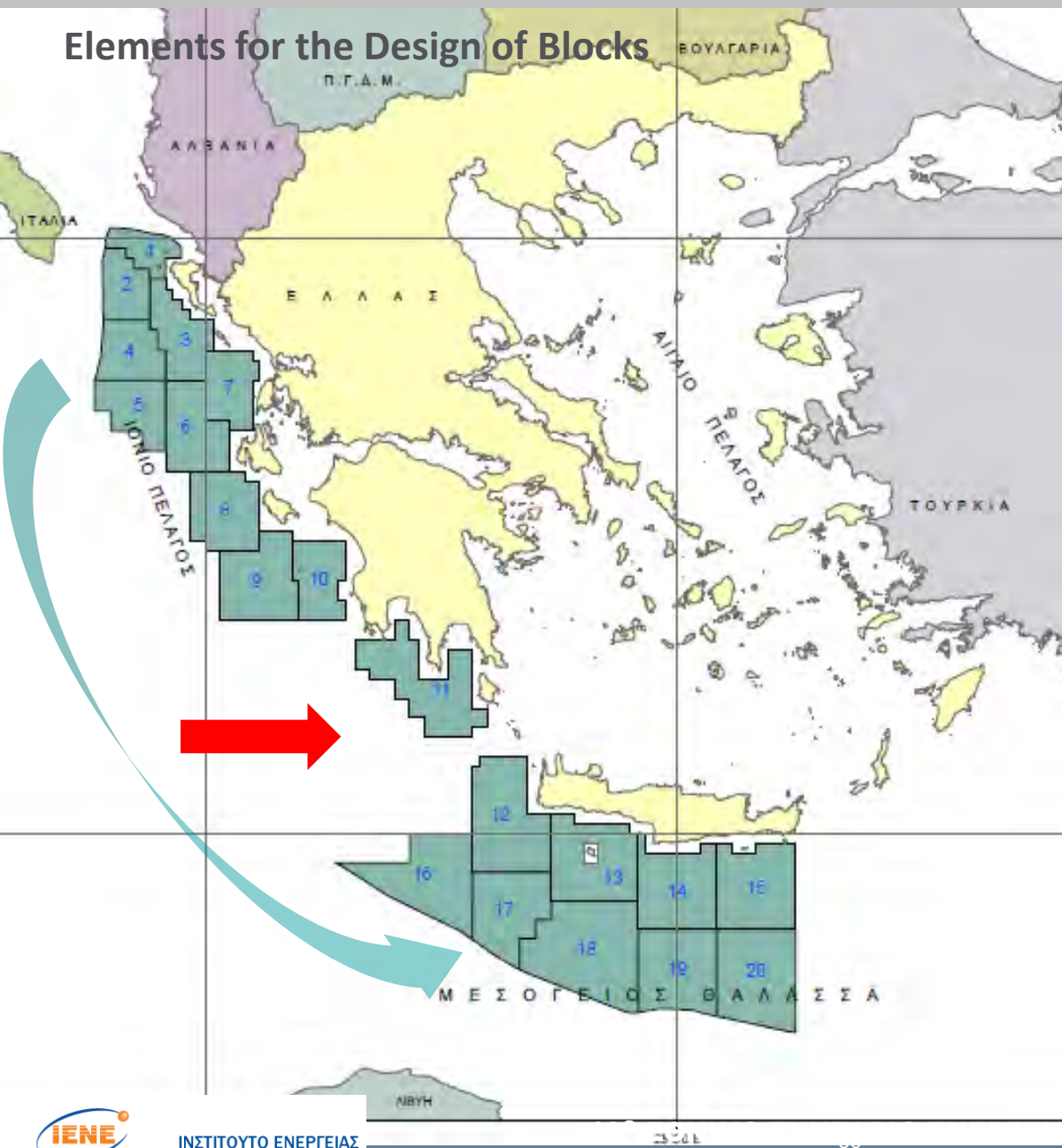
Elements for the Design of Blocks

Environmental Considerations – SEA Findings



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Elements for the Design of Blocks



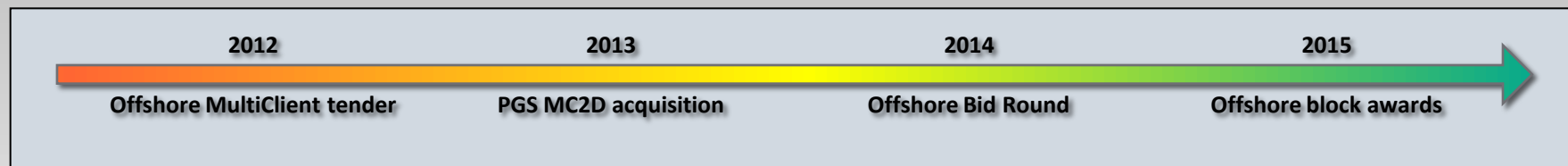
- **Exclusion** of a central part with ultra-deep water depth
- Size and shape adjusted to key factors:
 - ✓ the basic lat/long grid,
 - ✓ the available data,
 - ✓ the 2D seismic grid,
 - ✓ the water depth and
 - ✓ the potential prospectivity as assessed to date

Larger surface in South of Crete & Central Ionian

Smaller surface in Northern Ionian

Surface area: 1,801 – 9,543 sq. km

What next?



- ✓ Data packages
- ✓ Interpretation report
- ✓ Data rooms in operation - Athens, Oslo, Houston, London, Singapore
- ✓ Strategic Environmental Assessments
- ✓ Delineation of blocks
- ✓ Onshore Notice Publication in the official EU Journal - **5th November 2014**
- ✓ Model of Lease Agreement
- Offshore Notice Publication in the official EU Journal – **pending**

Consistency Is The



ΙΝΣΤΙΤΟΥΤΟ ΕΝΕΡΓΕΙΑΣ
ΝΟΤΙΟΑΝΑΤΟΛΙΚΗΣ ΕΥΡΩΠΗΣ



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18^ο ΕΘΝΙΚΟ ΣΥΝΕΔΡΙΟ ΕΝΕΡΓΕΙΑΣ- ΕΝΕΡΓΕΙΑ & ΑΝΑΠΤΥΞΗ 2013

Ένα χρόνο πριν.....Οργάνωση Γύρου Παραχωρήσεων

Χρονοδιάγραμμα εργασιών

ΟΡΓΑΝΩΣΗ ΓΥΡΟΥ ΠΑΡΑΧΩΡΗΣΕΩΝ Δ.Ελλάδα & Ν. Κρήτη	2013											2014											
	Φεβ	Μαρ	Απρ	Μα	Ιουν	Ιουλ	Αυγ	Σεπτ	Οκτ	Νοε	Δεκ	Ιαν	Φεβ	Μαρ	Απρ	Μα	Ιουν	Ιουλ	Αυγ	Σεπτ	Οκτ	Νοε	Δεκ
1. Επεξεργασία νέων σεισμικών δεδομένων																							
2. Επανεπεξεργασία παλαιών δεδομένων																							
3. Ολοκληρωμένο Σύστημα Δεδομένων (Παλαιών + Νέων)- Greece Mega Project																							
4. Ανοιγμα Data Room (Λονδίνο, Χιούστον, Αθήνα)																							
5. Ερμηνεία δεδομένων																							
6. Μελέτη εκτίμησης πετρελαιοδυναμικότητας (petroleum assessment) της περιοχής																							
7. Στρατηγική Μελέτη Περιβαλλοντικών Επιπτώσεων																							
8. Οριοθέτηση blocks																							
9. Διεθνής πρόσκληση & συνοδευτικό υλικό																							
10. Εμπορία δεδομένων																							
11. Προώθηση Γύρου Παραχωρήσεων																							

Το νέο στοίχημα..... Η νέα πρόκληση.....

Οργάνωση & Λειτουργία Ελληνικής Διαχειριστικής Εταιρείας Υδρογονανθράκων (ΕΔΕΥ Α.Ε)

Νομική σύσταση
Οικονομική λειτουργία
Δομή

Στέγαση, βασική υποδομή & εξοπλισμός

Ορθολογική στελέχωση

Μεταφορά και οργάνωση εθνικού αρχείου υδρογονανθράκων

Σύστημα επίβλεψης συμβάσεων

- Τεχνική
- Λογιστική
- Περιβαλλοντική

Προτυποποίηση εγγράφων υποβολής στοιχείων, εκθέσεων
(ενιαίος τρόπος επικοινωνίας, ελέγχου & συγκριτικής αξιολόγησης)





Ευχαριστώ