

## **Twinning Project fiche**

“Strengthening of the Organizational, Technical  
and Administrative Capacities of the Ministry’s Oil and Gas Department  
and Updating of the Relevant Oil and Gas Regulation and Legislation”

Country: Israel

Beneficiary: Ministry of National Infrastructure, Energy & Water Resources  
Oil and Gas Department

## Important reminders:

- Any Member State entity that submits a proposal or that is part of the consortium that submits a proposal, **if it does not constitute a proper public administration, must be registered as mandated body**. Mandated bodies are semi-public bodies assimilated to administrations, as some MS have outsourced or are in the process of outsourcing and privatising parts of their administration. The know-how required for Twinning projects is therefore sometimes located outside the administration.

The Commission Headquarters may accept or refuse proposals to be registered as Mandated Body and maintains an open-ended list of semi-public bodies mandated to act in lieu of public administrations. Conditions and means to apply to be on the list are described in the Common Twinning Manual, section 3.3

([http://ec.europa.eu/europeaid/where/neighbourhood/overview/documents/20121011-twinning-manual-2012\\_en.pdf](http://ec.europa.eu/europeaid/where/neighbourhood/overview/documents/20121011-twinning-manual-2012_en.pdf))

In case of question and to launch the registration procedure, entities that wish to be considered as mandated body must liaise with their National Contact Point (list of NCPs and contacts available at:

[http://ec.europa.eu/europeaid/where/neighbourhood/overview/documents/twinning\\_contact\\_points\\_july\\_2013.pdf](http://ec.europa.eu/europeaid/where/neighbourhood/overview/documents/twinning_contact_points_july_2013.pdf)).

- **Proposed Project Leaders and proposed RTA are obliged to have a pre-established, and not-remote, connections with the administration(s) or mandated body(ies) submitting the proposal** or being part of the consortium that submits a proposal;.

Not complying with these conditions will lead to the rejection of the concerned proposal(s).

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## **List of Acronyms:**

AA: Association Agreement  
BC: Beneficiary Country  
BCM: Billion Cubic Meters  
CNG: Compressed Natural Gas  
EC: European Commission  
E&P: Exploration and Production  
EIA: Environmental Impact Assessment  
ELD: Environmental Liability Directive  
EMG: East Mediterranean Gas Company  
EMP: Energy Master Plan  
ENP: European Neighbourhood Policy  
ES: Environnemental Statement  
EU: European Union  
GDP: Gross Domestic Product  
G&G: Geophysics and Geology  
HR: Human Resources  
HSE: Health, Safety and Environment  
IEC: Israel Electric Company  
IMF: International Monetary Fund  
IOC: International Oil Company  
IT: Information Technology  
km: kilometres  
LNG: Liquefied Natural Gas  
LPG: Liquefied Petroleum Gas  
MARPOL: MARine POLLution  
MoE: Ministry of Economy  
MoEP: Ministry of Environmental Protection  
MNIEWR or Ministry: Ministry of National Infrastructures, Energy & Water Resources  
MMBTU: Million British Thermal Units  
MNI: Ministry of National Infrastructures (now MNIEWR)  
MS: Member State.  
NG: Natural Gas  
NGA: Natural Gas Authority  
NGL: Natural Gas Liquids  
O&G: Oil and Gas  
OECD: Organisation for Economic Co-operation and Development  
OGP: Oil and Gas Department  
OPRC: Oil Pollution Preparedness, Response and Co-operation  
OVI: Objectively Verifiable Indicator  
PAO: Program Administration Office  
PL: Project Leader  
PSC: Project Steering Committee  
RTA: Resident Twinning Advisor  
STE: Short Term Expert  
TA: Technical Assistance  
US: United States

## **1. – BASIC INFORMATION**

1.1 – Programme: Support to the ENP Action Plan 2011-2012 (Israel) – ENPI/2012/024-115

**1.2 – Twinning Number:** IL14ENPEY09b

### **1.3 – Title:**

“Strengthening the Organizational, Technical and Administrative Capacities of the Ministry's Oil and Gas Department and Updating of the Relevant Oil and Gas Regulation and Legislation”

**1.4 – Sector:** Energy

**1.5 – Beneficiary country:** Israel

## **2. – OBJECTIVES**

### **2.1 – Overall Objective**

The overall objective is to reinforce the Israeli energy sector by strengthening the Ministry of Energy and Water Resources' management capacities, based on European Union (EU) Member States' acquis and experience.

This will contribute to achieve efficient and orderly growth of the E&P industry in a way that strengthens the value of Israel's oil and gas assets, avoids the undesirable health, safety and environmental consequences of the under-regulated hydrocarbon exploitation, and sets the conditions for closer inter-linkage with the EU equivalent sector.

### **2.2 – Project purpose**

The goal of the proposed twinning project is to support the adoption of an effective regulatory framework and monitoring system of the E&P activity within the Ministry of National Infrastructures, Energy & Water Resources, and strengthen Israel's capacity to reinforce safety and environmental protection measures taking into account EU experience, standards and acquis.

### **2.3 – Contribution to National Development Plan / Cooperation agreement / Association Agreement / Action Plan**

The European Union and Israel concluded an Association Agreement (AA) in 1995 that entered into force in 2000, and developed relations further in the context of the Euro-Mediterranean Partnership.

The EU adopted on 11 March 2003 a new framework for its relations with its neighbours, including Israel. In a Communication called “*Wider Europe - Neighbourhood: A New Framework for the Relations with our Eastern and Southern neighbours*”, the European Commission underlined that the objective of the so-called European Neighbourhood Policy (ENP), renewed in the 2011 ENP package, is to develop an area of prosperity and anchor a "ring of friends" with whom the EU can enjoy close, peaceful and fruitful relations. The overall goal of ENP is to foster the political and economic reform process, promote closer economic integration, legal and technical approximation and sustainable

development. The central element of the ENP is the bilateral ENP Action Plans agreed between the EU and each partner. The EU-Israel ENP Action Plan (AP) was adopted on 11 April 2005.

Article 50 of the AA stipulates that the parties shall promote cooperation in the tasks of preventing deterioration of the environment, controlling pollution and ensuring the rational use of natural resources. Co-operation shall focus, in particular, on the quality of Mediterranean water and the control and prevention of marine pollution, environmental management of sensitive coastal areas, environmental education and awareness, use of environmental monitoring methods and surveillance including environmental impact assessment, and the impact of industrial development on the environment in general and the safety of industrial facilities in particular. According to the article 51 of the AA, relating to energy, the Parties shall endeavour to encourage operations designed to favour regional co-operation on matters such as transit of gas, oil and electricity.

The AP sets out a comprehensive set of priorities in areas within the scope of the AA, including energy and environment (chapter 2.5: Transport, energy, information society, environment and Science and Technology). The strengthening of the upstream sector targeted by the twinning will contribute to the development of the midstream O&G sector in accordance with the paragraph 7 “*Progress regarding energy networks*” mentioning the following actions:

- *Assess the scope for connecting Israel to the Trans-European/Mediterranean electricity, gas and oil networks, including Israel being part of inter-regional studies*
- *Develop gas transmission and distribution systems*
- *Exchange of know-how on security and safety of energy networks/infrastructure*

Indeed, considering the importance of natural gas – some 885 BCM of recoverable reserves - Israel is considering export to certain neighbouring countries. Export to EU countries by pipeline or as Liquefied Natural Gas (LNG) is another option being considered by Israel.

Protection of the environment is another priority put forth in the same chapter of the AP. The twinning project will support the development of the HSE function. The requirements of the newly adopted EU Directive on Offshore Safety regarding the independence of the competent authority will be presented and their relevance to the Israeli situation assessed. The exchanges of know-how related to HSE issues linked to E&P operations promoted by the project will be fully in line with paragraphs 11 *Ensure good environmental governance* and 12 *Take action for prevention of deterioration of the environment, protection of human health, and achievement of rational use of natural resources in line with the commitments of Johannesburg Summit* of the chapter 2.5.

There is no specific “National Development Plan” for natural gas, but the development of domestic natural gas production is a priority of the nation’s energy policy which aims to secure and diversify the country’s energy supply, encouraging private investments in the E&P sector.

### **3. – DESCRIPTION**

#### **3.1 – Background and justification:**

##### Overall context

##### *Major Discoveries of Natural Gas Reservoirs in the Offshore Levant Basin*

In June 1999, the Tethys Sea Partnership discovered the “Noa” field (Appendix 6) offshore the coastal town of Ashkelon, the first large natural gas reservoir in Israel. Nearby, in February 2000, the larger Mary B reservoir (≈30 BCM) was found. Commercialization of offshore discoveries began in 2004 with the commissioning of the “Mary B” field (Appendix 6), with most of the gas sold to the Israel Electric Company to operate power plants that were converted from fuel oil to natural gas.

Following the initial discovery, natural gas exploration efforts began to accelerate. The maps in Appendix 3 show that, since 2005, there has been an unprecedented growth of interest in the Israeli offshore sector. In January 2009, a different partnership group also led by Noble Energy, struck a large gas structure with the “Tamar 1” well, approximately 90 km off the coast of Haifa (Appendix 6). The Tamar reservoir contains an estimated 280 BCM of gas. In 2010 another partnership led by Noble announced the discovery of the giant Leviathan field (Appendix 6), estimated at 540 BCM. With these discoveries alone, it is clear that Israel has sufficient natural gas not only to supply current needs, but to greatly expand the domestic market, and to consider the possibility of exports by both pipeline and LNG projects. Furthermore, recent exploration licenses have firm commitments for the stakeholders to drill exploration wells. Since 2010 six smaller gas fields have been discovered (Appendix 6) with a high probability of new gas discoveries to be found

Following the discoveries of the giant "Tamar" and "Leviathan" natural gas fields in the Levant basin, the “Oil and Gas Department” (OGP), which is in charge of the regulation of the upstream O&G sector, needs to adapt its organization, working procedures and workforce rapidly, and the regulatory framework is to be developed to introduce new regulations related to E&P operations. The EU experience and know how accumulated in the field of offshore gas production, and the EU Acquis<sup>1</sup> related to the O&G sector will help the MNIEWR to handle the fast growing activity of the E&P sector

#### *Growing importance of the O&G sector in the Israeli economy*

Israeli GDP is around US\$ 245 Billion, ranking it 24<sup>th</sup> in the world. GDP per capita is \$32,397, placing it around 10% below the EU average of US\$ 35,887<sup>2</sup>. Israel currently imports the majority of its oil. The forecasts of future gas usage indicate that the Israel could be consuming 25 BCM per year of natural gas by 2040. This would be produced from the Israeli sector of the Mediterranean Sea. At today’s relatively modest wholesale gas price estimate of \$6.5/MMBtu<sup>3</sup> this equates to an annual value for wholesale gas of  $\approx$  \$6.3 Billion, or about 2.5% of the Israeli economy. This measures the potential annual value of the upstream gas sector at a conservative gas price and does not include the additional/potential income from:

- real increases in energy prices,
- natural gas liquids,
- oil field developments,
- the downstream natural gas industry,
- or natural gas exports.

It also does not take account of the additional balance-of-payments benefit of replacing imported natural gas and oil with indigenous supplies.

Clearly the natural gas industry will be an increasingly significant sector of the Israeli economy for many years to come.

#### *Overview of the O&G Markets*

Israel currently has a negligible oil production from onshore fields. However, since 2013, it is supplemented with larger volumes of condensate from the Tamar reservoir, and additional NGL’s from later developments are expected. According to the information available to the Ministry, the possibility of offshore oil exists, but the prospects are not yet fully explored.

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<sup>2</sup> IMF World Economic Outlook Database – Sept 2011

<sup>3</sup> Source: preliminary estimate of the Natural Gas Authority

Natural gas production in Israel began with limited production from onshore gas fields, and increased significantly in 2004 with the commencement of gas production from the Mary B field. Israel has a current gas demand of around 7 BCM/yr but, driven by recent large discoveries, domestic gas demand is forecast to increase to 25 BCM/yr by 2040 (see appendix 4). The bulk of this growth is expected to arise from the power generations sector, with most of the remaining growth from the industrial/commercial sector. Residential and CNG vehicle sectors are also expected to develop. Israel is actively striving to diversify the sources of energy by the introduction of natural gas as a primary, environmentally friendly, and economical fuel. By the encouragement and support of the government and the MNIEWR, power plants and large industrial factories should progressively be converted to natural gas use.

Current proved and probable gas reserves and contingent resources are around 885 BCM (see appendix 4). Prospective resources in undrilled prospects (best estimate according to PRMS) are estimated at 400 BCM. 885 BCM is enough gas to supply Israel's current consumption for around 146 years, or their 2040 forecast consumption for 33 years. This lower number is enough to give rise to security of supply concerns in the long-term.

In recent years, part of the gas used in Israel has been supplied by the East Mediterranean Gas Company (EMG), the exclusive supplier of the Egyptian gas to Israel. EMG signed 15-20-year gas sales & purchase agreements with a variety of end-customers (IEC, independent power producers and industrials) for a total of about 4.5 BCM/yr, at relatively low prices. Since the uprising in Egypt starting January 2011, the gas pipeline has been repeatedly attacked and the supply has become unreliable. Gas supply agreement was terminated unilaterally by Egypt in April 2012. At times of supply curtailment from Egypt and after the termination of the agreement, oil and coal-fired power station load factors are increased and gas-fired plant must be run on their (much more expensive) backup gas oil supplies as peaking plant. This has raised concerns at national level about increased air pollution.

The Egyptian supply curtailments and termination have also forced accelerated depletion of the Mary B field, leading to a production decline as most wells have now reached the end of their useful lives.

In view of Israel's urgent need for more gas efforts has been made to accelerate first production from the giant Tamar gas field. In March 2013 work on the Tamar field was completed and gas started to flow, one month ahead of schedule and in a record time of less than three years. The Tamar production facility includes a 150 km long, subsea double pipe tie-back and a production platform located offshore the town of Ashdod (Appendix 6). Daily production rate average 700 MMCF and annual production is currently estimated at 7 BCM.. Provided it performs reliably, Israel will have a gas surplus in the medium term. Gas from the Tamar field will improve the security of the Israeli gas system, but the country will still rely heavily on just one principal source of supply Tamar. The conversion of the Mary B reservoir to a gas storage facility is currently under consideration, aimed at providing back-up and peak seasonal supplies.

In October 2011, the Prime Minister appointed an inter-ministerial Committee to establish a government policy for gas export and developing Israel's natural gas resources (the "Zemach" Committee). The abundant reserves found in the ground led license holders to lobby the government for unrestricted rights to export natural gas from Israel. On the other hand there is a strong lobby for Israel to conserve indigenous energy resources for future use in Israel. The committee submitted to the government the final report in September 2012.

The main recommendations of the committee are the following:

- Supply of natural gas for the domestic market must be guaranteed for 25 years. Israel's total natural gas consumption for 25 years period is estimated of about 450 BCM.



- All gas fields on Israel's territory or in its EEZ will be connected to the national gas transmission network.
- The government will be involved in planning and construction of gas transmission and treatment infrastructures.
- Total gas export will be limited to 500 BCM. Export licenses will be granted by the Minister of National Infrastructures, Energy and Water Resources for a period of 25 years.
- Special measures will be undertaken to encourage the development of small and medium-sized gas fields.
- The government policy is to encourage the entrance of major international oil and gas companies to Israel's gas industry.

In June 2013 the government of Israel decided to adopt most of the recommendations of the inter-ministerial Committee. The amount of secured gas reserve was increased from 450 to 540 BCM, adding some 4-5 years of supply. The decision further emphasised the requirement that all export facilities will be located within Israel's territory or in its EEZ.

#### *Key Players in the Oil & Gas Industry*

The leading E&P IOC in Israel is Noble Energy who holds the operatorship of many of the key exploration licenses and all gas production leases in Israel. Partnerships vary between permits, with most comprising US and Israeli stakeholders.

Israel-based Delek Energy is a key partner for Noble Energy in most permits. Delek holds substantial equity positions in Mary B, Noa, Tamar, Dalit, and Leviathan. Other significant upstream stakeholders include: Isramco and Ratio.

The Israel Electricity Company, by virtue of its position as by far the largest existing consumer, and the largest potential growth area in Israel is a key player for the whole of the gas industry. The NGA forecasts that 75% of electricity will be generated from natural gas by 2040, consuming around 17 BCM per year (currently around 5 BCM/yr). IEC power plants and gas purchase contracts are the key determinant of future natural gas development projects.

Gas marketing companies currently have a relatively small demand (less than 1 BCM/yr) but the NGA expect this to rise to around 4 BCM per year by 2020. Individually the gas marketers do not command significant political might but their future diverse consumer base and high public profile will give them a much larger lobbying power than they currently possess.

Relations with the government of Cyprus are another key consideration for the Israeli E&P sector by virtue of the potential joint development of natural gas export projects.

#### Institutional context

##### *Ministry of National Infrastructures, Energy & Water Resources (MEWR)*

The O&G infrastructures are controlled by the Ministry of National Infrastructures, renamed the Ministry of National Infrastructures, Energy & Water Resources in 2013. Within the Ministry, the administration of the O&G industry is divided between two separate units; the Oil and Gas Department (upstream/midstream), and the Natural Gas Authority (midstream/downstream). The upstream industry includes production facilities and liquids pipelines from production facilities to shore. The midstream/downstream assets managed by the NGA includes offshore gas transmission pipelines, onshore gas processing plant, onshore compression stations and pipelines, and gas distribution systems through to end-customer sites.

Directly underneath the Minister of Energy & Water Resources (Mr Silvan Shalom ) is the Director General. Amongst those reporting to the Director General is the Director of Natural Resources Administration who heads two units: the Oil and Gas Department, and the Mining Unit. The OGP is responsible for the licensing and management of the Israeli upstream sector. Also reporting to the Director General, but not under the Natural Resources Manager, is the head of the Natural Gas Authority (NGA). The NGA is not included as a beneficiary of this Twinning project but needs to be considered as a major influence on the future direction of the Israeli gas industry, and therefore a key determinant of the future of the OGP.

#### *The Petroleum Commissioner, the Petroleum Council and the Oil and Gas Department*

The Petroleum Law (1952) establishes the roles of the Petroleum Commissioner and the Petroleum Council. Both are appointed by the Minister responsible for petroleum affairs. The Petroleum Commissioner is responsible for granting the petroleum rights and for monitoring the E&P activity. The role of the Petroleum Commissioner is held by the Director of the OGP.

The Petroleum Council is an advisory council consisting of 15 members, at least five of whom are public representatives. The Council recommends and advises to the Petroleum Commissioner on the following topics:

- The granting of permits, licenses and possession for petroleum and natural gas prospecting and production
- The execution of various operations, such as right transfer between concessionaires and subordination of petroleum rights

The OGP was established in 1953, but is not mentioned in the Petroleum Law (1952). It acts in accordance with the Petroleum Law and its various regulations. Its functions include granting petroleum rights and overseeing the development of these rights, as well as advising the Minister of Energy & Water Resources and other units in matters related to the E&P sector. In effect it supports the Petroleum Commissioner and the Petroleum Council, and performs other roles defined under the Petroleum Law and its various regulations that are not specifically allocated to the appointed roles.

The OGP is specifically responsible for managing and preserving all professional reports and data relating to the E&P activity in Israel. These must be submitted by the companies to the OGP in accordance with the Law. This includes geophysical data, seismic surveys, electrical, geological data, drilling data, core samples, maps, and all data relating to licence applications and management.

Underneath the Head of the Oil and Gas Department there are four section directors:

- Director of Geology and Geophysics
- Director of Engineering Inspection
- Director of Regulation
- Director of Health and Environment

In addition to the section directors, there are five other professional staff within the unit, four in the Engineering Inspection section and one in the G&Gsection. One full-time staff provides administrative support.

There are also threecross-unit posts that are located within the OGP:

- Accounts/Planning
- GIS System
- Public relation and information

A legal advisor is also attached to the OGP but maintains managerial autonomy from the OGP.

These support functions, like the OGP itself, are under-resourced and struggling to keep pace with the urgent and growing day-to-day workload of the OGP. The OGP is undergoing a re-structuring. Additional staff member are expected to be recruited in early 2014. An organization chart for the OGP is shown in Appendix 5.

Recruitment of skilled staff is a major challenge. With a relatively small existing E&P sector within Israel, there is a very small pool of available staff with E&P commercial or technical skills. To add to the recruitment problem, the Ministry is constrained by national wage scales that are below those of international E&P companies with which they must compete in the labour market.

Another dimension to the resource problems of the unit, there is limited support to the essential task of document maintenance. The quantity of stored documentation is overflowing the available storage space, and there is no formal system in place for monitoring the locations of key documents. Also, a system for monitoring the stakeholders' license obligations and commitments that was developed in-house has limited capabilities and is not sufficient for effective monitoring and management of license work programs. As the licenses move from the exploration to the production phase there is expected to be a massive increase in the documentation storage and monitoring needs of the OGP.

#### *The Natural Gas Authority (NGA)*

The NGA is responsible for the midstream and downstream sectors of the gas industry. Unlike the OGP, the NGA has a “brand image”, including dedicated identity and office space.

Principal responsibilities of the NGA include:

- The tendering and on going management of distribution system licences,
- The certification of distribution marketing organizations,
- Regulation and monitoring of the national gas transmission system,
- Gas demand planning, including leadership of the national gas masterplan.

Israel does not currently have underground gas storage facilities. Responsibilities for the administration and processing of natural gas storage facilities are not yet developed.

For division of responsibilities, there is an informal agreement between the OGP and the NGA about the dividing line between the two authorities (midstream installations). OGP is responsible for production facilities up to the riser platform outlet flange. NGA authority extends from this point to the end-customer. This dividing line is different to the European practice where the upstream responsibility usually extends to the beach and often includes onshore gas processing facilities.

#### *The Upstream Sector Legal Structure*

The foundation legislation for the upstream sector is the Petroleum Law 5712-1952, accompanied by The Petroleum Regulations 5713-1953. The Petroleum Law has had some small corrections and amendments, so that most of the legislation is contained in a single document. The law is elaborated by the 1953 Petroleum Regulations, which have been amended a number of times. Around 2000, as it became apparent that Israel might have offshore hydrocarbons resources, a major legislative gap was highlighted: that both the law and regulations lacked an offshore context. As a result, a second regulation, the Offshore Regulations (2006), was introduced to address some key issues, but it remains very general (one single page).

In 2011 a new law was introduced to address the key issue of oil & gas taxes. The taxation terms in the Petroleum Law were written in 1952 at a time of relatively low oil prices and in the absence of

any significant oil or gas activity. Over 50 years later when large quantities of natural gas were discovered, it was realized that the legislation contained only limited and out-dated reference points for an appropriate level of hydrocarbons taxation. In April 2010, the Minister of Finance established a committee of experts (the “Sheshinski” Committee) to examine the policy on O&G resources in Israel. The Committee reported in January 2011 and proposed to increase the government take from 30% to the range 52%-62% based on a sliding scale. This committee found this level of taxation to be in line with the average of OECD countries. The government and parliament approved the recommendations and they were transposed into law in 2011.

In the last few years as licensing activity intensified, it has become apparent that the Petroleum law is lacking much of the detail required for its application. The current legislation however offers a sound basis for the development of more comprehensive regulation and guidelines for day-to-day operations of the Ministry. Accordingly, the policy of the Minister of Energy & Water is not to change the legislation but to elaborate on it with regulations and guidelines about how the law should be applied. These detailed regulations and guidelines can be “instructions of the Petroleum Commissioner”, which are documents defining operational procedures of the Ministry. They therefore fall under the mandate of the MNIEWR and will be instrumental in ensuring that the concrete inputs of the project are effectively followed-up.

Another aspect of the E&P regulatory framework is those issues that fall under the category trans-boundary or multi-national issues, which are dealt with by international standards, rules and conventions. Israel has been a signatory to a number of these agreements, including:

- International standard ISO 14001 environmental management standard, governing the accreditation of major petroleum projects
- OPRC 1990, Article 3(2) requires offshore installations to carry and maintain an approved emergency response plan.
- Special Protected Areas and Biodiversity Protocol 1995 - entered into force for the Mediterranean Sea
- Mediterranean Seabed Protocol 1994. Article 20 requires the complete removal of offshore equipment on abandonment
- MARPOL 73/78, Annexes IV & V regulate waste discharge from vessels, including offshore platforms

Having signed these agreements, the role of the OGP, and the responsibility for enforcement of these international rules within Israel is not clearly defined. These commitments need to be incorporated into the Israeli legal framework during its forthcoming development.

As a conclusion, the recently discovered Tamar and Leviathan giant gas fields could potentially bring about fundamental changes to the economy of the country. Existing gaps in the present legal and institutional structures (see Summary Gap Analysis) necessitate establishing an effective regulatory and monitoring system for the E&P activity.

The twinning project will help the OGP to upgrade its organization, working procedures workforce and the regulatory framework rapidly. The EU experience and know how accumulated in the field of offshore gas production, and the EU Acquis related to the O&G sector will help the MNIEWR to handle the fast growing activity of the E&P sector.

Some of the activities planned in this project will include the participations of relevant staff from other government ministries and in particular the MoE and the MoEP. It is envisioned that the MoEP will take part in activities related to the protection of the marine environment. Presently the MoEP is taking part in reviewing ES and EIA documents submitted by the operators. The MoEP is also responsible for issuing discharge permits for offshore facilities. The MoE is the government authority responsible for work safety in Israel. In the framework of this project work safety regulations and their applications to offshore E&P activities will be reviewed.

### 3.2 – Linked activities:

#### 1/ Contract for technical assistance to the engineering section

The OGP has contracted, in 2011, a Netherlands-based firm SGS Horizon to provide engineering supervision services. The firm will assist in monitoring corporate working plans, drilling and development plans for marine and onshore fields, supervising drilling operations, compliance with HSE standards, and production regime supervision. This technical assistance is to compensate for the lack of human resources in the engineering section of the OGP.

An important component of the twinning process will be to train, and help to recruit people able to perform some of these tasks within the Ministry. Overlap with this contract is an avoidable issue by ensuring that the twinning project will be focused on long-term enhancement of the skills and technical performance of the department and not on short-term tasks performed by the SGS Horizon

#### 2/- Contract for Consulting on Oil and Gas Policy and Regulations in Israel

The OGP has contracted, in early 2013, the US-based firm IHS Global Inc. to provide support in reviewing world-wide practice associated with E&P activities and in assessment of relevant documents presented to the Petroleum Commissioner by the E&P companies. IHS consultation also encompasses gas reserve estimates and advice on fiscal issues such as royalties and taxation. The MNIEWR will proactively avoid overlaps with the twinning activities by focusing on long-term goals rather than short-term tasks that are performed by IHS.

3/ In the field of Energy, the MNIEWR has been taking an active role in various frameworks for EU-Israel and EU-Mediterranean co-operation, like MED-EMIP (platform for energy policy dialogue and exchange of experiences, from 2007 to 2010) and SAFEMED II (co-operation on issues of maritime safety and security and prevention of pollution from ships, from 2009 to 2011), and is currently involved in the MEDSTAT III regional statistical co-operation program.

This program strengthens the capacity of authorities in the Mediterranean Partner Countries to collect updated, timely and relevant statistics, which ensure reliability and coherence. The goal is to provide more and better data in the six priority thematic sectors (agriculture, energy, migration, social statistics, transport, trade and balance of payments) and will promote the increased use of this data. The project includes the following indicators in the energy domain:

- . Complete energy balance at the national level for all energy sources (including offshore)
- . Renewable Energy Statistics
- . Energy efficiency indicators
- . Breakdown of final energy consumption
- . Statistics in oil prices and petroleum products, natural gas and electricity

The first phase was initiated in 1996. The European Commission has approved the extension of the third phase MEDSTAT III until the end of 2013. The Planning & Economics Unit within the MNIEWR is involved in this program for the delivery of indicators. There is no overlap with the proposed twinning project.

4/ The “National Masterplan” is an inter-departmental project aimed at investigating a range of possible energy futures for Israel. It considers political, economic and security of supply considerations over a time-period to 2050. The plan envisages a computer-based mathematical model and output is intended to report monthly projections for the usage of all primary fuels and electricity generation in Israel. The country is a major importer of fuel but Israel will otherwise be treated largely as an energy island. The offices of the Chief Scientist, the NGA and the Planning &

Economics section within the MNIEWR are amongst those heavily involved in the project. The project is in progress and the envisaged completion date is around 2014-15. Although there may be some interaction with the twinning program, the project activities are not expected to overlap.

### **3.3 – Results:**

The twinning project aims to achieve the following mandatory results:

- 1/ Support the development and implementation of new rules for the E&P regulatory framework, taking into account EU standards and experience.
- 2/ Support the reinforcement of the OGP's technical and administrative capacity
- 3/ OGP competencies are strengthened and the team is confident to perform OGP's missions of regulating the E&P sector

Indicators of achievement of these results are detailed in the following 3.4 section (see benchmarks) and in the Logical Framework Matrix in Appendix 1 (see OVIs).

### **3.4 – Activities:**

In order to achieve results described in previous Section 3.3, eleven activities have been defined as detailed below and in the logical framework in Appendix 1.

Activities, below, are presented as guidance – they are indicative and not presented in chronological order. Other activities necessary to achieve the mandatory results and the expected goal of this project may be considered, within the budget allocation.

#### Standard activities

##### 0.1 - Kick off meeting

A half-day conference will be organized to officially launch the project in the presence of high level personnel from both MS partner and Beneficiary sides during the first three months of implementation of the project. It will contribute to the mobilization of the internal project stakeholders and to the visibility to be given to external players and to the public.

##### 0.2 - Closure conference

A final seminar will be organized during the last month of implementation of the project to publicize the achievements of the project.

#### Component 1: Development of the E&P regulatory and legal framework

##### 1.1 - Identifying key gaps in the Israeli regulatory framework

Method: The goal of this expert mission is to support the BC in the identification of key gaps in the Israeli regulatory framework, which will feed through to the workshops in Israel. Legislation related to E&P activity in EU countries having a significant offshore gas production will be taken as a reference, as well as the relevant EU acquis related to the E&P domain.

The EU has one sector specific offshore oil and gas legislation. Directive 2013/30/EU of the European Parliament and Council on safety of offshore oil and gas operations, was recently adopted, on 12 June 2013. This Directive reinforces the regime of the Directive 92/91/EEC to include, inter alia, environmental assessment, to require the risk assessment to be submitted to the regulator for consent, to establish notification scheme for well operations and to require independent verification of critical risk control elements. This new regulation goes beyond the Seveso Directive, in requiring stronger verification of technical and financial capability at licensing

stages or provisions for evacuation escape and rescue of workforce. It also strengthens obligations of relevant authorities during the licensing process in order to improve assessment of technical and financial capacity of the applicants. A number of particular best practices exist in Member States and industry already in relation to safety, preparedness and response.

Additionally, there is broader Union “Acquis” that, often only partially, applies to the offshore sector:

- Environmental Liability Directive (ELD) 2004/35/EC addresses liability for damages to the environment also in connection with offshore O&G operations.
- Environmental Impact Assessment (EIA): Directive 85/337/EEC4, as amended by Directives 97/11/EC5, 2003/35/EC6 and 2009/31/EC7, on the assessment of the effects of certain public and private projects on the environment, has harmonised the principles of the EIA of projects by introducing general minimum requirements. In addition, the UN/ECE Espoo Convention on EIA in a trans-boundary context, which is part of the environmental acquis, is relevant as regards the assessment of projects likely to have trans-boundary effects. Its application is, however, discretionary for some drilling operations.
  - Waste law: Directive 2008/98/EC on waste (Waste Framework Directive) applies fully to oil spills. Oil escaping from an offshore installation is covered by the EU definition of waste, thus imposing the obligation to the polluter of cleaning up.
  - Health and safety of workers at work: Directive 92/91/EEC (complementing the Framework Directive 89/391/EEC) is the principal piece of Union legislation relevant for protection of offshore workers and working environment.
  - Major hazards: The Seveso Directive 96/82/EC does not apply to the offshore sector but some of its elements served as a good practice example.
  - Granting hydrocarbon prospection, exploration and production authorisations: Directive 94/22/EC is a principal legal framework for granting licences for exploration and production.
  - Emergency response: The EU Civil Protection Mechanism (Council Decision 2007/779/EC), the Monitoring and Information Centre (MIC) and the European Maritime Safety Agency (EMSA) are principal Union tools for emergency response. Steps were already taken to expand EMSA's competence to cover also accidents of offshore installation (beyond its primary focus on maritime shipping).

Benchmarks: relevant gaps regarding the regulatory framework of the E&P sector are identified, if needed in cooperation with other relevant Ministries (e.g. the Ministry of Economy, Ministry of Environmental Protection etc.).

Resources: EU legal expert

1.2 – Organize a workshop in MNIEWR about legislation in the E&P domain

Method:

Using the feedback received from the assessment activity, organize a workshop about the development of E&P legislation and ministerial oversight in EU member States to raise the awareness of the institutional and legal changes to be introduced within the MNIEWR. Experts from EU Member States' administration having extensive offshore natural gas industries will share their experience with the OGP team and other representatives from Israeli governmental bodies involved in the domain, notably the Ministry of Economy and the Ministry of Environmental Protection. Such a workshop will track the historic development of legislation and identify the driving forces behind the need for the legislation. It should also show the impact of legislation on the manpower and other resources of the MS ministries and other regulatory bodies. It should also identify areas for an approximation with the EU “Acquis” and furnish recommendations for

priorities for the Ministry to introduce new instructions in the existing regulatory framework about the E&P activity in Israel, and also contribute to develop relations with similar units in EU countries.

Benchmarks: Priorities and recommendations for introducing new guidelines and instructions relating to the E&P regulation are identified

Resources: panel of EU experts + Interpretation (to facilitate discussions)

1.3 – Support in the drafting of new instructions and guidelines in-light of EU standards and experience, to be introduced in the regulatory framework

Method:

A work group including EU expert(s), MNIEWR's staff and other ministries such as the Ministry of Economy, the Ministry of Environmental Protection as appropriate, will be established for defining new regulatory rules to fill the gaps in the existing Israeli regulatory framework. Tasks will be based on the recommendations delivered by the previous workshop and by the working groups set in place in the Component 2. The uncertainties related to the boundaries between the responsibilities of the OGP and other governmental bodies within the Ministry (the Natural Gas Authority, in charge of the downstream sector, has the responsibility of installations for transmission and distribution of the NG) or outside (for instance the Ministry in charge of Environmental Protection), will be clarified. The rules will take the form of instructions associated to existing regulations, or new regulations to be launched for regulating the E&P sector or, as far as needed, amendments to the existing Petroleum Law, but the mandatory results of the twinning project will not include the promulgation process. This twinning action will be developed with the active participation of one or several EU experts having an extensive experience in O&G legal frameworks who will support the BC administration in drafting new rules.

Benchmarks:

- . Guidelines for the submission of applications for performance of E&P activities are defined
- . An E&P license tendering process is defined and ready for implementation
- . Guidelines concerning the mandatory flow and format of data from E&P companies to the Ministry are produced
- . HSE regulations and guidelines in-line with the EU Acquis are developed
- . Guidelines about performance bonds, environmental guaranties and insurance policy are drafted

Resources: STE days

Component 2: Support to restructuring and strengthening of the capacity of the Oil and Gas Department

The team within the OGP currently comprises 9 professionals. It will have to grow progressively as the E&P operations to be monitored by the unit will expand in the coming years. In 2014 a new positions will be opened. In EU countries having a significant O&G production, similar units have staffs of more than one hundred people. It will be essential for the MNIEWR to have a prospective view of the development of OGP.

At present time there are numerous gaps in the working procedures, guidelines, check lists, forms, etc...to be used by the OGP team to perform their missions, including but not limited to the following areas:

- application procedure for petroleum rights (licenses, permits, leases...)
- monitoring of work programs pre and post drilling
- monitoring / supervision of ES and EIA (Safety issues, , reporting on Major Hazards)



- procedure for inspections / auditing of drilling, development plans and production activities and independent verification

2.1 – Clarify the existing organizational structure of the OGP, define a mid-term target structure and an associated staffing plan

Method:

The experts will deliver advice for the restructuring of the OGP, formalize the missions, responsibilities and job descriptions for each sections within the unit, clarify the inter-relationship between the OGP and other bodies within the Ministry (NGA, Legal Advisor, Planning & Economics, Chief Scientist, Geological Survey, Geophysical Institute....) and outside (Ministry of Environmental Protection, Ministry of Industry, Trade and Labour, Ministry of Finance,...). Recommendation for further development of the organigramme will be provided and a mid-term target organizational structure will be elaborated by the EU expert(s). A methodology for calibrating the sections defined in the target organizational structure in terms of number of individuals and competencies to be recruited will be drafted by the MNIEWR with the support of EU experts.

Benchmarks:

- . Organizational structure, tasks and responsibilities of the each section and job description are reviewed
- . A mid-term target organizational structure is defined
- . A methodology for calibrating the human resources within the OGP is developed
- . A progressive staffing plan in line with the foreseen growth of the activity is delivered

Resources: STE days

2.2 – Study visit focused on organizational, technical and administrative capacities in one EU country

Method:

This study tour will focus on the organizational scheme and the working methods, procedures and software tools in use in a similar EU body in order to identify best practices to be transferred to the OGP, with a particular focus on document and data management, petroleum rights administration, application of HSE legislation and royalty accounting/economic evaluation in the E&P sector. This study visit will also pave the way for further co-operation, for instance, partnership for training of OGP staff. Opportunities for organizing on-the-job training courses during the twinning project should be identified or confirmed.

Benchmarks: operational procedures, documentation, systems and tools related to key processes (inter alia: licensing process, economic evaluation, supervision of E&P operations, etc.) are reviewed in a similar MS institution

Resources: Officials from the OGP and associated bodies

2.3 – Support in the drafting of new procedures and supporting documents for exploration and production operations

Method:

Ad-hoc working groups including EU experts specialized in the relevant fields (granting of petroleum rights, monitoring of E&P operations, safety, environmental protection, etc.) and BC participants will be set up to review existing procedures and develop an efficient working system for the OGP, in-light of best EU practices related to the monitoring of E&P operations to be presented by EU experts. An important goal is to support the setting up of the new entity in charge of the HSE function in order to reach an operational stage.

#### Benchmarks:

- A methodology for evaluating reserves is defined
- An effective HSE regulatory and monitoring system is drafted in taking into account EU and international standards
- Guidelines are developed within the twinning for inspections and audit

Resources: STE days (EU specialists in relevant E&P fields)

### Component 3: Strengthening of the human capacity of the Oil and Gas Department

The level of skills and experience of future recruits to the OGP is unknown. Recent tenders for open positions in the E&P domain have shown that recruitment of qualified oil & gas professionals is a challenging task for the Ministry. University courses in the field of E&P were discontinued in the 1990's and Israeli Institute of Petroleum training courses were curtailed. Recently; the “Technion” University in Haifa has introduced a new program for energy studies and other universities in Tel Aviv, Haifa, Beer Sheva and Jerusalem are working to include new courses related to E&P. But the supply of skilled and experienced people available to the job market will not take effect for several years. The twinning can help to bridge the gap by accelerating the development of E&P regulatory skills within the Ministry.

#### 3.1 - Formulate a training program for the OGP team

##### Method:

Initially, a competencies analysis will be performed to define the priority needs to be filled by twinning actions. Then, taking into consideration those needs and also the new working procedures to be used by the OGP (output from the activity 2.3), a training plan will be built to organize and perform the training sessions. Relevant topics should be related to following areas; reserves definition and evaluation, economics related to E&P activity, monitoring of deep drilling operations, reservoir engineering, HSE controls and inspection.

##### Benchmarks:

- A training needs assessment for the OGP team is conducted
- A OGP skills development plan is defined

Resources: STE days

#### 3.2 - Perform a pilot training program

##### Method:

The goal is to accelerate the acquisition of know-how by transferring valuable knowledge and expertise from EU experts. A series of training sessions will be organized in Israel and carried out by relevant STE according to the training programme drafted within the previous activity. The courses will be oriented towards to presentation of practical skills and will include case studies adapted to the context of the O&G upstream activity in Israel and the needs of the team. Each attendee will provide feedback after each session to assess the quality of the training. This training program is meant to survive the twinning project. The round of training performed under this twinning is intended to set the example for training that can be replicated in the future, and rightly emphasises the training of future trainers. A specific session will be performed to enhance the capability of the team to replicate the training session for new recruits.

##### Benchmarks:

- Pilot training programs are successfully implemented
- A reserve evaluation, consistent with international standards, is performed by trained officials using the methodology developed within the twinning project
- An E&P environmental impact assessment is undertaken by trainees conforming to leading EU and international standards
- The development and production plan of a gas field under development is effectively monitored

Resources: STE days

### 3.3 - Perform on-the-job training sessions

Method:

Following the training program carried out in Israel, OGP team members - to be selected jointly by the beneficiary and the RTA - will be sent into similar MS bodies or other institutions (training facilities ..) to be integrated into “learning by doing” processes. The objectives and the scope of work of those on-the-job training courses will be defined when formulating a training program for the OGP team (activity 3.1). In order to share the benefit of the courses with the whole OGP team, “feedback” sessions will be organized by the RTA where the trainees will present the lessons learned and the best practices to be transferred into the OGP.

Benchmarks:

- Lessons and best practices learned during the on-the-job training sessions are presented to the OGP team by the trainees

Resources: OGP Officials participating to the on-the-job training sessions in EU public administrations or other relevant institutions

### 3.5 – Means / Input from the MS Partner Administration

#### 3.5.1 – Profile and tasks of the Project Leader (PL)

The Project Leader (PL) of the Member State (MS) must be a senior official in the administration of the beneficiary country, capable of an operational dialogue at the political level and of providing solutions to problems and difficulties encountered during the execution of the Twinning project. Its level of responsibility should enable to support the effective implementation of planned activities and the reach the mandatory results.

Academic Background:

Graduate of university or higher education institution, preferably in the field of engineering, economics or equivalent.

Professional Experience:

- At least ten years in a governmental body, preferably an institution related to the O&G sector
- Proven experience in the areas of identifying needs and institutional capacity building
- Proven experience in the management of international programs

In addition, the PL should have:

- A strong technical knowledge in the management of regulatory activities in the O&G sector
- A good fluency in written and spoken English

- A knowledge of the European Neighbourhood and Partnership Instrument and an understanding of the mechanisms of the twinning instrument would be an asset
- Professional experience in the region would also be an asset

Personal skills:

The PL must have:

- The ability to steer and implement the project
- Autonomy and sufficient authority to carry out its mission and, in particular, to contact and deal with government or private providers in the EU, according to the needs of its mission.
- A thorough knowledge of European energy practices and procedures (recommended)

Tasks of the PL:

He/she will:

- be responsible for the implementation of the work plan and the achievement of the results, and must be available for the project at least three days per month, with a field visit at least every three months.
- supervise the implementation of the Twinning project. He/she will organize, in relation with his Israeli counterpart and with the RTA, the quarterly meetings of the Steering Committee that he/she will co-chair. The Steering Committee will provide updates on the progress of the project against the expected results and recommend corrective actions or adjustment to the work plan in case of deviation from the path toward the expected results.
- be responsible, in liaison with his/her Israeli Counterpart, to submit to the Delegation of the European Union in Israel the quarterly reports and the final report, and submit a copy of these reports to the PAO.

### **3.5.2 – Profile and tasks of the Resident Twinning Advisor (RTA)**

A Resident Twinning Advisor (RTA), based in Israel during the implementation phase, will be responsible for the day-to-day management and implementation of the work plan defined for the twinning project and also mandated to provide technical advice to the MNIEWR as necessary.

Academic Background:

Graduate of university or higher education institution, preferably in the field of engineering or economics (preferably a field related to the upstream O&G sector)

Professional Experience:

- At least ten years of experience and demonstrated proficiency in managing and coordinating projects, preferably related to the O&G sector
- Knowledge of institutional twinning or Euro-Mediterranean programs as well as mechanisms for approximation of the EU “acquis” would be an asset
- Must have experience of working with governmental authorities
- Extensive experience of the E&P activity
- Knowledge of regulatory procedures in the O&G sector would be a strong asset

Personal skills:

- Strong communication skills, including excellent interpersonal skills
- Understanding of public sector administrative environment
- Be fluent in English
- Open to other cultures

- Extensive use of PC tools

#### Tasks of the RTA:

He / she will:

- be based in an office within the same building than the OGP and will liaise closely with his/her Counterpart
- ensure the continuity of the implementation of the work plan in close relationship with his/her Counterpart (synchronization of STE missions with availability of BC counterparts)
- provide assistance in defining the detailed content of the twinning activities and the scope of work of the MS expert missions
- provide information on the profiles of MS experts mobilized to fulfill the work plan
- ensure the coordination and the supervision of the MS experts missions
- establish working groups/workshops/roundtables/training sessions as defined in the work plan
- be responsible for the project logistics, in particular to ensure the proper preparation and organization of the STE missions in Israel and the study visits to be done by BC recipients in EU countries
- follow up the achievement of budget, planning and results, and identify with his/her counterpart suitable adjustments to be introduced in the working plan to be submitted to PSC
- draft and submit in due time to the EU Delegation in Israel side letters required during the implementation
- assist the Project Leaders to draft and submit amendment to the contract if needed
- assist the Project Leaders to draft and submit quarterly reports and final project report, and submit a copy of these reports to the EU Delegation in Israel
- organize quarterly meetings of the PSC, to be chaired jointly by both Project Leaders.

The RTA will be assisted by a RTA assistant, to be recruited locally. His/her salary will be covered by the budget of the Twinning project, in accordance with the Twinning manual.

### **3.5.3 – Profile and tasks of the short-term experts**

The tasks and responsibilities of the STEs are those corresponding to the various activities to be developed in each component, in order to reach the mandatory results.

The team of STEs to be mobilized on this project is to be defined by the MS partner. STEs should be civil servants or equivalent with a thorough expertise in the following areas:

- legislation / regulation related to E&P sector
- G&G, engineering , HSE, economics
- Management of petroleum rights
- IT systems used in similar units
- Training engineering, educational IT systems

## **4. – INSTITUTIONAL FRAMEWORK**

Beneficiary Institution: The Oil and Gas Department within the MNIEWR

## **5. – BUDGET**

970 000 euros

## 6. – IMPLEMENTATION ARRANGEMENTS

A new Financial Regulation applicable to the general budget of the European Union entered into force on 1st January 2013<sup>4</sup>. This implies several changes to the Twinning contract templates. An updated version of the Twinning Manual and of its Annexes, incorporating these changes, is in preparation and shall be published soon on EuropeAid website<sup>5</sup>. The Twinning contract that shall be signed as a result of the present procedure shall follow the templates of the updated Twinning Manual and Annexes.

### 6.1 – Implementing Agency responsible for tendering, contracting and accounting

The Implementing Agency which will be responsible for tendering, contracting and accounting of this twinning project is the Delegation of the EU to the State of Israel. The person in charge is:

Ms Livia Stella  
Head of Operations Section,  
Delegation of the EU to the State of Israel  
Address: 5-7 Shoham Street, Ramat Gan, Israel  
Postal Address: P.O. Box 3513 Ramat Gan, 52136 Israel  
Tel: + 972-3 600 0921 - Fax: + 972-3 613 7770  
Email: [livia.stella@ceas.europa.eu](mailto:livia.stella@ceas.europa.eu)

Assistance to the Delegation in the management and administration of the Twinning Programme is provided by the PAO (within the Ministry of Foreign Affairs):

PAO (Program Administration Office)  
Mr David Nezer  
Economic Affairs Division - Ministry of Foreign Affairs  
9, Yitzhak Rabin Blvd.  
Jerusalem - Israel  
Fax: 972-2-5303209 - Email: [david.nezer@mfa.gov.il](mailto:david.nezer@mfa.gov.il)

### 6.2 – Main counterpart in the BC

Responsible Institution in the Beneficiary Country: Oil and Gas Department (MNIEWR)

Project leader:  
Mr Alexander Varshavsky  
Petroleum Commissioner, Director of the OGP  
Ministry of National Infrastructures, Energy and Water Resources  
14 Hartom St, Har Hozvim Industrial Zone, 9136002  
P.O.B. 36148, Jerusalem  
Email: [svarsh@energy.gov.il](mailto:svarsh@energy.gov.il)

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<sup>4</sup> Financial Regulation: Regulation (EC, Euratom) No 966/2012 of the European Parliament and of the Council of 25 October 2012 on the financial rules applicable to the general budget of the Union and repealing Council Regulation (EC, Euratom) No 1605/2002.  
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:298:0001:0096:EN:PDF>

Rules of Application: Commission Delegated Regulation (EU) No 1268/2012 of 29 October 2012 on the rules of application of Regulation (EU, Euratom) No 966/2012 of the European Parliament and of the Council on the financial rules applicable to the general budget of the Union.  
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:362:FULL:EN:PDF>

<sup>5</sup> [http://ec.europa.eu/europeaid/where/neighbourhood/overview/twinning\\_en.htm](http://ec.europa.eu/europeaid/where/neighbourhood/overview/twinning_en.htm)

RTA's counterpart:

Dr Michael Gardosh

Director of G&G Section, OGP

Ministry of National Infrastructures, Energy and Water Resources

14 Hartom St, Har Hozvim Industrial Zone, 9136002

P.O.B. 36148, Jerusalem

Email: mikig@energy.gov.il

A Project Steering Committee (PSC) will be established for the control and supervision of the project activities and the mandatory results. The Steering Committee will meet after the submission and review of the interim reports and will submit by the end of the meeting (as recorded in the minutes of meeting) an approval/not approval of the reports. Official minutes of the PSC meetings will be kept in English and distributed to all parties within 15 days after the PSC meeting.

Contributions expected from the Beneficiary include:

- Provision of office accommodation, computers, international telephone line, internet access, printer, and photocopier to RTA, RTA's assistant and MS experts,
- Provision of suitable venues, catering and equipment (projector) for workshops, training sessions and conferences that will be held under the project,

### **6.3 – Contracts**

N/A

## **7. – IMPLEMENTATION SCHEDULE (INDICATIVE)**

### **7.1 – Launching of the call for proposals**

February 2014

### **7.2 – Start of project activities**

October 2014

### **7.3 – End of project activities**

March 2016

### **7.4 – Implementation period duration**

18 months

(see Appendix 2: indicative implementation chart)

## **8. – CROSSCUTTING ISSUES**

*Sustainability*

The training courses, learning tool and relationships with other MS institutions developed during the implementation will contribute to the capitalization of the results reached at the end of the Twinning project.

The following factors (internal/external) would contribute to make the results sustainable in the future:

- Political will to implement the institutional changes (regulatory framework and organizational structure)
- HR management within the Ministry encourage trained people not to leave the institution
- People understand that the management of change is a constant requirement rather than something that happens once or periodically
- Political situation of the country does not impede co-operation and partnerships developed during the twinning

#### *Environment*

Although this project deals with the field of fossil energy, the objective can be considered to generate a positive contribution to environmental protection. The project aims to develop new regulations strengthening the bonds of companies and authorities regarding the prevention of risks and the environmental protection, like the assessment of technical and financial capacity of the applicants during the licensing process, the verification of critical risk control elements during well operations or the obligation for a polluter of cleaning up and bearing the full costs of damages to the environment.

#### *Communication and Visibility*

The project shall draw up a communication plan that will ensure visibility for the activities themselves as well as for EU support throughout the implementation of the project. Proposals to be received from Member States should include proposals for communication and EU visibility. Based on these, the communication plan will be finalised with the Beneficiary administration, the Member State and the EU Delegation in the inception phase of the project<sup>6</sup>.

## **9. – CONDITIONALITY AND SEQUENCING**

There are no prerequisites for regulatory change before the start of the twinning project.

Co-ordination between some activities of the various components will be ensured by the RTA and the RTA's counterpart in order to achieve the mandatory results, especially because a chronological order of completion is to be defined and followed.

The work plan of the twinning project proposals shall take into account the different period of national holidays in Europe and in Israel.

Contributions expected from the Beneficiary include:

- Provision of office accommodation, computers, international telephone line, internet access, printer, and photocopier to RTA, RTA's assistant and MS experts,
- Provision of suitable venues, catering and equipment (projector) for workshops, training sessions and conferences that will be held under the project,
- Provision of flight tickets for BC administration staff participating in study visits to Europe.

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<sup>6</sup> Rules on visibility for EU projects can be found at: [http://ec.europa.eu/europeaid/work/visibility/documents/communication\\_and\\_visibility\\_manual\\_en.pdf](http://ec.europa.eu/europeaid/work/visibility/documents/communication_and_visibility_manual_en.pdf)



## **APPENDICES**

Appendix 1: Logical Framework Matrix

Appendix 2: Indicative implementation chart

Appendix 3: Increase of licences between 2005 and 2011

Appendix 4: NG demand and reserves of in Israel

Appendix 5: Organizational charts of the MNIEWR and the Oil and Gas Department

Appendix 6: Discovered gas fields and existing gas infrastructure offshore Israel

Appendix 7: Summary gap analysis

## APPENDIX 1: LOGICAL FRAMEWORK MATRIX

<b>“Strengthening the Organizational, Technical and Administrative Capacities of the Ministry's Oil and Gas Department and Updating of the Relevant Oil and Gas Regulation and Legislation”</b> <b>Budget: EUR 0.97 million</b>			
<b>Overall objective</b>	<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	
To reinforce the Israeli energy sector by strengthening the Ministry of Energy and Water Resources' management capacities, based on European Union (EU) Member States' acquis and experience.	Efficient and orderly growth of the E&P industry OGP reinforced and recognised for its management of the E&P business Approximation of Israeli legislation to the EU standards	Ministry website National statistics Israeli legislation	
<b>Project purpose</b>	<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions</b>
To support the adoption of an effective regulatory framework and monitoring system of the E&P activity within the Ministry of National Infrastructures, Energy & Water Resources, and strengthen Israel's capacity to reinforce safety and environmental protection measures taking into account EU experience, standards and acquis	New instructions and regulations are developed and introduced within the existing regulatory framework New structure is implemented Improved operational capacity of the OGP Petroleum rights granted (number of permits, licenses and leases) Increased number of IOCs present in Israel	Project reports PSC minutes Presentations done during the closure conference Statistics, publications and information delivered on the Ministry's website Specific webpage developed for the OGP Official gazette (Reshumot) Press / media coverage	Effective political support to implement the institutional changes (organizational and legal aspects) Fulfilment of MS and BC's commitments related to the project Strong commitment of OGP staff Adequate expertise and know how is provided by the MS experts OGP has sufficient staffing for its tasks Twinning project starting on time Time is adequately managed during the implementation HR management within the Ministry encourage trained people not to leave the institution

**Component 1: Development of the E&P regulatory and legal framework**

<b>Results</b>	<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions</b>
Support the development and implementation of new rules for the E&P regulatory framework, taking into account EU standards and experience	<ul style="list-style-type: none"> <li>. Relevant gaps regarding the regulatory framework of the E&amp;P sector are identified</li> <li>. Priorities and recommendations for introducing new guidelines and instructions relating to the E&amp;P legislation and regulation are identified</li> <li>. Guidelines for the submission of applications for performance of E&amp;P activities are defined</li> <li>. An E&amp;P license tendering process is defined and ready for implementation</li> <li>. Guidelines concerning the mandatory flow and format of data from E&amp;P companies to the Ministry are produced</li> <li>. HSE regulations and guidelines in-line with the EU Acquis are developed</li> <li>. Guidelines about performance bonds, environmental guaranties and insurance policy are drafted</li> </ul>	<ul style="list-style-type: none"> <li>Study visits report</li> <li>Workshop report</li> <li>Quarterly progress reports</li> <li>Experts mission reports</li> <li>PSC minutes</li> <li>Ministry's website</li> <li>Ministry's annual report</li> <li>Official gazette (Reshumot)</li> </ul>	<ul style="list-style-type: none"> <li>Effective governmental support</li> <li>Top management commitment</li> <li>Efficient coordination with the Ministry of Environmental Protection</li> <li>Legal Advisor unit take part to the component (representative fluent in English)</li> <li>Participation of a panel of EU specialists from various countries having an offshore E&amp;P activity to the workshop</li> </ul>
<b>Activities</b>	<b>Means</b>		<b>Assumptions</b>
1.1: Identifying key gaps in the Israeli regulatory framework 1.2: Organize a workshop in MNIERW about legislation in the E&P domain 1.3: Support to the drafting of new instructions and guidelines in line with EU standards and experience to be introduced in the regulatory framework	<ul style="list-style-type: none"> <li>STEs</li> <li>Budget for interpretation</li> <li>Premises and equipment for the workshop</li> </ul>		<ul style="list-style-type: none"> <li>Legal Advisor unit involved in the activities of the component (representative fluent in English)</li> </ul>
			<b>Preconditions</b>
			Recruitments planned for the OGP in 2012-2013 are achieved

**Component 2: Support to restructuring and strengthening of the capacity of the Oil and Gas Department**

<b>Results</b>	<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions</b>
Support the reinforcement of the OGP's technical and administrative capacity	<ul style="list-style-type: none"> <li>. Organizational structure, tasks and responsibilities of the each section and job description are reviewed</li> <li>. A mid-term target organizational structure is defined</li> <li>. A methodology for calibrating the human resources within the OGP is developed</li> <li>. A progressive staffing plan in line with the foreseen growth of the activity is delivered</li> <li>Operational procedures, documentation, systems and tools related to key processes (inter alia: licensing process, economic evaluation, supervision of E&amp;P operations... ) are reviewed in a similar MS institution</li> <li>. A methodology for evaluating reserves is defined</li> <li>. An effective HSE regulatory and monitoring system is drafted in accordance with EU and international standards</li> <li>- Guidelines are developed within the twinning for inspections and audit of E&amp;P operations</li> </ul>	<ul style="list-style-type: none"> <li>Experts' mission reports</li> <li>Study visits report</li> <li>Quarterly reports</li> <li>PSC minutes</li> <li>Procedures handbook</li> <li>Monitoring /Inspection reports</li> <li>Formal audits</li> </ul>	<ul style="list-style-type: none"> <li>Managers own the regulatory and monitoring system defined for the OGP</li> <li>Availability of the budget from the BC country for the implementation of IT systems</li> </ul>
<b>Activities</b>	<b>Means</b>		<b>Assumptions</b>

<p>2.1: Clarify the existing organizational structure of the OGP, define a mid-term target structure and an associated staffing plan</p> <p>2.2: Study visit focused on organizational, technical and administrative capacities in one EU country</p> <p>2.3: Support in drafting new procedures and supporting documents for exploration and production of operations</p>	<p>STE's</p>		<p>Twinning partner's commitment to provide suitable experts          People within the OGP are available          Budget for acquisition of hardware and software tools</p> <p style="text-align: center;"><b>Preconditions</b></p> <p>Recruitments planned for the OGP in 2012-2013 are achieved</p>
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**Component 3: OGP Strengthening of the human capacity of the Oil and Gas Department**

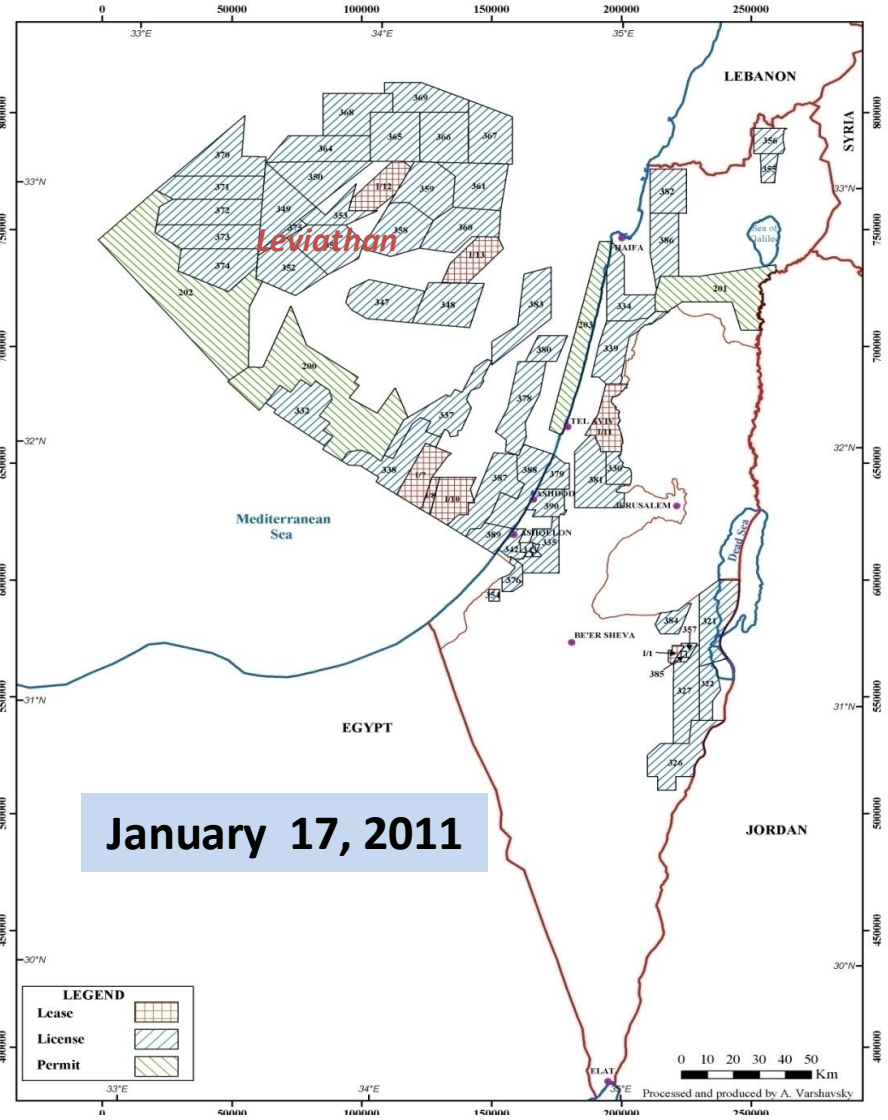
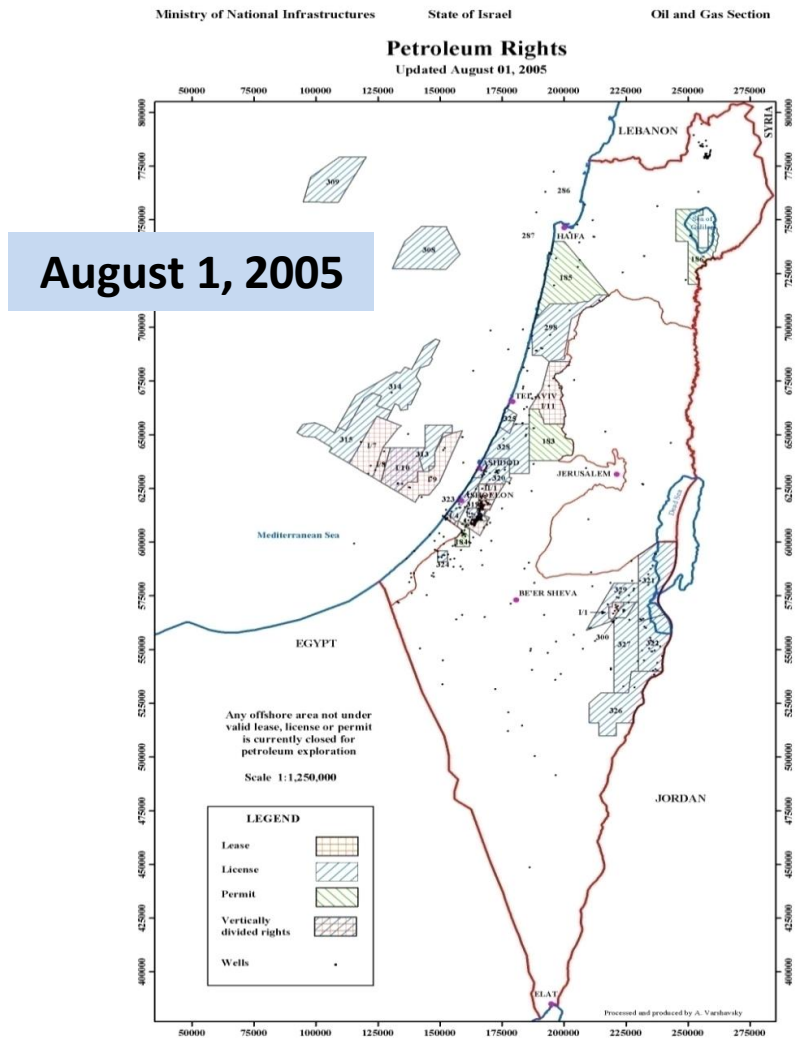
<b>Results</b>	<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions</b>
OGP competencies are strengthened and the team is confident to perform OGP's missions of regulating the E&P sector	<ul style="list-style-type: none"> <li>. A training needs assessment for the OGP team is conducted</li> <li>. A OGP skills development plan is defined</li> <li>. Pilot training programs are successfully implemented</li> <li>. A reserve evaluation, consistent with international standards, is performed by trained officials using the methodology developed within the twinning project</li> <li>. An E&amp;P environmental impact assessment is undertaken by trainees conforming to leading EU and international standards</li> <li>. The development and production plan of gas fields under development are effectively monitored</li> <li>. Lessons and best practices learned during the on-the-job training sessions are presented to the OGP team by the trainees</li> </ul>	<ul style="list-style-type: none"> <li>Trainees evaluation sheets</li> <li>Experts' mission reports</li> <li>Quarterly reports</li> <li>PSC presentations and minutes</li> <li>Monitoring /Evaluation reports</li> <li>DVD support training tool</li> </ul>	<ul style="list-style-type: none"> <li>Commitment from the OGP staff to the training</li> <li>People within the OGP are available</li> <li>Member State institutions are cooperative for on-the-job training courses</li> </ul>

Activities	Means		Assumptions
3.1: formulate a training program for the OGP team 3.2: perform a pilot training program 3.3: perform on-the-job training sessions	STE's Premises for organizing the training sessions Budget for developing a DVD training tool		Commitment from the OGP staff to the training People within the OGP are available Twinning partner's commitment to provide suitable experts Cooperation of MS institution for organizing on-the-job training <b>Preconditions</b> Recruitments planned for the OGP in 2012-2013 are achieved
Standard activities	Means		Assumptions
0.1: kick off meeting 0.2: closure conference	STE's and MS PL Venues and catering for the visibility events Budget for interpretation		Political support to the project Excellent cooperation between the twinning partners <b>Preconditions</b> Recruitments planned for the OGP in 2012-2013 are achieved

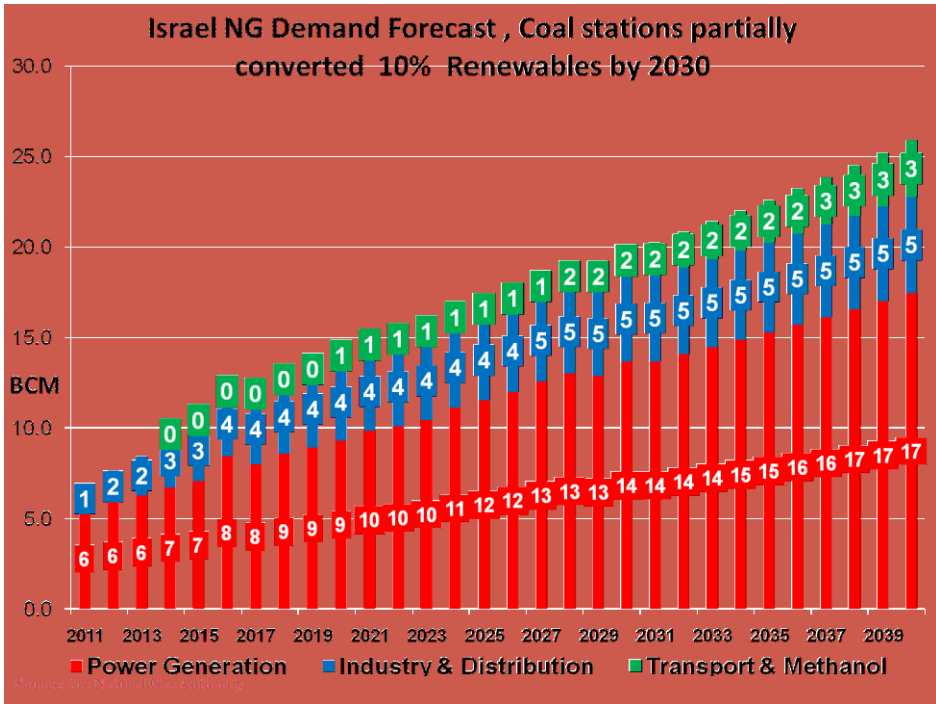
<b>APPENDIX 2 – INDICATIVE IMPLEMENTATION CHART</b>																			
	Months	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Signature of contract		x																	
<b>Project implementation</b>																			
RTA arrival			x																
Steering Committee Meetings				x			x			x			x			x			x
Monitoring and reporting				x			x			x			x			x			
Finalisation Communication Plan				x															
Kick-off Meeting			x																
<b>Component 1: Development of the E&amp;P regulatory and legal framework</b>																			
1.1: Identifying key gaps in the Israeli legislative framework				x															
1.2: Organize a workshop in MERW about legislation in the E&P domain					x														
1.3: Support in the drafting of new “rules” in light of EU standards and experience to be introduced in the regulatory framework						x	x	x	x	x	x	x	x	x	x	x	x	x	
<b>Component 2: Support to restructuring and strengthening of the capacity of the Oil and Gas Department</b>																			
2.1: Clarify the existing organizational structure of the OGP, define a mid-term target structure and an associated staffing plan						x	x												
2.2: Study visit focused on organizational, technical and administrative capacities in one EU country									x										
2.3: Support in the drafting of new procedures and supporting documents for E&P operations											x	x	x	x					
<b>Component 3: Strengthening of the human capacity of the Oil and Gas Department</b>																			
3.1: formulate a training program for the OGP team							x												
3.2: perform a pilot training program								x	x										
3.2: perform on-the-job training sessions																x	x		
<b>Closing Conference</b>																			



APPENDIX 3: INCREASE OF LICENCES BETWEEN 2005 AND 2011



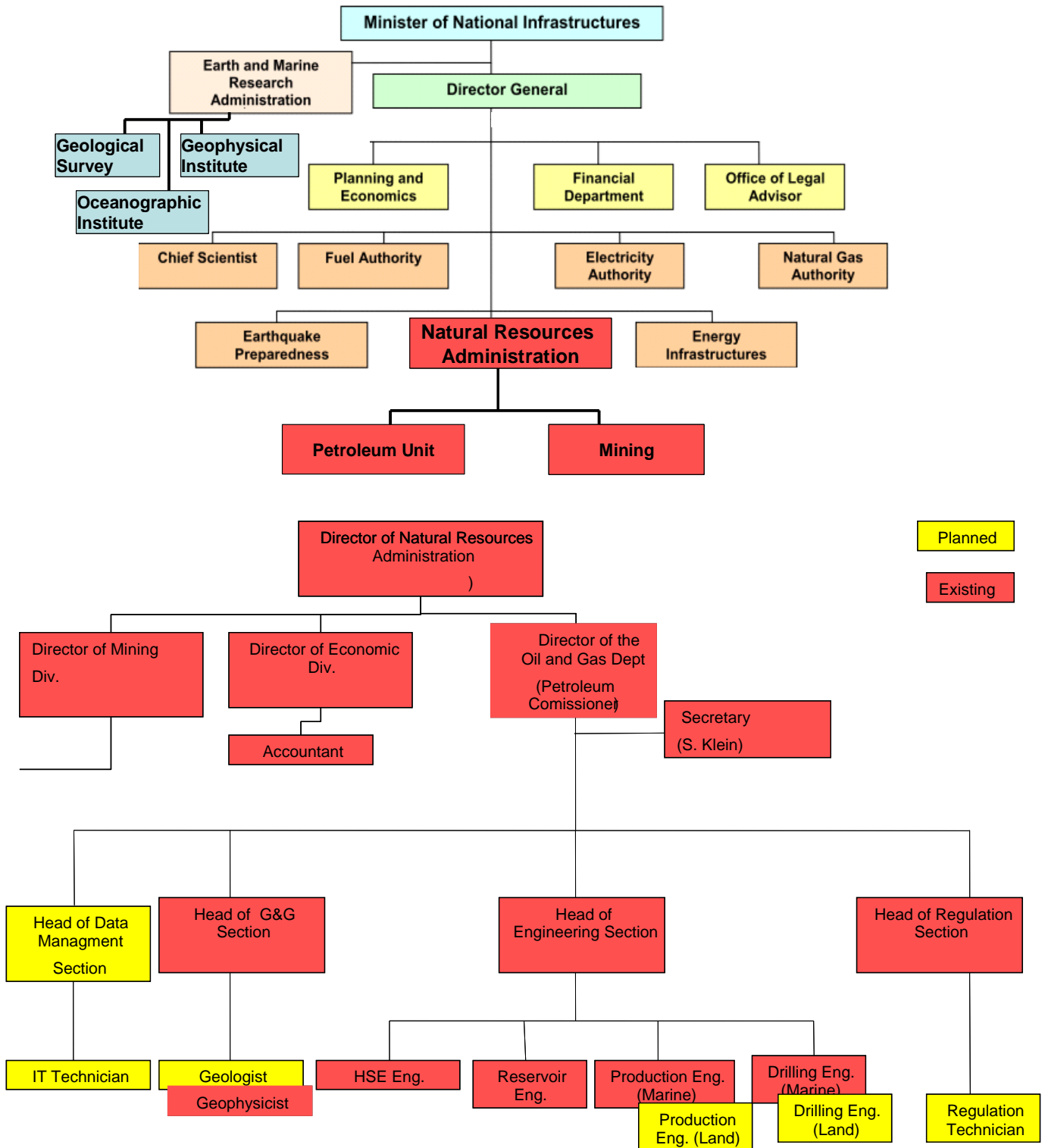
**APPENDIX 4: NG DEMAND AND RESERVES IN ISRAEL**



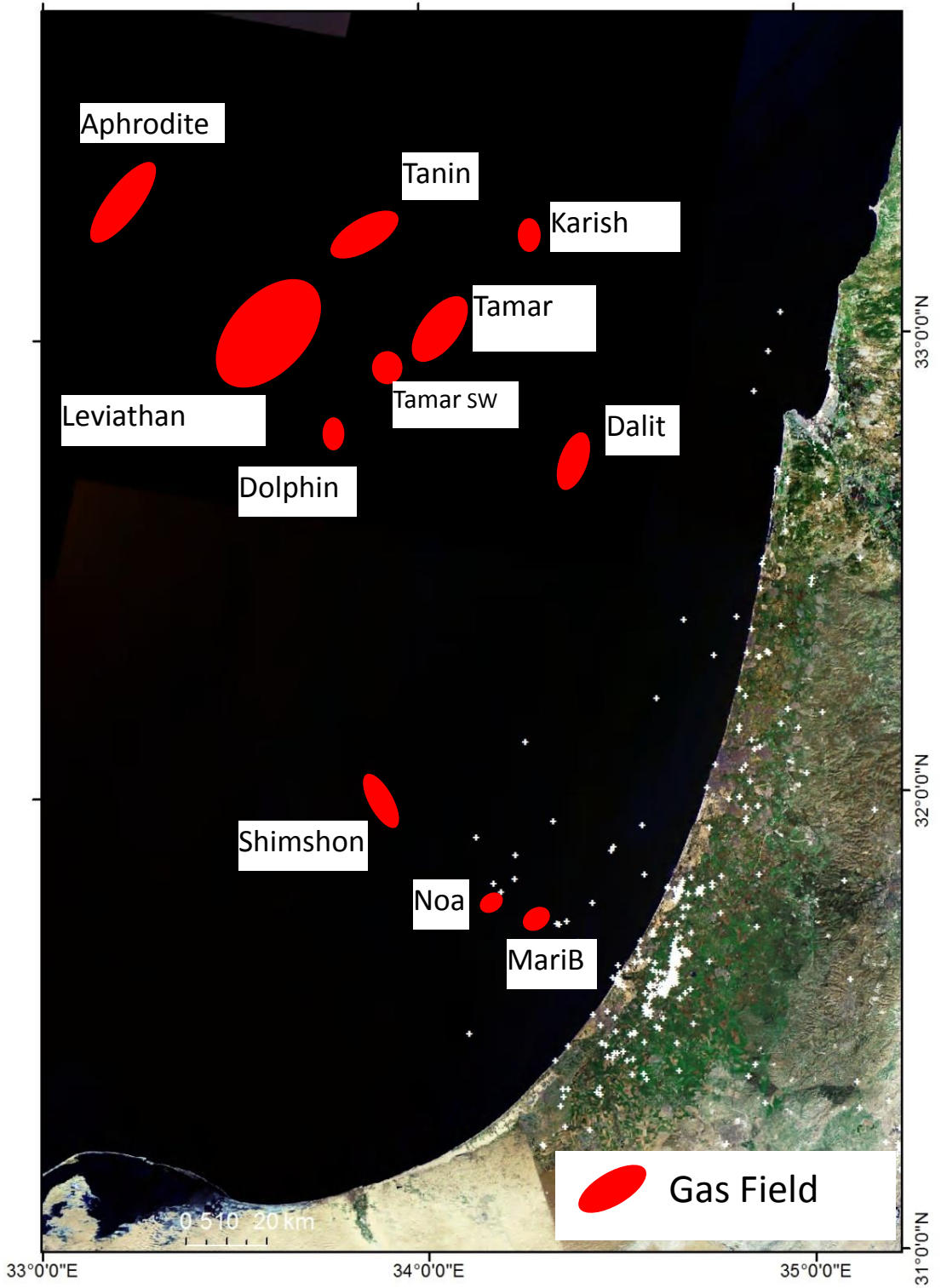
**Proved + Probable Gas Reserves (2P) (Tamar + Mary B + Noa North) – 280 Bcm**  
**Contingent Gas Resources (2C) (Leviathan + Dalit + other fields) – 535 Bcm**  
**Total (2P reserves and 2C contingent resources) – 815 BCM**

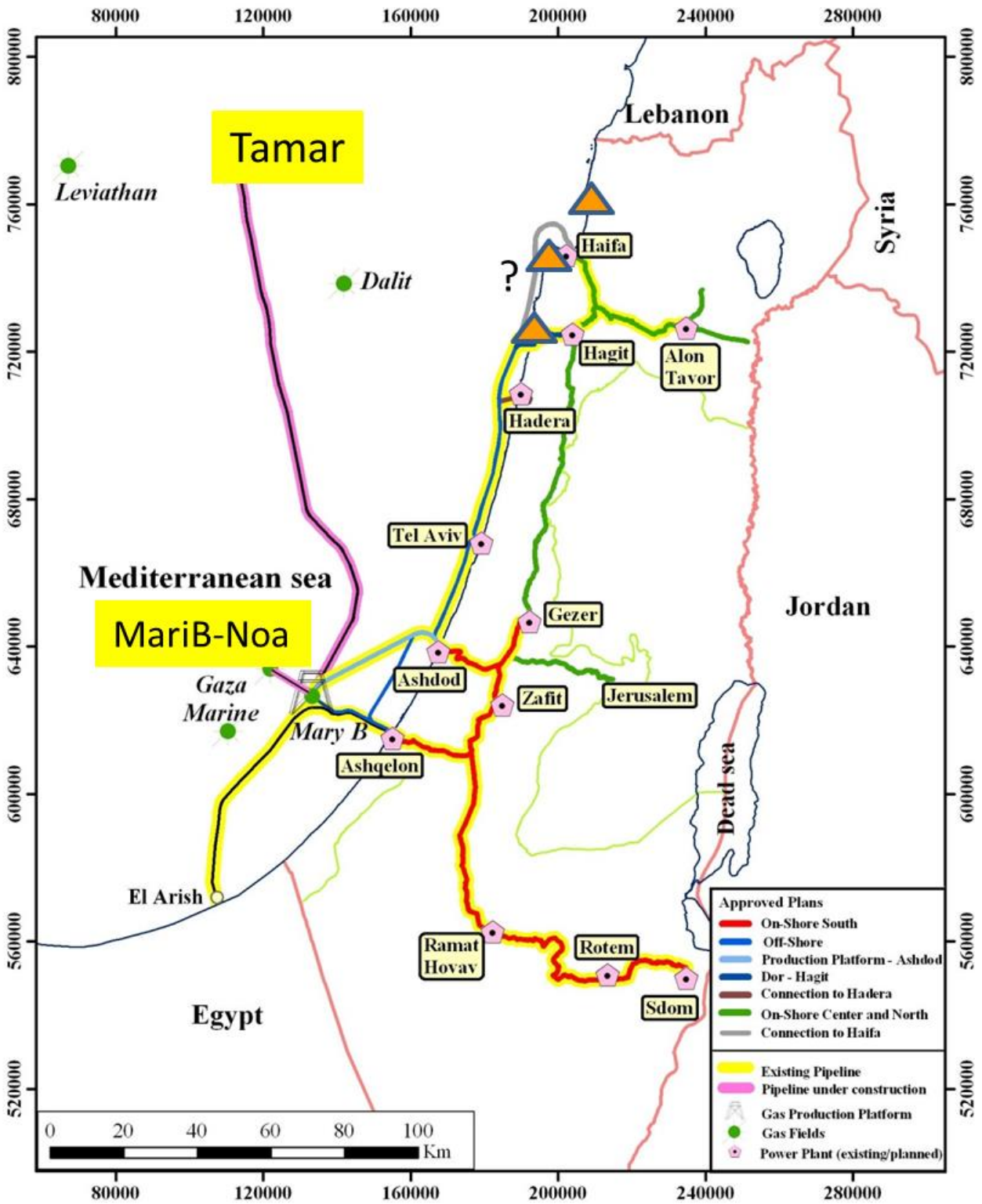
**APPENDIX 5: ORGANIZATIONAL CHARTS OF THE MINISTRY OF ENERGY & WATER RESOURCES AND THE OIL AND GAS DEPARTMENT**

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**APPENDIX 6: DISCOVERED GAS FIELDS AND EXISTING GAS INFRASTRUCTURE OFFSHORE ISRAEL**





## APPENDIX 7: SUMMARY GAP ANALYSIS

### *Overview*

In the last few years the active interest in the Israeli offshore sector has intensified, licensing activity increased, E&P companies are performing their licence obligations in terms of seismic surveys and wells, and Ministry operational workload has increased significantly. Furthermore, the workload is scheduled to increase dramatically year-on-year as some major offshore developments transition from the exploration to the production phase. The Ministry urgently needs to increase its manpower resource but faces the problem that, in a country that only has a small E&P sector, skilled and experienced personnel are not only hard to find, but difficult to recruit on MNIEWR wage scales.

In parallel to the manpower problems, deficiencies in the legal framework are becoming increasingly apparent. Attempts to apply the law to the increasingly active E&P sector have reached a point where the shortcomings of the law/regulations are becoming apparent, and the lack of guidelines is becoming problematic.

Facing these dual problems, the MNIEWR has only a handful of staff, with only limited experience of the way that similar issues are tackled internationally. Although the individual staff is well-educated and trained, the Ministry lacks the depth of experience that can only be gained through a prolonged exposure to an active E&P regulatory environment.

### *Israeli Legislation / Regulatory framework*

The Petroleum law and regulations define the framework for the operations of the Ministry but, lack detail of how the job should be done. Between the law and its application there needs to be a wide range of guidelines about how the tasks are to be performed. When the legal structure begins to be applied to operational activities, gaps and inconsistencies in the law/regulations become apparent and problematic, and this is where the Ministry currently stands. The gap is highlighted by use of “Instructions of the Petroleum Commissioner” that are used as temporary guidelines, amended before each meeting of the Petroleum Committee in order that it has a framework within which to perform its duties.

This gap also becomes apparent in areas of activity that were not envisaged at the time the legal framework was first drafted, such as: offshore E&P activity, depleted-reservoir gas storage facilities, and a wide range of HSE issues.

### *International Rules*

Israel is a signatory to a number of international agreements and conventions that impact on the E&P sector legislative framework. Within the legal support function of the OGP there is limited awareness of the obligations under these treaties, and not clear how far the Israeli legal framework complies or interfaces with these rules.

The Ministry clearly needs to be adequately resourced to ensure that any new legal documents are written to comply not only with Israeli law, but the broader range of European rules and regulations to which Israel is committed. European Union ministries have already faced these challenges and should be able to provide valuable assistance with this task.

### *Oil and Gas Department Structural/ Organizational Gaps*

There is relatively little in the Israeli legal framework to indicate how the OGP should be structured. The organizational structure is developing but currently there are significant gaps in the overall mission, responsibilities, coordination with other departments. There are a number of dimensions to be considered including but not limited to the following:

- MNIEWR professionals have a limited awareness of how similar Ministries are organized in Europe.
- There is no mid-term staffing plan linked to the growth of the E&P activity in Israel, so there is no analysis to highlight the deficiency to the Ministerial level.



- Support functions such as legal affairs, HR, economics and accounting are not under the direct control of the Oil and Gas Department and are not adequately resourced to support the upstream sector.
- The accounting support function currently comprises two accountants, shared with the Mining unit. One relatively urgent request from the accountants is the need for a dedicated system for royalties calculations, and forecasting. A dedicated software purchase has been completed but implementation and use has not been achieved.
- The accounting support function is involved in discussions about guidelines for Performance Bonds, Environmental Guarantees and Insurance Policies. It is important to understand how these financial instruments are structured in similar circumstances abroad. Failure to adequately address these issues could result in substantial shortfalls in future revenues to the government of Israel.
- The legal support function comprises a single person, and is seriously under-resourced to face the challenges of the next few years. The OGP is already in a situation where it needs to review a spectrum of contracts related to exploration and production license activity. Currently, some of the workload has been contracted-out, but other areas are inadequately reviewed. MNIEWR is taking a risk that problems do not arise regarding the under-fulfilment of their responsibilities. The development of regulations and guidelines is under way but moving slowly.
- The HR function has no E&P experience within the recruitment section due largely to the historic low levels of E&P activity in Israel. The fact that very few skilled/experienced people are available in the market makes it difficult to fill the vacant positions in the OGP. Even if people were available from the international market, MNIEWR wage scales might not compete with private sector wages.
- The manpower/skills gap might be possible to fill with education/training, but there is no established plan or procedures for foreign education/training. Recently launched university courses will take years to produce results.
- The newly formed HSE function within the OGP is started almost from a zero point in late 2011. There is an urgent need for this unit to be strengthened by the introduction of a framework of guidelines, procedures, forms, etc. Recently recruited staff could benefit enormously from EU MS experience.
- An E&P document library data management system is urgently required

Specific gaps with urgent operational needs that have been discussed in more detail include:

- Granting of Petroleum Rights - To date, E&P companies have applied to the Ministry for acreage on an ad-hoc basis. The process, although it has been applied fairly, has not been fully transparent. Following some awards, license holders using their licenses to raise capital, and make large amounts of money, the process raised lots of criticism within Israel. In response, the Ministry proposes to award licenses under a public tender process in licensing rounds, using a process similar to that used in several European countries. To date, Israel has no experience in the process of launching E&P licensing rounds, which is a relatively complicated process. The license tendering process needs guidelines, and then the tender documents themselves need considerable work inputs.
- At the present time (and for the last 2 years) no new licenses are being issued offshore Israel because it is felt that the current gas reserves are adequate, and the existing drilling commitments under licences already issued will yield additional reserves. AS the present exploration programs are being executed it is therefore felt that a licence issue process by public tender process may be demanded in 2014. At the present time the Ministry is unprepared and has no experience in this field. This issue is covered by EU legislation and several EU countries have recent experience that could be extremely useful to Israel in the time frame of this twinning project.
- The Roles of the Petroleum Commissioner and the “Professional Committee” - This role was recently held by Dr Michael Gardosh, the head of G&G, and then passed to Alexander Varshavsky. The job is demanding and high profile, and to perform the increasing workload without adequate support is a near-impossible task. The experts heard criticism that the role is outdated and needs to be reviewed. The role will be difficult to change as it has been enshrined in petroleum law, which is difficult to amend. A more pragmatic route would be to review the

functions and to support the role with adequate resources. In the event of the proposed move towards public tendering of petroleum rights, the workload of the Petroleum Commissioner might be partially relieved, provided the tendering process did not call extensively on the resources of the Petroleum Commissioner.

- Financial Instruments - In the offshore E&P sector, there are expenditures in the order of millions to billions of dollars, and these are written into the licences as obligations. There are also some potential liabilities in terms of environmental clean-up costs if the licence holders perform their duties badly or negligently. In Europe, and across the world, E&P activities are frequently supported by performance bonds, Environmental guarantees and insurance policies. The Ministry would like to hold the E&P companies financially responsible for performance failures, and potential environmental damage, and would like to follow the current practices used in active producing areas such as the North Sea. The Ministry therefore seeks to learn from the European and international experience.

- HSE Regulation - HSE regulation of the offshore sector is currently at an embryonic stage. In November 2011, a new post of “Head, Safety & Environmental Division” was filled within the OGP. The post-holder is intended to work closely in parallel with the Ministry of the Environment who have a joint responsibility with the Oil and Gas Department. In 2012 some guidelines for addressing the environmental concerns around E&P operations had been established, however, there is more work to be done to develop a co-ordinated approach based on Israeli petroleum law/regulations, International rules and conventions, and the state-of-the-art legislation from a range of countries, especially those with an active offshore E&P industry. The experts believe that the twinning program is an excellent tool for filling this gap.

- Data Management - The Ministry has an urgent need for a document management system to handle the range of documents (paper and electronic) that are generated by the OGP in its day-to-day activities, and are required to be maintained and reviewed both periodically and on an ad-hoc basis. Some documents are required to be kept confidential (not to be made available to the public) but may be released into the public domain according to various triggers, such as the expiry of a license. Other documents are to be made available and will be published on the Ministry web site. The volume of paper documents now exceeds the storage capacity of the OGP; some boxes are kept in corridors and others are sent for storage in the Geological Survey, or the Geophysical institute.

The basic problem is that there is no dedicated resource to the maintenance of a document record, so it is unlikely that all documents can be located easily. Furthermore, the volume of documents is likely to grow dramatically over the near-term as large offshore developments transition from the exploration to the production phase.

Another dimension of the problem is there appear to be limited rules about which data are to be furnished by the E&P companies to the OGP, and in which format they are to be provided (paper/electronic, Microsoft Office/pdf/other, well log data format?, etc.).

A further question is whether the IT system used for document management should be integrated with the system used for the day-to-day operations of the Ministry.

The issue of data management urgently needs to be subjected to review, and this can undoubtedly be helped by reference to the best practices used in similar ministries in Europe.

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