

**DEVELOPMENT OF AN OIL AND GAS SECTOR IN PALAU**  
**PRELIMINARY REPORT**



**Oil & Gas Task Force**  
**August 2007**

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## ACRONYMS AND ABBREVIATIONS

AIPN	Association of International Petroleum Negotiators
CD	Committee Document
EA	Environmental Assessment
EEZ	Extended Economic Zone
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EPA	(U.S.) Environmental Protection Agency
EQPB	Environmental Quality Protection Board
GDP	Gross Domestic Product
HD	House Document
IOC	International Oil Companies
MOA	Memorandum of Agreement
MWP	Minimum Work Program
NEMO	National Emergency Management Office
NOAA	(U.S.) National Oceanographic and Atmospheric Agency
NOC	National Oil Company
NPV	Net Present Value
OEK	Olbiil Era Kelulau (National Congress)
O&G	Oil and Gas
PNCC	Palau National Communication Corporation
PNEA	Palau National Energy Authority
PPE	Palau Pacific Energy Inc.
PSC	Production Sharing Contract
PPUC	Palau Public Utilities Corporation
SD	Senate Document
USD	United States Dollar
USGS	United States Geological Survey
WB	World Bank
2D	2 Dimensional

## OIL AND GAS TASK FORCE MEMBERS

In 2003, the Executive Branch requested the assistance of the World Bank (WB) Oil, Gas, and Mining Policy Division to aid Palau develop an oil and gas sector. In response, the WB sent two Missions to Palau, first in the early part of 2003 and again in November 2003. In 2005, the Republic of Palau requested financial and technical assistance from the WB to begin the implementation of the WB Road Map developed during the second WB Mission to Palau.

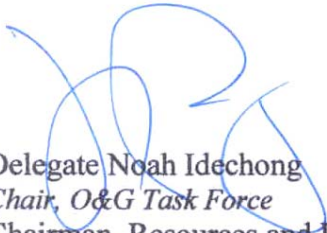
In 2007, the Olbiil Era Kelulau (OEK) passed Senate Joint Resolution No. 7-54, SD1 calling for the establishment of an Oil and Gas (O&G) Task Force with a mandate to review the proposed House Bill No. 7-16-1, HD1 within the context of the WB Road Map. In addition, the President and the Chairman of the House Committee on Resources and Development and the Senate Committee on Resources, Commerce, Trade and Development entered into a Memorandum of Agreement (MOA) to create a broad-based O&G Task Force to address the WB Road Map and to incorporate the recommendations within Palau's current socio-economic reality.

In response to the Senate Joint Resolution and the MOA, the President executed Executive Order No. 241 in February 2007 that established the O&G Task Force with the following membership.

- Two members appointed by the President;
- One member appointed by the Senate;
- One member appointed by the House of Delegates;
- One member appointed by the Environmental Quality Protection Board;
- Two members appointed by the Chamber of Commerce, one representing the tourism sector and one representing the fisheries sector; and
- Two members appointed by the Governors Association.

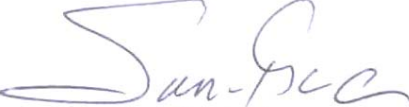
As a result, and within the context of the above appointments, the following members were elected by their respective agencies to the O&G Task Force.

### The House of Delegates:



Delegate Noah Idechong  
*Chair, O&G Task Force*  
Chairman, Resources and Development  
Committee  
7<sup>th</sup> Olbiil Era Kelulau

### The Senate:



Senator Santy Asanuma  
*Vice-Chair, O&G Task Force*  
Chairman, Committee on Resources,  
Commerce, Trade, and Development  
7<sup>th</sup> Olbiil Era Kelulau

President:



Ms. Youlsau Bells  
*Secretary O&G Task Force*  
National Environment Planner  
Office of Environmental Response and  
Coordination  
Office of the President



Mr. Terangue "Tiger" Gillham  
President  
GK2 Inc.

Palau Chamber of Commerce:

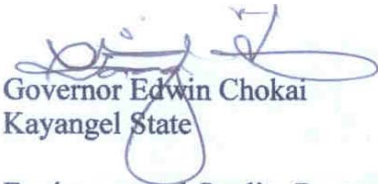


Mr. Victorio Uherbelau  
*Fisheries Representative*  
Director  
Compact Review Commission

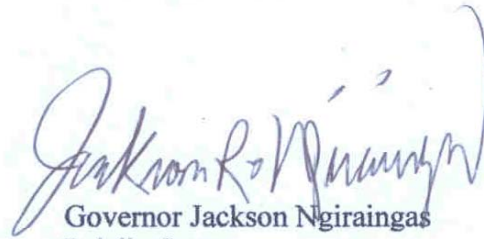


Mr. Sam Scott  
*Tourism Representative*  
President  
Palau Sea Ventures, Inc.  
Sam's Tours

Governor's Association:



Governor Edwin Chokai  
Kayangel State



Governor Jackson Ngiraingas  
Peleliu State

Environmental Quality Protection Board:



Ms. Portia Franz  
Executive Officer

In line with its mandate, the Task Force hereby submits this Preliminary Report that delineates a set of recommendations that should be considered for the development an effective and efficient oil and gas sector for Palau. The Task Force hopes that this report will contribute to the possible development of an oil and gas industry in Palau.

## EXECUTIVE SUMMARY

The first petroleum exploration license was signed in 1977. Since then, there has been continued interest in exploring Palau's territorial waters for the potential of oil and gas. Although limited, petroleum exploration interests have been persistent over the years. Currently, one company has existing petroleum licenses with the States of Kayangel, Hatahobei, and Anguar respectively. However, to date, no exploratory drilling has occurred.

Conscious that Palau lacks experts to develop an oil and gas sector that conforms to international standards and protections, while also taking into account Palau's socio-economic reality, the Executive Branch requested the assistance of the World Bank (WB) Oil, Gas, and Mining Policy Division. Several missions took place that resulted in the establishment of a framework for technical assistance. A road map was proposed with the objective to promote the orderly development of the sector.

In February 2007 the Oil and Gas Task Force (O&G Task Force) was created to oversee and direct the analysis and preparation of a comprehensive report on the opportunity and alternative ways for developing the oil and gas sector in Palau. The preliminary findings and recommendations of the O&G Task Force are summarized below.

- 1. The potential for oil exploration and exploitation in Palau raises numerous jurisdictional issues that require resolution if the development of the oil sector is to find success if and when petroleum reserves are found.*** The Palau Constitution and its laws provide numerous rights, privileges and powers that relate to the rights to benefit from the oil industry, the power to tax and regulate the industry, and the powers and obligations to protect the health and safety of the citizens of the Republic. At times, these various powers may appear to compete and contradict with one another. These apparent contradictions in the laws are reflective of the fact that the Constitution gives and protects rights to many different citizens, interest groups and governmental entities. In fact, many of these rights and powers may be held simultaneously between the national and state governments for the benefit of their citizens. In order to establish the most efficient institutional and legal framework-up for the management and oversight of the oil and gas sector, the O&G Task Force recommends that overlap of responsibility between national government and states that may generate, conflicts in the future be resolved through a negotiated process. Whenever possible, the management and oversight of the sector should be carried out at national level to ensure the greatest effectiveness, the least cost, and the smallest impact on the social, economic, and political landscape of Palau.
- 2. The geological potential is one of the critical elements that determine the attractiveness of a country to potential investors. This in turn affects the potential structure of the sector and the way host governments establish their policies, and their institutional and legal set ups. It is paramount for Palau to improve its knowledge of the geological potential of its territory so as to***

*establish the opportunity and modalities for developing the hydrocarbon sector.* The O&G Task Force recommends that Palau begins the process of building a database of information regarding the geological structure of its territory. To this end, the O&G Task Force has taken the necessary steps to obtain a copy of the relevant raw and processed data and interpretation report from PPE. Some of the data collected through the above avenues may need to be re-processed or re-interpreted. It may be necessary to acquire additional data. Since Palau currently has no local expertise in this field, expert advice will be needed to carry out the task.

3. ***The hydrocarbon sector may be used as platform for the creation of business opportunities and local employment in the archipelago.*** The O&G Task Force recommends that local content obligations be set forth in the future Hydrocarbon Law with the objective to facilitate local employment opportunities, training, transfer of technology, and the use of local goods and services. In defining such provisions the current and likely future structure of Palau's economy and society should be taken in due consideration in order to avoid the creation of wasteful barriers to foreign investment and/or economic imbalance. The design of special economic incentives may be necessary to support the development of local business. To this end, the O&G Task Force will undertake a detailed analysis of barriers to investment in Palau, which will be presented in the final report on the development of the hydrocarbon sector in Palau.
4. ***Given that Palau's economy relies upon socially and environmentally sensitive industries like tourism and fishery which could be adversely affected by the oil and gas industry, particular importance should be given to the creation of appropriate environmental legal and institutional framework.*** The O&G Task Force recommends that, in the short term, the EQPB be re-organize and strengthen in order to increase its effectiveness and guarantee the availability of necessary human and financial resources. In line with international practice, in addition to the transfer from the state budget, direct sources of funding should be sought (administrative fees, environmental permit fees, etc). To improve transparency and accountability the EQPB shall be the sole agency entrusted with the regulation and monitoring of environmental aspects of oil and gas operations in territory of the Republic of Palau. Should the volume and complexity of activity justify it, the creation of a Ministry of the Environment could be considered.)
5. ***Transparency and accountability are key elements of a successful institutional set up for the management and oversight of the oil and gas sector.*** The O&G Task Force recommends that transparency and accountability be a major concern and be incorporated into the institutions and laws regarding each and every aspect of the oil and gas economy, including environmental monitoring, taxation, auditing, financial oversight, procurement, licensing and contracting. Great consideration should be given to public education and comment throughout the process of institution building and development of the oil and gas sector. The

O&G Task Force further recommends that information (that is not commercially sensitive) be made publicly available to all citizens.

6. ***High risks and long project cycles are key elements of the oil and gas industry. As risks can differ substantially by project and over time, a transparent and stable legal and contractual framework and an efficient fiscal system need are crucial to attracting foreign investments.*** The O&G Task Force recommends the development of a national hydrocarbon law and implementing regulations with the objective to ensure the consistency of approach at national and state level. Model contracts based on the concessionary system should also be developed which would apply to both the national territory and the sub-national territory. Nonetheless the hydrocarbon law will provide for the possibility of introducing production sharing and/or service contracts. The future fiscal regime for hydrocarbons should be flexible enough to accommodate a variety of projects. The fiscal regime, which should apply to hydrocarbon exploration and production activities carried out in the Republic, would include royalties, corporate taxes and/or resource rent tax. Further analysis needs to be carried out to establish the adequacy of the existing general tax law and regulations vis-à-vis the specificities of hydrocarbon activities, and how they compare to international practice. In addition, the capacity of the tax administration department to administer petroleum taxation should be further investigated with a view to determine capacity building and technical assistance needs.
7. ***A transparent revenue management system will need to be established whereby clear and equitable allocation principles between states and national government are established and excess revenue is set aside to allow the smoothing of expenditure over time.*** Given the economic and social structure of Palau, and the constitutional provisions related to resource revenue assignments and expenditure responsibility at national and sub-national level, the O&G Task Force recommends that a detailed analysis be carried out to determine the present and expected magnitude of vertical and horizontal imbalances, with the objective to define clear and efficient revenue assignment rules. This would include an assessment of the efficiency of current expenditure responsibility at the national and sub-national levels, and recommendation for the future. Finally, because Palau's revenue potential from oil and gas production is currently unknown, at this stage it is not recommended that a special legislation be developed to establish a petroleum fund.
8. ***Given the lack of local expertise in the petroleum sector, a decision shall be made on sustainable funding arrangements for acquiring the needed expertise internationally.*** Initially the Task Force will need to be able to contract the services of sector experts to assist it in developing a reference framework of petroleum operations in Palau. Capacity constraints will also need to be addressed in the implementation phase, through targeted recruitment and training. Institutional set up that avoid the proliferation of agencies, and is subject to the normal political control and oversight should be preferred. Careful consideration

should be given to the choice of sources of funds. Borrowing may create financial difficulties in the event of a lack of success in petroleum exploration. On the other hand, mobilizing funds through donors' grants eliminates the risk of financial exposure but may require a longer time frame

Comments and input on the preliminary report are being sought from the Legislative and Executive Branches. These will be incorporated in the final report, which is expected to be finalized in November 2007 for public dissemination and discussion.

After its completion, in November 2007, the O&G Task Force plans to organize a public forum to present and discuss the Preliminary Report and other aspects of public concern pertaining to the development of a hydrocarbon sector in Palau. A public forum summary report highlighting major concerns, recommendations and other notable views will be produced and provided as an annex to the Preliminary Report.

After completion of the Final Report and the public forum discussion, the OGTF will move forward with phase II activities. Phase II will entail contracting the services of industry experts to assist Palau in drafting a regulatory petroleum framework for the potential gas and oil sector. Specifically, the process will entail the drafting of the following:

- Petroleum Code
- Model Petroleum Contract
- Environmental Regulations
- Fiscal Regulations
- Petroleum Operations Regulations

This process will facilitate the creation of a broad legal and fiscal framework for the petroleum sector, a necessary element to ensure the amicable development of the sector and its integration into Palau's current socio-economic reality. The legislation that will be developed will supplement the provisions of existing licenses by improving the clarity and stability of the licenses through the establishment of a proper hydrocarbon framework and management regime.

Phase II will also see the development of promotional information on Palau's hydrocarbon institutional framework and policy to the petroleum industry at large and general public. It is hoped that the campaign will facilitate a greater understanding of Palau's hydrocarbon potential, industry policy and infrastructure framework.

It is anticipated that a website will be created during Phase II to highlight Palau's petroleum sector, including all relevant data to inform potential competitors and the general public about the Republic's regulatory regime and energy policy. The web site will include information on Palau's policies to address socio-economic impact, environmental protection and health and safety precautions.

Phase III, which will include implementation and capacity building, will be undertaken in line with the recommendations contained in the Report on the Development of the Hydrocarbon Sector in Palau.

# **1. INTRODUCTION**

## **1.1 BACKGROUND**

The first exploration license was signed in Palau in 1977 by Yates Petroleum. In 1982, Yates Petroleum conducted the first seismic survey. The Yates license expired in 1994. In 1995, the first EQPB permit was issued to TMBR/Sharp Drilling, Inc. of Midland, Texas, to drill a test well on Velasco Reef in Kayangel under contracts with both the National Government and the State of Kayangel signed in September of 1995. The licenses, which were essentially the same, covered an area of approximately 1.12 million acres over the Velasco Reef in Kayangel State. The licenses granted the Texas-based company the exclusive right to explore for petroleum in the area for a period of 10 years. In return, TMBR was obliged to commence the drilling of one well by the end of the second year, and the drilling of a second well within 6 months of completion of the third year and to begin paying annual surface rentals of US\$0.10 per acre until such time as commercial production was undertaken or exploratory contract conclusion, whichever came first.

Two licenses, one signed by the National Government and one by Kayangel State, were signed. Surface rentals were to be divided between the Republic and the State according to the number of acres which lay in Republic and State waters respectively. While the original Republic license was silent on this point, the State license provided that, in the event of overlapping jurisdictions in any producing area, TMBR would place a promised 12.5% royalty in escrow until it received written instructions from both National and State Governments on how the royalty should be divided.

In November 1996, TMBR acquired 200 km of 2D seismic data over the acreage. The time needed to interpret the new seismic data was one of the arguments used to obtain extensions. At the same time, the license holders were actively seeking new partners to fund the cost of the first and second wells. In 1997, Palau Pacific Energy Inc. (PPE) took over the licenses with the National Government and the State of Kayangel from TMBR/Sharp. The licenses were extended three times in 1997, 1998, and 2000 to grant PPE additional time to commence drilling of the first well. The date for commencement of rental payments was also postponed. In 2001, PPE sought a fourth extension. This was denied by the National Government on grounds of breach of contract, i.e., failure to commence a first well, and PPE's licenses lapsed. In 2002, PPE signed a new agreement with Kayangel State. The National Government chose not to extend its lease with PPE. Subsequently, PPE extended its lease with Kayangel State until 2011.

PPE also entered into lease agreements with the States of Ngarchelong, Anguar, Hatohebei, Sonsorol, and Peleliu. However, the Peleliu State Legislature has not ratified their agreement with PPE. In 2006, Kayangel State applied for an EQPB permit, with PPE as agent, to drill two exploration test wells. The permit is currently pending until all information is available to evaluate the environmental impacts associated with the project. PPE also has a pending Foreign Investment Permit application with the Foreign Investment Board.

### **1.1.1 First World Bank Mission**

In 2003, at the request of the President of the Republic of Palau, through the Minister of Finance, a World Bank (WB) Petroleum Sector Mission visited Koror in February of 2003. The purpose of the Mission was to: a) review recent petroleum exploration and production licensing, license agreements and activity in the Republic and the State of Kayangel; and b) provide recommendations on the future development of Palau's petroleum sector, including appropriate legal, fiscal and regulatory frameworks, and mechanisms to assess the social and economic impact of exploration and production activity. This request to the World Bank for technical assistance was in response to the continued exploratory and preliminary development activities of PPE.

The initial WB mission to Palau in February of 2003 made the following observations leading to its initial recommendations:

- The assessment of Palau's petroleum potential is still by industry standards at an extremely early stage;
- Neither the National Government, nor the Government of Kayangel State has any expertise in the petroleum sector;
- Neither government has any expertise in, or knowledge of the environmental risks associated with petroleum operations, or regulation thereof;
- Social risks associated with the petroleum operations, including not only the immediate impact of exploration and production activity, but also the challenge posed by oil revenues for economic management and governance are not fully appreciated;
- Neither government has any legal framework to govern petroleum operations or provide an anchor to the award of petroleum licenses; and
- The petroleum exploration licenses awarded by both governments in the past fall well short of international standards in terms of specificity and protection to the host country.

Based upon the foregoing, the WB Mission recommended the following course of action:

- Defer the award of any new licenses, pending completion of the steps below;
- Contract a qualified consultant to provide an independent assessment of Palau's petroleum potential;

- Contract an experienced oil industry environmentalist to prepare an independent assessment of likely risks associated with offshore petroleum operations in the Palau marine environment;
- Seek consultant expertise to prepare a discussion paper on the social risks posed by petroleum activity and, in the event of exploration success, by the potential mismanagement of oil revenues;
- If the petroleum potential is considered worth pursuing, and the environmental and social risks manageable, engage qualified consultants to assist in the preparation of an appropriate legal, fiscal, regulatory and contractual framework for petroleum licensing and petroleum operations;
- Work with Kayangel and other states to clarify and resolve any jurisdictional issues, whether related to oversight or revenue sharing;
- Conduct a public information campaign/program;
- Once a framework is in place, engage consultants to assist in the promotion of investment opportunities in the petroleum sector to the international industry; and
- Begin to build some institutional capacity to address petroleum sector issues.

### **1.1.2 Second World Bank Mission**

In November of 2003, a second Petroleum Sector Mission from the World Bank visited Palau to follow up on its initial overview mission. Acknowledging the observations and recommendations of the first Mission, the second Mission further observed that:

- Given that Palau's economy relies upon environmentally sensitive industries like tourism and fishery, particular importance should be given to the creation of appropriate environmental and petroleum operations regulations, and to the delineation of areas to be open to prospection;
- Considerations relating to the absorption capacity of the Palauan economy, and the possibility of creating business opportunities and employment in the archipelago through the promotion of hydrocarbon activities, should guide the design of the petroleum sector strategy; and
- Active participation of the population in the shaping of the petroleum sector, through opinion poll/attitude surveys, will ensure that the interests of the Palauan community are safeguarded in the best possible way.

The Mission recommended a phased approach towards the definition of sector strategy and policies, with a view to building consensus among the stakeholders and ensuring that, if a decision is made to proceed with the development of a petroleum sector, a legal,

fiscal and regulatory framework be developed that includes suitable environmental, social and economic safeguards.

With these considerations set forth, the second Mission proposed a three phased Road Map to assist in developing Palau's petroleum sector.

Phase I of the Road Map proposed the following:

- a) Prospectivity Assessment – Assessment of the hydrocarbon potential of Velasco Reef.
- b) Environmental Impact Assessment – An environmental study to ascertain the potential impacts of petroleum development in areas of potential interest, with a focus on the Velasco Reef area. An oceanographic model and weather model will be included in the study, and efforts will be made to tie the study into an on-going project between the Palau National Government and NOAA. The results of this assessment will be used in the drafting of environmental protection regulations regarding petroleum exploration and production, as well as a national emergency preparedness plan.
- c) Socio-economic Impact Assessment – A survey of the economy to develop a macro-economic model, management alternatives, evaluation of alternative sector policies and institutional arrangements, and assessment of local capacity.

Phase II proposed the drafting of a petroleum code, model petroleum contract, environmental regulations, fiscal regulations and petroleum operational regulations, as well as a promotional campaign. Phase III envisioned implementation and capacity building.

### **1.1.3 Third World Bank Mission**

The third World Bank mission visited Palau in March of 2004 to: a) provide Palau with relevant information in relation to other countries' experience in the petroleum sector, with particular reference to the institutional framework, environmental protection, licensing and tendering procedures, model contracts, and fiscal terms, b) to answer questions regarding the Road Map and c) to discuss and agree on the dates, agenda, participants, and funding of a workshop on Petroleum Sector Management.

In its meetings with both Houses of the Olbiil Era Kelulau and the Executive Branch, the Oil and Gas (O&G) Task Force discussed a number of primary issues and preferred treatment of the issues at the international level, as follows:

### ***1.1.3.1 Institutional Set-Up***

- Countries have had more success in managing their resource endowment through a clear separation of responsibilities for policy design, oversight of the sector and commercial operations.
- In countries that are new to the petroleum sector, the creation of a sector ministry is the preferred choice as it avoids the proliferation of agencies and is subject to the normal political control and oversight.
- In almost all countries, the central government, through its sector ministry, has the exclusive authority to grant hydrocarbon rights to third parties.

### ***1.1.3.2 Legal Framework***

- The consistency of the legal framework with the constitutional foundation is an important factor affecting the security and stability of the legal framework.
- The trend is towards the establishment of modular legal frameworks where all matters relating to hydrocarbon rights and their use are governed by the hydrocarbon law/regulations, all matters relating to taxation are defined in the tax code, all issues relating to environment protection are defined in environmental laws, etc. Modularity increases transparency and accountability, reduces administration costs and facilitates compliance.

### ***1.1.3.3 Fiscal System***

- It is common practice to use a centralized system where the central government defines the tax base, sets the rates and administers the tax system.
- Most federal countries use some form of revenue sharing or assignment of tax bases.
- The capacity of a particularly country to competently administer a complex tax system must be taken into account when designing the fiscal regime.

### ***1.1.3.4 Links with Local Economy***

- Economic diversification (and, in particular, petroleum sector's linkages with local economy), improvement of the quality of life for all citizens and protection of the environment are commonly stated guiding principles in the design of a hydrocarbon law.
- Analysis of local capacity is critical.

### ***1.1.3.5 Promotion of the Sector***

- Governments allocate their hydrocarbon rights through licensing rounds, or direct allocation. In licensing rounds, oil companies compete against each other to secure hydrocarbon rights to specific areas. As in any auction, hydrocarbon rights are awarded to the best offerer.
- However, in frontier areas (unknown hydrocarbon provinces) licensing rounds may not be the most efficient procedure.
- The area in which governments have recently imposed greater restrictions on operating freedom is the area of environmental protection.
- Environmental Assessments, Environmental Management Plans and Environmental Impact Assessments are normally a pre-condition for approval of exploration.

### ***1.1.3.6 Civil Society and Local Business Consultation***

- In a multi-stakeholder world, transparency becomes a key tool for both governments and companies. Transparency encourages public debate and facilitates socially acceptable decisions lowering social tensions.
- The most comprehensive approach to environment protection includes a local community consultation process.

### ***1.1.3.7 Macro-economic Effects***

- The volatility of oil revenues produces boom and bust cycles that can have detrimental effects on investment and growth.
- Stability of budgetary expenditures and sterilization of excess revenue inflows have been dealt with in several ways, from rigid fiscal policies to the establishment of petroleum funds. These mechanisms are typically not regulated in the hydrocarbon law and are not the responsibility of the sector minister. However, modern hydrocarbon laws specifically recognize the supremacy of other laws (foreign investment, tax, banking, labor, etc.).
- When a country derives a substantial part of their fiscal revenue from the exploitation of non-renewable resources, two main problems arise: the revenue stream a) is volatile and uncertain; and b) it comes to an end with time. A possible approach is to set up a petroleum fund. Savings funds aim at preserving wealth for future generations.

- No matter what institutional arrangement is ultimately chosen, clear and transparent rules for the use and oversight of a resource fund are key elements for its success.

#### **1.1.4 Proposed Legislation**

During the WB petroleum assessment process, the Olbiil Era Kelulau simultaneously worked to develop a 'Palau National Petroleum Act'. This proposed act took various forms during the legislative drafting and review process and resulted in a final form as House Bill No. 6-265-13, HD5, SD2, CD1, which failed to gain passage by the end of the Sixth Olbiil Era Kelulau. The same bill has been re-introduced in the Seventh Olbiil Era Kelulau as House Bill No. 7-16-1, HD1.

The Bill would create a Palau National Energy Authority (PNEA), which would be the sole point of contact and have sole and exclusive authority for the bidding, contracting and granting of petroleum licenses and the regulation and monitoring of any exploration, production and extraction efforts. Under the proposed bill, the PNEA is mandated to consult with states and government agencies, including the Environmental Quality Protection Board (EQPB), tax authorities, the National Emergency Management Office (NEMO) and Public Safety. However, the Authority would have the final determination on all petroleum issues. The PNEA would also develop royalty tax and fee formulas under each separate petroleum contract. It would also develop model operating contracts. The proposed Authority would be exempt from national and state taxes and fees and government procurement, but would be subject to the Administrative Procedures Act.

### **1.2 OIL AND GAS TASK FORCE**

#### **1.2.1 World Bank Grant**

In 2005, the Republic of Palau requested financial and technical assistance from the World Bank to begin the implementation of the Road Map developed during the second WB Mission. In response, the WB created the Palau Petroleum Multi-Donor Trust Fund through grant funds provided by the Government of Australia and the government of the Faroe Islands. This grant is matched by local funds. The Grant calls for the development of an O&G Task Force to work with consultants provided under the grant.

#### **1.2.2 Senate Joint Resolution/Memorandum of Understanding**

Recognizing the proposed requirements of the WB Grant, the Olbiil Era Kelulau passed Senate Joint Resolution No. 7-54, SD1. This Joint Resolution called for the establishment of an Oil and Gas Task Force to be given the responsibility of reviewing the proposed House Bill No. 7-16-1, HD1 within the context of the development of the Oil and Gas Sector and the WB Road Map.

The President and the Chairmen of the House Committee on Resources and Development and the Senate Committee on Resources, Commerce, Trade and Development then

signed a Memorandum of Agreement further delineating the joint commitment to move forward with the creation of the Task Force. Specifically, the MOA agreed that the Task Force will prepare a report on the hydrocarbon potential of the Republic's territory, and on the potential impact of oil exploration and production on the Palauan environment, economy, and community.

The MOA further indicated that the report will contain recommendations on the opportunity of and alternative methods for developing the oil sector. After the presentation of a report to the President and the Olbiil Era Kelulau, and after receiving comments from both, the Task Force will:

- a. Recommend the institutional set up for the management and oversight of the sector, including its financing, staffing, technical assistance, and capacity building needs; and
- b. Oversee the preparation of hydrocarbon code, model agreement, and related environmental, operational, and tax regulations, taking into account any existing or proposed legislation for presentation to the President and to the Olbiil Era Kelulau.

The Task Force will also provide recommendations on the design of sector policies, provided that the Government so requires. The parties to the MOA also agreed that, upon completion of the Task Force's work, appropriate government agencies will be created by law, and be tasked with the implementation of the relevant legislation, the promotion of Palau's hydrocarbon potential to the industry, and the oversight and administration of the petroleum sector.

### **1.2.3 Executive Order No. 241**

Executive Order No. 241 was subsequently promulgated by President Tommy E. Remengesau Jr. The Executive Order established the Oil and Gas Task Force with the following membership:

- Two members appointed by the President;
- One member appointed by the Senate;
- One member appointed by the House of Delegates;
- One member appointed by the Environmental Quality Protection Board;
- Two members appointed by the Chamber of Commerce, one representing the tourism sector and one representing the fisheries sector; and
- Two members appointed by the Governors Association.

The Powers and Duties of the O&G Task Force are as follows:

- a) To oversee and direct the analysis and the preparation of a comprehensive report on the following:

1. The prospectivity of oil and gas in Palauan off-shore;
  2. The possible impact of hydrocarbons in the Republic's territory and the impact of oil exploration and production on the Palauan environment, economy and community; and
  3. Recommendations on the opportunity and alternative ways for developing the oil and gas sector.
- b) Based on comments from the President and the Olbiil Era Kelulau on the Task Force report, oversee and direct the preparation of:
1. Recommendations on the institutional set up for the management and oversight of the oil and gas sector, including the related financing, staffing, technical assistance and capacity building needs; and
  2. A draft comprehensive sector legislation, taking into account House Bill No. 7-16-1, HD1, the Palau National Petroleum Act, including a hydrocarbon code, model agreement, and related environmental, operational and tax regulations.

## **2. ROAD MAP IMPLEMENTATION**

### **2.1 OIL AND GAS TASK FORCE HISTORY AND MANDATE**

The Olbiil Era Kelulau (OEK), in Senate Joint Resolution No. 7-54, SD2, HD1, requested “that the President seek technical assistance from the World Bank, Asian Development Bank and other donor organizations to conduct a comprehensive study and provide advice in the form of recommendations to improve House Bill No. 7-16-1, HD1.”

In addition, the OEK has, in a Memorandum of Agreement (MOA) between the President and the Chairman of the House Committee on Resources and Development, and the Senate Committee on Resources, Commerce, Trade and Development, recommended the creation of a broad-based Oil and Gas Task Force to accomplish the following:

- Assess the viability and the environmental and socio-economic impact of the development of a petroleum sector;
- Propose the necessary petroleum legislation, contract and fiscal policies, and associated regulatory framework; and
- Propose institutional arrangements for the management and oversight of the sector at national and state level.

In response to the Senate Joint Resolution and the MOA, the President executed Executive Order No. 241 on 16 February 2007 effectively establishing the Oil and Gas Task Force to oversee and direct the analysis and the preparation of a comprehensive report on the following:

- The prospectivity of oil and gas in Palauan off-shore;
- The possible impact of hydrocarbons in the Republic’s territory and the impact of oil exploration and production on the Palauan environment, economy, and community; and
- Provide recommendations on the opportunity and alternative ways for developing the oil and gas sector.

Based upon the comments on the report provided by the President and OEK, the O&G Task Force is also commissioned to oversee and direct the preparations of the following Phase II activities:

- Recommendations on the institutional set-up for the management and oversight of the oil and gas sector, including the related financing, staffing, technical assistance, and capacity building needs; and

- A draft comprehensive sector legislation, taking into account House Bill No. 7-16-1, HD 1, the Palau National Petroleum Act, including a hydrocarbon code, model agreement, and related environmental, operational, and tax regulations.

The O&G Task Force was called to order on 19 June 2007. The members reviewed the expected outputs of the Task Force and established the following product output and timetable:

<b>PRODUCT/ACTION</b>	<b>TIMELINE</b>
Draft Preliminary Report Completed	24 August 2007
OEK Joint Committee Review of Preliminary Report	29 August – 14 September 2007
Executive Branch Review of the Preliminary Report	29 August – 14 September 2007
Draft Preliminary Report Incorporating OEK Joint Committee Review and Executive Branch Review Comments	21 September 2007
Leadership Forum Review of Preliminary Report	5 October 2007
Incorporate Leadership Comments and Finalize Preliminary Report	31 October 2007
Public Forum to present the Report on the Development of the Hydrocarbon Sector in Palau	November 2007
Initiation of Phase II – Preparation of legal, contractual, and regulatory framework	31 May 2008

## **2.2 THE PRELIMINARY REPORT**

### **2.2.1 General Overview**

The Preliminary Report is the outcome of Phase 1 of a 3-phased approach to develop a petroleum sector in Palau that conforms to international industry standards and protections while also safeguarding Palau’s socio-economic and natural environments. Palau’s relative isolation from major economic markets, limited landmass, small population, and high terrestrial and marine biodiversity makes the Republic highly vulnerable to the development of a petroleum sector that does not take into account Palau’s unique features. The Preliminary Report provides for an overview of considerations that should be taken into account when developing the petroleum sector in Palau.

However, regardless of the protections that are put into place, any potential large-scale venture will have impacts on Palau’s overall social, cultural, environment, and economic fabric. The development and implementation of an effective and protective petroleum framework that conforms to both international standards and Palau’s current reality will limit potential negative impacts while promoting the economic benefits that may be derived from this endeavor.

## **2.3 LEADERSHIP REVIEW**

By 29 August 2007, the Preliminary Report will be officially disseminated to the Leadership of Palau, consisting of the House Committee on Resources and Development, and the Senate Committee on Resources, Commerce, Trade and Development of the Olbiil Era Kelulau and the Executive Branch for review, discussion, and to provide the Oil and Gas Task Force with their respective recommendations.

### **2.3.1 OEK Joint Committee Review**

It is anticipated that the House Committee on Resources and Development and the Senate Committee on Resources, Commerce, Trade and Development of the OEK will jointly review and provide recommended changes to the Preliminary Report to the O&G Taskforce by 14 September 2007. The recommendations from both committees' will then be incorporated into the Preliminary Report on the Development of the Hydrocarbon Sector in Palau.

### **2.3.2 Executive Branch Review**

The President and his designated authorities will each be provided with a copy of the draft Preliminary Report. It is expected that the Executive Branch will review and provide their respective recommendations to the O&G Task Force by 14 September 2007. The Executive Branch recommendations will also be integrated into the final draft PFR.

### **2.3.3 Leadership Forum Review of the Preliminary Report**

It is envisioned that the final draft of the Preliminary Report highlighting the recommendations of the OEK Joint Committee Review and the Executive Branch Review, will be completed and disseminated, along with a copy of the O&G Task Force's initial draft report, to members of the House Committee on Resources and Development and the Senate Committee on Resources, Commerce, Trade and Development of the OEK, and the President and designated members of the Executive Branch by 21 September 2007.

Operating under the expectation that the leadership recommendations will be forwarded to the O&G Task Force by 14 September 2007, the Task Force has set a timetable for the Leadership Forum Review for 5 October 2007 to finalize the draft Preliminary Report.

The Leadership Forum Review will present the opportunity for both committee's of the OEK to review and comment on the recommendations provided by the Executive Branch. In addition, the President and his designated members will also have the option of commenting on the recommendations put forth by the Joint Committee Review.

### ***2.3.3.1 Leadership Forum Outcomes***

Unless otherwise directed, the O&G Task Force will incorporate the recommendations of the leadership to the Preliminary Report by the final session of the Leadership Forum. It is anticipated that both committee's of the OEK and the President and designated members of the Executive Branch will, at the completion of the Leadership Forum Review, reach consensus and adopt the draft report thereby formally finalizing the Preliminary Report.

## **2.4 PUBLIC FORUM**

In November 2007, the O&G Task Force plans to organize a public forum to present and discuss the Preliminary Report and other aspects of public concern pertaining to the development of a hydrocarbon sector in Palau. All sectors, including government, non-government, and community-based organizations, as well as private sector companies and concerned citizens and residents will be invited to attend and express their concerns and/or support of the development of a hydrocarbon sector in Palau. A Public Forum summary report highlighting major concerns, astute recommendations, and other notable views will be produced and provided as an annex to the Preliminary Report.

## **2.5 INITIATION OF PHASE II – LEGAL, CONTRACTUAL, AND FISCAL FRAMEWORK**

The finalization of the Report on the Development of the Hydrocarbon Sector in Palau and presentation for public comment will generate the activation of the last two phases of the 3-phased approach to develop the hydrocarbon sector in Palau. Phase II will be partially funded by the World Bank Trust Fund which purpose is to assist Palau to develop the hydrocarbon sector legal, contractual, fiscal and regulatory framework.

### **2.5.1 Petroleum legislation, contract, and fiscal terms**

Phase II will entail contracting the services of industry experts to assist Palau draft petroleum, legislation, contract, and fiscal terms, in addition to the associated regulatory framework. The process will entail the drafting of the following:

- Petroleum Code
- Model Petroleum Contract
- Environmental Regulations
- Fiscal Regulations
- Petroleum Operations Regulations

During the drafting of each of the above, due consideration will be given to the relationship between the State and National government, as well as existing petroleum exploration and exploitation licenses.

This process will also facilitate the creation of a legal and fiscal framework for the petroleum sector, a necessary element to ensure the amicable development of the sector

and its integration into Palau's current socio-economic reality. The legislation that will be developed will also supplement the provisions of existing licenses by improving the clarity and stability of the licenses through the establishment of a proper hydrocarbon framework and management regime.

### **2.5.2 Promotional Campaign**

The development of promotional brochures will provide information on Palau's hydrocarbon institutional framework and policy to the petroleum industry at large and general public. It is hoped that the campaign will facilitate a greater understanding of Palau's hydrocarbon potential, industry policy, and infrastructure framework. It is also expected that this process will facilitate possible competitive offers during the acreage/licensing round. The promotional campaign should include:

- The applicable regulatory framework;
- The impact of the petroleum sector on the economy of Palau; and
- The Government's energy policy.

#### ***2.5.2.1 Website***

A website should be created to highlight Palau's petroleum sector, including all relevant data to inform potential competitors and the general public about the Republic's regulatory regime and energy policy. In addition, the website should include information on Palau's policies to address the following:

- Socio-economic impact;
- Environmental protection; and
- Health and safety precautions.

## **2.6 PHASE III – IMPLEMENTATION AND CAPACITY BUILDING**

The implementation of Phase III will likely require the contracting of international technical assistants to strengthen local capacity.

The type of institutional arrangement to be implemented and the assessment of technical assistance requirements will be guided by the findings and recommendations contained in the Report on the Development of the Hydrocarbon Sector in Palau.

A budget and time frame for implementation, as well as possible funding sources will be defined after completion of Phase I.

### 3. JURISDICTION ISSUES

#### EXECUTIVE SUMMARY

**The potential for oil exploration and exploitation in Palau raises numerous jurisdictional issues that require resolution if the development of the oil sector is to find success if and when petroleum reserves are found.**

In the context of the oil and gas industry, it is therefore imperative that these potential conflicts be resolved through a negotiated process that agrees to the establishment of the most efficient institutional set-ups for the management and oversight of the oil and gas sector that reflects these compromises. The O&G Task Force recommends that a national institution be developed to oversee and develop the oil and gas industry. This institution should be created by national legislation and deal with all relevant oversight issues.

Due to the complexity of the oil and gas sector and its relevant environmental issues, the necessity to put into place sufficient capacity to regulate and manage environmental issues, and the national scope of the environmental issues as envisioned in the Constitution in the sector, the O&G Task Force recommends that the environmental function remain at the national level.

The O&G Task Force recommends that taxation of the oil and gas sector be accomplished at the national level. The O&G Task Force also recommends that the Office of the Public Auditor be made responsible for audit issues in the oil and gas sector. As with the National Government's budget, this audit function can easily be combined with a private independent annual audit requirement. The O&G Task Force recommends the use of existing capacity in the Ministry of Finance to deal with procurement issues. However, the O&G Task Force recognizes that a unique process for the bidding and award of oil and gas leases must be established and that such process must consider the establishment of an independent procurement process that recognizes the need for transparency and fairness, taking into consideration existing contracts. The O&G Task Force recognizes the potential need to establish a unique dispute settlement system to deal with oil and gas leases. However, the O&G Task Force recommends that ultimate dispute resolution be housed in the Judicial Branch of the Palau government.

The O&G Task Force, while recognizing varying interests between the national and state governments, the development of a model contract that takes into account the realities of Palau's oil and gas industry and comprehends the need to have a single national response to private oil and gas companies. The O&G Task Force believes that the structure of the national oil and gas institution should focus on the capacity that exists and will exist to manage the sector with the greatest effectiveness, the least cost, and with the smallest impact on the social, economic and political landscape of Palau.

### 3.1 INTRODUCTION

The potential for oil exploration and exploitation in Palau raises numerous jurisdictional issues that require resolution if the development of the oil sector is to find success if and when petroleum reserves are found. The Palau Constitution and its laws provide numerous rights, privileges and powers that relate to the rights to benefit from the oil industry, the power to tax and regulate the industry, and the powers and obligations to protect the health and safety of the citizens of the Republic. Specifically, these Constitutional issues include:

- The state ownership of natural resources;
- The national ownership of natural resources;
- The state right to revenues derived from the exploration and exploitation of non-living resources within the 12 mile limit;
- The national right to revenues derived from the exploration and exploitation of non-living resources outside the 12 mile limit;
- The national powers to levy and collect taxes, duties and excises tax;
- The state power to tax;
- The national power to audit national and state agencies;
- The national power to regulate commerce among the several states;
- The national power to regulate the ownership, exploration and exploitation of natural resources;
- The national power to provide for the general welfare, peace and security of the people of Palau; and
- The responsibility of the national government to take positive action to provide for the conservation of a beautiful, healthful and resourceful natural environment, the promotion of the national economy, the protection of the safety and security of persons and property and the promotion of the health and social welfare of the citizens.

Sub-section 3.2 describes these constitutional powers and obligations in detail, and highlights its implications from the development of the oil and gas sector in Palau.

At times, these various powers may appear to compete and contradict with one another. For example, a state has a right to receive revenues from oil exploitation within its exclusive territory. At the same time, the National government simultaneously has the right to tax the revenues from oil exploitation. Therefore, should the state grant a license that limits the total tax and fee liability of the investor to a certain percentage – e.g. 15% - of the future profits of the oil venture and the national government choose to tax oil revenues at the same rate, a problem may arise. For example, all revenues would flow to the national government if the state license had a provision that any national taxes would be deducted from the state license fee payment. Likewise, if the national government chose to tax oil profits, the state would be precluded from taxing the same oil profits unless permitted by national law.

These apparent contradictions in the laws are reflective of the fact that the Constitution gives and protects rights to many different citizens, interest groups and governmental entities. In fact, many of these rights and powers may be held simultaneously between the national and state governments for the benefit of their citizens. In order to establish the most efficient institutional and legal framework-up for the management and oversight of the oil and gas sector, the O&G Task Force recommends that overlap of responsibility between national government and states that may generate, conflicts in the future be resolved through a negotiated process.

In order to promote the coherent development of the oil and gas sector, as well as to avoid states competing with each other to attract investors, it is necessary to agree on a unified sector policy. In effect, what is good for one state might not appear to be good for another state. What is good for the national government may not appear to be good for the state government. And what is good for one state government may not appear to benefit the nation as a whole.

Many questions arise, which can only be answered through the dialogue among national and state governments.

- Should each state that pursues oil exploitation establish its own management and oversight mechanisms?
- Should environmental policy and oversight be set at the state or national level?
- Should the management and oversight scheme use current institutional structures or create a new institutional structure?
- Should each state have its own model contracts or should there be national model contracts followed by each state?
- Should the revenue derived from oil exploitation flow just to the residents of the state in which the oil is extracted or to all of the citizens of Palau? In which proportion should revenue be shared?
- Should a portion of the revenue derived from the exploitation of hydrocarbons located in national territory flow to state treasuries? How should the transfer be determined?
- Should a portion of these hydrocarbon revenues be set aside to insure against potential environmental disasters (for example, oil spills)?
- Is it fair that oil revenues flow to the citizens of only one state when the presence of the oil industry may adversely affect the health, environment, and economic welfare of another state?

- How would intergovernmental disputes, including those related to petroleum revenue assignments, be dealt with/regulated (legislative/OEK, courts)?
- Do national and state Public Financial Management and Accountability structures have sufficient capacity to ensure the effective management and integrity of petroleum revenue?
- Do national and state entities have sufficient expertise and capacity to ensure the effective and efficient management and oversight of exploration and production activities?

This section 2 focuses on the institutional set-up for the oil industry and proposes solutions that, in the opinion of the O&G Task Force, appears most adequate, transparent and efficient taking into consideration Palau’s institutional capacity and body of laws. Section 8 discusses the potential impact of hydrocarbon revenue on Palau’s economy and proposes alternative revenue management solutions.

The O&G Task Force believes that it would be is critical that both the institutional, legal, contractual, and fiscal framework (including the establishment of an agreed-upon revenue distribution mechanism) be in place before hydrocarbon exploration and exploitation activities start and in any event before any revenue is generated by such activities.

### **3.2 CONSTITUTIONAL POWERS AND RIGHTS**

The Constitution establishes the powers and rights of the national government, the state governments and the people in many areas relevant to the oil and gas industry. These powers and rights are described in detail below.

#### **3.2.1 National Powers**

The national government has the following constitutional powers that relate to the establishment of an oil and gas industry:

- Article VI - “The national government shall take positive action to attain these national objectives and implement these national policies: *conservation of a beautiful, healthful and resourceful natural environment; promotion of the national economy; protection of the safety and security of persons and property....;*”
- Article VIII, Section 1. “The President shall be the chief executive of the national government.”
- Article VIII, Section 7. “The President shall have all the inherent powers and duties of a national chief executive, including, but not limited to the following to enforce the law of the land;”
- Article IX, Section 5. “The Olbiil Era Kelulau shall have the following powers:

- 1) to *levy and collect taxes, duties and excises*, which shall be uniformly applied throughout the nation;
  - 3) to *regulate commerce* with foreign nations and among the several states;
  - 12) to *regulate the ownership, exploration and exploitation* of natural resources;
  - 15) to *delegate authority* to the states and administrative agencies;
  - 20) to provide for the *general welfare, peace and security*; and
  - 21) to *enact any laws which shall be necessary and proper* for exercising the foregoing powers and all other inherent powers vested by this Constitution in the government of Palau.”
- Article XI, Section 2. “All governmental powers not expressly delegated by this Constitution to the states nor denied to the national government are powers of the national government. The national government may delegate powers by law to the state governments.”
  - Article XII, Section 2  
The Public Auditor shall *inspect and audit accounts in every branch, department, agency, or statutory authority of the national government and in all other public legal entities or nonprofit organizations* receiving public funds from the national government. The Public Auditor shall report the results of his inspections and audits to the Olbiil Era Kelulau, at least once a year, and shall have such additional functions and duties as may be prescribed by law.
  - Article XII, Section 6  
“(b) The national government shall be entitled to all *revenues derived from the exploration and exploitation* of all living and non-living resources, except highly migratory fish, and fines collected for violation of any law beyond the areas owned by the state.”

### 3.2.2 State Governments

State governments have the following constitutional powers that relate to the establishment of an oil and gas industry:

- Article I, Section 2. “Each state shall have *exclusive ownership of all living and non-living resources*, except highly migratory fish, from the land to twelve (12) nautical miles seaward from the traditional baselines; provided, however, that traditional fishing rights and practices shall not be impaired.”
- Article XI, Section 3. “Subject to laws enacted by the Olbiil Era Kelulau, state legislatures shall have the power to *impose taxes* which shall be uniformly applied throughout the state.”
- Article XII, Section 6.

“(a) Each state shall be *entitled to revenues derived from the exploration and exploitation of all living and non-living resources*, except highly migratory fish, and fines collected for violation of any law within the marine area extending from the land to twelve (12) nautical miles seaward from the traditional baselines.

### **3.2.3 Overview of Powers and Rights**

A review of these Constitutional powers and rights indicates that the States own and have the right to revenues from the exploitation of oil and gas within their 12-mile limits while the national government owns and has the right to revenues from the exploitation of oil and gas beyond the 12 mile limit.

Within this context, the National government has the power and right to regulate national commerce, which would include the oil and gas industry, to levy taxes, duties and excise taxes, to provide for the general welfare of the people of Palau and to take positive action to protect the conservation of a beautiful, healthful and resourceful natural environment, promotion of the national economy and protection of the safety and security of all persons and property, including the health and social welfare of the citizens. Taxes at the state level, unless delegated cannot conflict with national taxes. In addition, powers not expressly delegated to the state governments are national powers.

Taking these powers into account, the national government, through the Olbiil Era Kelulau, may delegate powers and rights to states.

### **3.2.4 Guiding Principles**

In making recommendations for an appropriate institutional structure for an oil and gas industry in Palau, the O&G Task Force believes that it is necessary to develop and follow a set of guiding principles. These recommended guiding principles are as follows:

1. Powers expressly set forth by the Constitution should be upheld and guide the development of oil and gas institutions.
2. Delegation of national powers to states governments should only occur for compelling reasons and where the placement of institutions at the state level is expected to improve the effectiveness and efficiency of the oil and gas sector as a whole.
3. The development of institutions for the oil and gas industry must take equal account of state ownership of natural resources within their 12-mile limits and the interest of all citizens of the Republic (namely general welfare, safety, health, security, natural environment and national economy).
4. Existing governmental institutions, developed over the years to implement constitutional powers and mandates, should be used as components of an overall institutional framework for the promotion, management and oversight of the

petroleum sector, unless detrimental to the efficient and effective development of the sector.

### **3.3 INSTITUTIONAL STRUCTURE**

#### **3.3.1 Institutional Issues**

Taking into account the Republic's Constitutional framework, the guiding principles established above, and different models used in different nations throughout the world, the O&G Task Force reviewed the following issues and options for an institutional framework for the oil and gas industry:

1. National vs. State Oversight of the Oil and Gas Industry
2. Type of National Institution
3. Environmental Oversight
4. General Oversight Issues
  - i. Taxation
  - ii. Financial Oversight
  - iii. Auditing
  - iv. Procurement
  - v. Judicial Redress
5. Model Contracts
6. State and National Cooperation

#### **3.3.2 National vs. State Oversight of the Oil and Gas Industry**

Different countries establish institutional oversight at the national and state level. In Palau, while the states own their natural resources and the right to their revenues, the national government has constitutional powers to regulate the ownership, exploration and exploitation of natural resources. The national government also has the power and responsibility to take positive actions to protect the environmental, to promote the national economy, protect the safety and security of persons and property and to promote health and social welfare of Palau's citizens. Finally, the national government has the powers to collect national taxes and to audit state and national finances.

Thus, while the states have the right to own and develop their natural resources, they do not have the power to manage and monitor numerous national interests. Even if the national government should delegate some of these rights and power, given the scale of activities, under current conditions, it would be expensive and likely inefficient to develop management and oversight capacity at state level. Consequently, the O&G Task Force recommends that a national institution be created by national legislation to develop and oversee the oil and gas sector in Palau. The extent and nature of its responsibility is discussed below.

### **3.3.3 Type of National Institution**

A national oversight institution can take many different forms, from an organization within an Executive Branch ministry to a quasi-governmental authority or corporation entity. House Bill No. 6-265-13, HD5, SD2, CD1, which failed to gain passage by the end of the Sixth Olbiil Era Kelulau and was re-introduced in the Seventh Olbiil Era Kelulau as House Bill No. 7-16-1, HD1 created a national energy authority having powers over almost every level and element of oil and gas oversight and management. Specifically, the bill gives the powers of contracting, bidding, licensing, taxing, distribution of revenues, environmental protection and development of model contracts to a non-governmental agency. This model somewhat parallels structures for the Palau National Communication Corporation and the Palau Public Utilities Corporation. A review of other international models indicates that the preferred structure places these functions within the national government, usually within a ministry in the Executive Branch.

According to the 2004 WB Aide Memoire, “In countries that are new to the petroleum sector, the limited availability of human resources is often a key factor in the choice of [an] institutional framework. The creation of a sector ministry is the preferred choice since it both avoids the proliferation of agencies, and is subject to the normal political control and oversight.” (2004 WB Aide Memoire on Palau Oil and Gas Sector, P. 2)

How do the realities of the telecommunications and utilities sectors differ from that of an energy sector? The primary objective of telecommunications and utility sectors is to provide a public service and not to seek profit. Rates are established to promote affordable access to all citizens and to recover the costs of delivering a public service. According to the projections of PPE, the oil and gas sector may result in annual revenues of between \$70 and 140 million per year. This amount is greater than the current national government budget. Because the development of the oil and gas sector has the potential to generate major economic, social, political, and environmental impacts – as other countries’ experience demonstrates – the concentration of powers in an independent agency is of great concern to the O&G Task Force.

In addition, PNCC and PPUC do not delve into the issues of taxation, environmental protection, state and national revenue sharing, which are the responsibility of the national government and for which institutional capacity and expertise have been created over years to carry out these functions effectively and efficiently.

A review of other countries’ models indicates that the preferred structure places these functions within the national government, usually within a ministry in the Executive Branch.

Countries that have had more success in managing their resource endowment usually feature a clear separation of responsibilities for policy design, oversight of the sector and commercial operations. Separation of roles and responsibilities favors accountability,

transparency, and the efficient use of resources, in other words good governance. Norway's "trinity" model is an example in this direction: policy design and licensing are the responsibility of the Ministry of Petroleum, the Directorate of Petroleum provides advice to the Ministry on technical matters and is responsible for the management of all technical data and the enforcement of technical regulations, and Statoil, the national oil company, focuses on conducting commercial operations.

The respective roles of the government and the National Oil Company ("NOC") can be summarized as follows:

- Governments set national priorities for the development of mineral resources and formulate hydrocarbon laws within the framework of the constitution. Often, the constitution lays the basic foundation, with a definition of property rights for sub soil resources.
- The sector Ministry ensures the application of such laws, formulates policies, and implements the government's decisions on the pace of petroleum sector development by making available areas for exploration, and granting licenses.
- The NOC focuses on commercial activities. In practice, especially in developing countries, NOCs are often entrusted with some of the responsibilities of the sector ministry<sup>2</sup> (negotiate work programs, negotiate licenses, monitor oil company activities). The technical expertise the NOC develops by working closely with IOCs in the exploitation of petroleum resources, and the direct access to financial resources from oil production, enable the NOC to attract and retain qualified staff, which may be difficult to achieve within the general public sector salary structure. The interests and objectives of NOC managers are however, not necessarily the same as those of the government, which in turn, may then lead to suboptimal decisions, and a lack of oversight of the oil industry. The emphasis therefore becomes the design of effective performance monitoring systems to ensure the proper allocation and utilization of public resources.

The most effective division of government functions is to separate policy making from policy administration. The creation of a specialized petroleum agency is the most common solution. The agency supports the ministry in the planning of operations, supervises petroleum operations and issues guidelines, standards and objectives for operations. However, due to capacity constraints, many countries opt for keeping policy administration functions within the sector ministry<sup>3</sup>.

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<sup>2</sup> For example, see the statute of the Nigerian National Petroleum Corporation, art. 10, that creates the Petroleum Inspectorate, a department of the corporation which acts as the agency for the enforcement of the regulations and issues permits and licenses for activities connected with exploration, production, transportation, and distribution of hydrocarbons. In the exercise of its functions the Petroleum Inspectorate is not subject to the direction or control of any person or authority in the corporation except the Minister of Petroleum (Chairman of the Board).

<sup>3</sup> "In countries that are new to the petroleum sector, the limited availability of human resources is often a key factor in the choice of [an] institutional framework. The creation of a sector ministry is the preferred

Whatever the choice of institutional arrangement the separation of regulatory, implementation and monitoring authority has generally been successful in enhancing accountability and good governance.

### **3.3.4 Environmental Oversight**

Sound environmental planning and mitigation requirements are critical to the development of an oil and gas sector. At the international level, the area in which governments have recently imposed greater restrictions on operation freedom is in the area of environmental protections. Sound environmental planning and mitigation requirements have become more and more important. According to the World Bank 2004 Aide Memoire written on Palau, “Environmental Assessments (EA), Environmental Management Plans (EMP) and Environmental Impact Assessments (EIA) are normally a pre-condition for approval of exploration, development and production activities.

The complexity of the requirements depends largely on the risk associated with such activities. Particular attention is normally given to hydrocarbon exploration and production conducted in proximity of protected or restricted access areas (such as marine conservation areas). Furthermore, the EA is a vehicle for, inter alia, assessing and ensuring compliance with relevant international environmental instruments” (2004 WB Aide Memoire on Palau oil and gas sector, P. 6)

Public international legal principles and rules (set forth in instruments such as treaties, conventions, or other multilateral, regional, or bilateral agreements) govern the conduct among states. Protection and conservation of the environment are frequently the subject of public international law. One reason is that many natural resources and environmental issues (e.g. pollution of the high seas) can be properly addressed only if states adopt common rules. The past 5-10 years has seen significant developments in the area of international environmental law, particularly with the entry into force of the Convention of the Law of the Sea and of conventions addressing global concerns such as climate and biological diversity. (2004 WB Aide Memoire on Palau oil and gas sector, P. 6)

Furthermore, actions taking place within one state may affect resources or environmental quality in other states or beyond the limits of national jurisdiction. These impacts may be direct (e.g. oil spill) or may illustrate more complex consequences (pollution of spawning areas that decreases fish population)

There are essentially two approaches on how to regulate the environmental aspects related to petroleum operations.

- a) The central approach whereby environmental legislation and enforcement institutions common to all sectors provides comprehensive solutions to environmental issues; and

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choice since it both avoids the proliferation of agencies, and is subject to the normal political control and oversight.” (2004 WB Aide Memoire on Palau Oil and Gas Sector, P. 2)

- b) The sectoral approach whereby the responsibility for the valuation, approval and monitoring of environmental impact assessment and mitigation plans is delegated to the sector Ministry of Petroleum, although the Ministry of Environment regains the authority to propose and issue regulations.

The key consideration in selecting either of these models relates to the present and future capacity of the Environmental Quality Protection Board (EQPB) to effectively and efficiently carry out all the necessary administrative and oversight functions. While there currently exists little capacity to respond to current environmental issues related to the petroleum sector, the EQPB has established the basic management structure to handle such issues.

For this reason, and due to the complexity and national scope of environmental regulations and protection – as envisioned in the Constitution, the O&G Task Force recommends that the EQPB’s capacity to regulate and monitor the environmental impact of oil and gas activities be strengthened, and that efficient, transparent, and non-discretionary procedures be developed to ensure the coordination between the EQPB and the ministry or entity entrusted with the granting of oil and gas exploration and exploitation licenses and the monitoring of oil and gas exploration and exploitation activities. To this end, further analysis is required that would likely involve the intervention of expert advisors.

The O&G Task Force further recommends the development of a transparent community-based process that encourages public debate on not only environmental issues, as well as, other issues related to development of the oil and gas sector in order to facilitate increased public awareness on the industry and discuss potential socio-economic impacts to the Palauan population.

### **3.3.5 General Oversight Issues**

The development of the oil and gas sector will have implications on public finance management, in particular, taxation, financial oversight, auditing and procurement.

#### ***3.3.5.1 Taxation***

From an analysis of other countries’ experience<sup>4</sup>, it is common practice to use a centralized system where the central government defines the tax base, sets the rates and administers the tax system. Most federal countries use some form of revenue sharing or assignment of tax bases<sup>5</sup>.

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<sup>4</sup> See Davis, J.M., Ossowski, R., Fedelino, A. 2003. *Fiscal Policy Formulation and Implementation in Oil-Producing Countries*. International Monetary Fund. and Gresik, Thomas A., April 2001. The Taxing Task of Taxing Transnationals, Working Paper 284.

<sup>5</sup> Fiscal regimes for the oil and gas sector and revenue distribution are discussed in detail in Section 8.

In Palau taxation is currently administered by the Ministry of Finance. While special fiscal provisions are required that are specific to the oil and gas industry, the assessment and enforcement of such provisions should not require the creation of a separate government entity. The O&G Task Force recommends that these functions remain the responsibility of the Ministry of Finance.

#### ***3.3.5.2 Financial Oversight***

While the O&G Task Force recognizes the need to create a separate Oil and Gas Institution, consideration should once again be given to existing institutions and existing capacity. The Ministry of Finance has demonstrated the capacity over many years now to handle the monitoring, budgeting and managing of the national finances. The O&G Task Force therefore recommends that the proposed new oil and gas agency cooperate, to the extent reasonable and manageable, with the Ministry of Finance in developing budgets, monitoring expenditures and ensuring transparency.

#### ***3.3.5.3 Auditing***

As with the financial and environmental systems, the national government has an existing audit capacity in the Office of the Public Auditor. The O&G Task Force therefore recommends that the Office of the Public Auditor be made responsible for audit issues in the oil and gas sector. As with the national government's budget, this audit function can easily be combined with a private independent annual audit requirement.

#### ***3.3.5.4 Procurement***

Once again, the O&G Task Force recommends careful consideration of the use of existing capacity in the Ministry of Finance to deal with procurement issues. However, the O&G Task Force recognizes that a unique process for the bidding and award of oil and gas leases must be established and that such process must consider the establishment of an independent procurement process that recognizes the need for transparency and fairness.

#### ***3.3.5.5 Judicial Redress***

Given the peculiarity of the oil and gas sector, the need may arise to establish a unique dispute settlement system. However, the O&G Task Force recommends that ultimate dispute resolution be housed in the Judicial Branch of the Palau government.

### **3.4 MODEL CONTRACTS**

The issue of contracting is very complex, considering the state ownership of state resources, the national ownership of national resources and the various state and national interests inherent in the oil and gas sector under Palau's constitutional setup. The Task Force also recognizes that certain oil and gas leases have been granted in more than one

state and has no intention of making recommendations to impair any existing contractual rights.

The O&G Task Force believes that the development of a national model contract that takes into account international standards as well as local realities would ultimately contribute to increase Palau's revenue. In fact, a common policy among states and national government would shift the burden of competition away from the state and back to the industry. In addition, the administrative costs of managing the system would be substantially lower. As the benefits to the oil and gas industry will eventually flow to all of the citizens of Palau, a single model contract that optimizes these benefits and that recognizes the uniqueness of each exploration effort would appear to be in the best interest of all parties. Section 8 discusses legal and contractual issues in more detail.

### **3.5 STATE AND NATIONAL COLLABORATION**

The creation of a national institution to manage and monitor the oil and gas sector is recommended by the O&G Task Force. Because oil and gas resources within each state's 12-mile limit are owned by the states, the O&G Task Force further recommends the development of clear and non-discretionary procedures that favor coordination with and involvement of state representatives in all aspects of sector management and oversight. A detailed analysis and specific recommendations will be presented by the O&G Task Force in the final report on the development of the oil and gas sector in Palau.

### **3.6 CONCLUSION**

The O&G Task Force believes that the institutional structure that will ultimately be created for the promotion, management, and oversight of the oil and gas sector, will be critical to the economical, safe, transparent, environmentally sound development of the sector. It is therefore very important to learn from the experiences of other oil and gas countries, especially those that have economic and social structures similar to Palau's. The O&G Task Force further recommends that in the design of the sector institutional structure, policy makers should look to the future, not the present, and should focus on the capacity that exists and will exist to manage the sector with the greatest effectiveness, the least cost, and with the greatest beneficial impact on the social, economic and political landscape of Palau.

## 4. GEOLOGICAL AND GEOPHYSICAL DATA REQUIREMENTS

### EXECUTIVE SUMMARY

**The geological potential is one of the critical elements that determine the attractiveness of a country to potential investors. This in turn affects the potential structure of the sector and the way host governments establish their policies, and their institutional and legal set ups. It is paramount for Palau to improve its knowledge of the geological potential of its territory so as to establish the opportunity and modalities for developing the hydrocarbon sector.**

Except for geological and geophysical interpretation conducted by PPE within the Velasco Reef area, little geological and geophysical information is available today on Palau subsoil, both onshore and offshore. Even this data and information is currently not available to the State and/or National Governments.

The O&G Task Force recommends that Palau begins the process of building a database of information regarding the geological structure of its territory. To this end, the O&G Task Force has taken the necessary steps to obtain a copy of the relevant raw and processed data and interpretation report from PPE. Once this data is obtained, the O&G Task Force will be able to form an independent opinion on the hydrocarbon potential of the area.

It is the O&G Task Force's intention to pursue other potential sources of information, including the United States Geological Survey (USGS), the Mineral Management Service under the United States Department of Interior, and the governments of neighboring countries - Australia, the Philippines and Indonesia. Some of the data collected through the above avenues may need to be re-processed or re-interpreted. It may be necessary to acquire additional data. Since Palau currently has no local expertise in this field, expert advice will be needed to carry out the task. The Faroese Geological Service has indicated its availability to provide technical assistance with respect to data interpretation with the objective of improving the knowledge of the hydrocarbon potential of Palau, and to assess the need for and positioning of additional seismic surveys.

The O&G Task Force further recommends investigating the interest of geophysical companies to acquire and/or interpret existing data on a risk basis (so called multi-client surveys). To this end, the O&G Task Force will develop and propose to the Government the relevant terms of reference and model contract with the objective to launch a tender by mid-September 2007.

Given the complete lack of information it is not possible to quantify the cost of carrying out such task. The O&G Task Force hopes to be in a position to present a detailed workplan and budget at the time the final report on developing the hydrocarbon sector in Palau is presented to the policy makers and the citizenry at large.

## **4.1 INTRODUCTION**

Currently the government of the Republic of Palau possesses little information regarding the geological and geophysical make up of the area in and around Palau in relation to oil exploration and exploitation. This information will be essential to the entire process of developing an oil and gas sector in Palau.

## **4.2 BACKGROUND INFORMATION ON OIL GEOLOGY**

The geological potential is one of the critical elements that determine the attractiveness of a country to potential investors. This in turn affects the potential structure of the sector and the way host governments establish their policies, and their institutional and legal set ups<sup>6</sup>.

Understanding how oil and gas accumulations form is the first step towards determining the hydrocarbon potential of an area

Oil and gas are derived from organisms, mainly marine plankton, which lived many millions of years ago. After dying, the bodies of these organisms sank to and were deposited on the ocean floor where there was little oxygen due to limited movement of water at this depth. The lack of oxygen meant that the organic material contained in the bodies did not fully decompose or rot.

As time went on, sediment in the ocean sank to the ocean floor burying the organic material. If enough sediment accumulated on top of the organic material, on the order of 1.2 miles (2 kilometers) in thickness, then the temperature around the organic material would be able to rise to between 140 and 300 degrees Fahrenheit (60 to 150 degrees Celsius). Elevated temperatures of this magnitude, as well as pressure from the weight of the accumulated sediment, are necessary for the organic material to be converted into hydrocarbons. Higher temperatures would have accelerated the conversion process, but if the temperature was consistently above about 200 degrees Fahrenheit (100 degrees Celsius), the oil would have been further converted into natural gas and water.

The process of oil or gas formation is exceedingly slow, taking millions of years. Once changed from the solid organic material into a liquid form, oil, or natural gas, the pressure surrounding the converted material would force it away from the source rock (where the conversion process occurred) to surrounding areas, normally but not always upwards. This movement, termed migration, would have been a very slow process due to the fact that the source rock would have been very dense and tight.

Through migration, the oil or gas would have moved from the dense source rock, which incidentally is unsuitable in terms of extraction for commercial purposes, to a more porous rock. This porous rock, which is usually sandstone or fractured limestone, is

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<sup>6</sup> For example in countries where the geological potential is unknown or believed to be low the importance of the petroleum activity may not justify the design of a unique policy regime.

termed reservoir rock, and its porous nature makes it suitable for oil or natural gas extraction activities for commercial purposes.

In order for enough oil and/or gas to accumulate to make extraction commercially viable, there would need to be a cap of impermeable rock over the reservoir rock that prevented the material from continuing to migrate through the cracks and pores. These structures are called traps, and they are targets of hydrocarbon exploration activities.

#### **4.2.1 Importance of Geological Survey Information**

Sufficient knowledge of an area's geological structure with regard to oil and gas potential is essential for the following reasons, among others:

- The potential size and locations of areas exhibiting oil and gas potential needs to be known in order to design suitably attractive, contractual, and fiscal terms. In Palau, the issue is further complicated by the overlapping rights and responsibilities of the national and state governments (see Section 2, 7, and 8).
- The potential size and location of oil and gas reserves will affect the manner in which the oil and gas industry will eventually develop (supply and storage bases, port facilities, ancillary services), and hence its impact on the economy, society, and environment of Palau.
- Because oil companies compare investment opportunities world wide, attracting investors would require providing appropriate information on Palau's prospectivity, and on its investment environment.

##### ***4.2.1.1 Geological Survey Methods***

As discussed in paragraph 3.2 above, oil and gas exploration activities target areas of potential oil and gas accumulation. Various techniques are used to gather geological data that can be used to ascertain the potential for oil and gas deposits and the particular areas where the deposits are likely to exist.

Magnetic and gravimetric measurements are used to obtain a first map of the underground layers to detect anomalies and derive a first picture of the underground layers. Magnetic measurements are used to determine the makeup of rock underlying the seabed by detecting the magnetic variations caused by metallic content. Gravimetric measurement relies on the difference in density of various rock formations in order to map their locations.

Geochemical examinations can be used to determine the presence of hydrocarbons in ocean water. Measurement of higher than average concentrations of hydrocarbons in a particular area would support the supposition that higher than average concentrations of hydrocarbons exist under the seafloor as well.

It should be noted that magnetic and gravimetric measurements, as well as geochemical examinations, are usually used to supplement geological survey data derived from seismic surveys and are not normally used alone as bases for geological structure surveys.

The most common method employed to obtain data for geological study is called seismic surveying. On water, a ship will traverse, or move along a predetermined course, the area being surveyed towing two pieces of equipment: the first emits sound pulses and the second records the sound waves that have traveled into the seafloor and are reflected back by the material underlying the seabed. The time it takes for the sound to be reflected back and the angle at which it returns provides a picture of the subsurface strata. This data is collected for the traverse and compiled to create a profile of the material underlying the seabed for the length of the traverse<sup>7</sup>. Consecutive traverses both parallel and perpendicular to one another can be put together to create a three dimensional map of an area.

Seismic surveying may be used to monitor the depletion of a reservoir and the displacement of hydrocarbons once production has started with the objective of optimizing reservoir management (4D or 4C seismic).

The interpretation of seismic data in combination with other geochemical, geological and geophysical information related to the area or to similar formations, allow the company to generate a geological model and to determine whether the potential for hydrocarbon accumulations exists and where exploratory wells should be sited.

Drilling is the surest method of determining whether or not oil and/or natural gas exists at a particular location, as the answer is either yes or no. However drilling may be very expensive and, in the absence of other geological and geophysical information, its results can only be applied to a localized area surrounding the borehole. For this reason exploratory drilling normally occurs only after data has been acquired through the other methods discussed above.

### **4.3 EXISTING GEOLOGICAL SURVEY INFORMATION FOR PALAU**

The Republic of Palau currently holds little to no information regarding the geological structure of the seabed within its EEZ. A company called Palau Pacific Energy Inc. (PPE) is thought to have conducted some geological survey work in the past, including seismic surveying and geochemical examinations. There are two other reports that may be valuable to the development of an oil and gas sector in Palau, particularly the *Main Points from Review of Information on Petroleum Exploration in Palau* by Mr. Colin Ford and the *History of Exploration, Republic of Palau* by Mr. Robert Hajicek. The O&G Task Force will request that its consultants investigate the contents of the two reports further to determine the applicability of the information to this process. The Republic of Palau national government does not at this time have access to any of the data derived from these activities.

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<sup>7</sup> On-shore, targeted explosions are set off and sound waves are measured by the receivers.

#### **4.4 RECOMMENDATIONS**

It is recommended that the Republic of Palau begins the process of building a database of information regarding the geological structure of its territory. This information will be essential to quantifying the potential for oil and natural gas reserves within its EEZ, to creating the legislative, institutional and regulatory framework necessary for the development of an oil/gas sector in Palau should the potential for hydrocarbon reserves exist, and for positioning Palau favorably such that it can successfully exploit its reserves within the competitive oil and gas world market.

Considering that geological survey data obtained by PPE exists at this time, the first step should be to obtain a copy of the relevant raw and processed data and interpretation and form an independent opinion on the potential of the area.

The second step should be to determine if additional geological survey data is available through other sources. Potential sources of information include the United States Geological Survey (USGS), the Mineral Management Service under the United States Department of Interior, and the governments of neighboring countries including Australia, the Philippines and Indonesia.

Some of the data collected in these first two steps might need to be re-processed or re-interpreted. Since Palau currently has no local expertise in this field, expert advice will be needed to carry out the task. In addition, the Faroese Geological Service has indicated its availability to provide technical assistance with respect to data interpretation with the objective of improving the knowledge of the hydrocarbon potential of Palau, and to assess the need for and positioning of additional seismic surveys.

Depending on the type, coverage, quantity and quality of the data collected, it may be necessary for Palau to acquire additional information. To this end, geophysical companies could be contacted to establish their interest in carrying out additional geological and geophysical work on a risk basis (so called multi-client surveys).

## 5. PLATFORM FOR THE CREATION OF BUSINESS OPPORTUNITIES

### EXECUTIVE SUMMARY

**The hydrocarbon sector may be used as platform for the creation of business opportunities and local employment in the archipelago.**

The role of international oil companies (IOCs) has been changing over the past decade. Their track record on their host countries' socioeconomic development, the environment, and human rights is becoming as important as their financial strength and technical ability. Creating value is inextricably linked to conveying value. An important aspect of the relationship between companies and governments is the direct impact of the petroleum sector on the economy through the investment project per se and its links to the local economy.

Petroleum contracts often contain clauses that directly promote local content. A common challenge is the lack of locally available skilled human resources. The efficient promotion of local labor calls for the adoption of a long term view. Comprehensive training programs should be developed and implemented to ensure that, when needed qualified and suitable human resources will be available. Cooperation between government and companies is crucial in this area: future developments and needs of the sector and the global education policy of the government should guide the creation of human capital.

Petroleum projects are normally a major consumer of a variety of goods and services, with multiplier effects on local economies. The utilization of local goods and services is frequently a contractual obligation for IOCs. The creation of a local market for goods and services of suitable standard is an important element for developing a diversified, sustainable economy, and its positive effects should not be underestimated by either the policy makers or the IOCs.

Social community investments are another contribution that IOCs often undertake, and for which consultation with local stakeholders and active participation of the host government are important elements to ensure sustainability.

The O&G Task Force recommends that local content obligations be set forth in the future Hydrocarbon Law with the objective to facilitate local employment opportunities, training, transfer of technology, and the use of local goods and services. In defining such provisions the current and likely future structure of Palau's economy and society should be taken in due consideration in order to avoid the creation of wasteful barriers to foreign investment and/or economic imbalance. The design of special economic incentives may be necessary to support the development of local business. To this end, the O&G Task Force will undertake a detailed analysis of barriers to investment in Palau, which will be presented in the final report on the development of the hydrocarbon sector in Palau.

## **5.1 OIL AND THE PALAUAN ECONOMY**

The potential development of an oil and gas industry in Palau and the resulting impact of such development on the Palauan economy will depend upon the quality of interaction between the Palau society and the international oil industry. The incentive behind applications for licenses for exploration and production of hydrocarbons on the Palau Shelf will be the oil companies' expectation of economic gain. The incentive behind society's establishment of a framework for granting licenses for such exploration is the anticipated socio-economic advantages. Hydrocarbon activity depends on such anticipation of economic benefits for both parties - the oil industry and society.

In the interplay between the oil companies and the Palauan society, both sides will not only, as mentioned, have wishes and demands, they will also have something to offer. The companies can offer capital strength and expertise in exploration, production and the further handling of hydrocarbons. The Palauan society's contribution will primarily be to make available exploration and production possibilities, (i.e., subject to applicable laws and contracts, the right to dispose of all or a share of hydrocarbons produced in a specific area).

To a certain extent, Palau will also be able to benefit from the development of commercial and employment opportunities in the petroleum exploration and production activities and connected/ancillary services. In addition, the spillover effect of earning derived from these activities will further social and economic development (for example, the use of private income earned in the oil industry and the public use of oil tax revenues).

Society will want to obtain the increased scope of choice which will result from a growth in income. Society should prioritize its wishes and demands towards the companies, as greater demands in one area reduce the possibilities for fulfillment of other demands.

## **5.2 COMMERCIAL POSSIBILITIES IN CONNECTION WITH OIL ACTIVITIES**

It is a clear political objective that the hydrocarbon activities shall be organized so that they can contribute to increased Palauan employment, and commercial growth and diversification in Palau, both in the short and long term. The commercial possibilities will be different for each of the four phases in an oil project. The ripple effects of the two first phases - the preliminary survey phase and the exploration phase - are normally limited in range, while the subsequent development and production phases, depending on the volume of activity, can form the basis for significant strategic commercial possibilities.

## **5.3 THE OIL INDUSTRY'S DEMANDS**

In recent years, there has been a dramatic increase in oil prices. At the same time the industry has established fixed routines for purchasing and inviting tenders. These routines include prequalification (i.e. some objective minimum requirements in order to be

nominated to bid for a specific job). These requirements reflect the special demands of the oil industry:

- Demands for a quality control system;
- Demands for control regarding health, safety and environment;
- Commercial demands; and
- Product specifications with reference to industry standards

#### **5.4 PALAU MANPOWER SUPPLY**

Today a significant portion of the workforce is employed by the Government. Emigration has had a dampening effect on development, as many Palauan have sought, and continue to seek, education and employment abroad, especially in the United States. As a result, relatively few young people have returned to Palau after experiencing higher wages or finishing their education abroad.

If employment opportunities improve, many of those who currently live abroad may want to return home. However, the number of people who return to Palau will probably be inversely correlated with the duration of their stay abroad (i.e. the longer the elapse of time until improvement in work opportunities, the fewer will return, as they gradually become established in their new environment).

Generally, even people with higher educations will need additional courses to become qualified for the oil industry. The maritime and the craftsman-like professions, with some further training, will be able to obtain employment in the oil industry. The requisite further training includes, for example safety courses, specific courses, training for offshore work or work on a supply basis.

It is primarily the oil companies' establishment of offices in Palau and the activities connected to a supply base and transport which are expected to provide employment in the short term for Palauan manpower in the oil industry. Palauan manpower will also be able to form part of the work force on drilling rigs and drilling equipment.

#### **5.5 PALAU'S SUPPLY OF SERVICES**

Tourism, as well as fishing, fish farming and fish processing have been the predominant industries in Palau for many decades. This has shaped the business community as services and goods ancillary to the key industrial sectors have developed over time. In particular, a number of trade, industrial and service companies have developed around the fishing industry. It is expected that, with minor adaptation, these will be ready to deliver goods and services to the oil industry.

Because of its remote location, Palau will likely see the development of local supply bases and helicopter services. It is worth noting that the level of activity will be directly linked to the time and intensity of drilling and production operations, and will likely disappear when/if the oil industry ceases to be viable in Palau. This type of activities will

have a localized impact on society and environment: the siting will depend on the location of the wells and on natural factors (water depth, currents, etc). Fiscal incentives may be needed to encourage the optimum location.

If Palauan industry and service companies assert themselves as suppliers in the more demanding components of a future offshore industry, it is critical to direct efforts towards improving qualifications. The most relevant demand which the companies can respond to and engage in is the establishment of a quality control system. Such endeavors will improve companies' competitiveness, regardless of when or whether oil is discovered.

## **5.6 LOCAL ESTABLISHMENTS AND GOODS TRANSPORTATION**

Many countries require oil companies to establish a local presence (either as branch of an offshore company or as locally incorporated affiliate<sup>8</sup>). There are many advantages to this:

- Improved efficiency of the communication between the company and the competent local authorities;
- Integration with local communities; and
- Increased local business opportunities.

The low and uncertain level of activity that characterizes the exploration phase may not justify the creation of local supply bases and dedicated ports. The needs in terms of local infrastructure are likely to change during the development phase, especially if several fields are discovered at the same time.

Although the predominant part of the requisite materials and supplies, such as special drilling equipment, pumps, drilling mud and spare parts will have to be imported, fuel, water and catered goods can be produced or sold by local companies.

The physical requirements for a supply base may be fulfilled by a number of existing harbor installations with limited investment in the form of offices and warehouse facilities, silos for drilling mud and lifting capacity.

Existing infrastructure should be used to the largest extent possible. Palauan companies should be given the opportunity to provide transportation services, whether through adaptation of their current fleet arrangements or through the investment in new equipment. The onus will be on the Palauan company to adapt its current services package to effectively compete with international service companies. This applies to both the exploration, development and production phases. The logistical network will naturally develop in the most economically efficient manner, taking into consideration the location/concentration of the wells and the geographical and urban features of the archipelago.

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<sup>8</sup> The fiscal implications of this policy is discussed in Section 7.

Transportation of materials to and from offshore drilling sites is carried out by supply boats. These are normally specialized according to the material to be transported. Personnel rotate periodically – normally each 28 days for offshore personnel. Transportation of personnel is often carried out via helicopter. Normally stand-by vessels are available for emergency operations. Again, Palau companies should be given the opportunity to competitively bid for these types of service contracts.

## **5.7 AIR TRANSPORT**

Air transport is an important component of logistics in an oil activity. There is a need to transport crew and cargos to and from the areas of activity. It is essential to the Palauan community that air traffic to and from the offshore installations takes place via the Palau International Airport, for the following reasons, among others:

- Efficient entry and exit controls (provides better control over in and outgoing traffic);
- Emergency standby (Safety wise it is advantageous to have helicopter standby facilities established in Palau);
- Palau air transport activities (Commercially it opens possibilities for a considerable development of Palau air transport and ancillary activities); and
- Employment (Development of Palau air transport activities creates direct and indirect employment in ancillary activities).

The existing facilities at the Palau airport are satisfactory for helicopter operations in the start-up phase of an oil industry in Palau. Increased activity will require investment in enlarged facilities. The direct employment in the start-up phase will not be significantly larger than today. However, in a more advanced phase a significant number of new jobs could be created.

## **5.8 POSSIBLE INITIATIVES TO PROMOTE EMPLOYMENT AND SUPPLIES**

The O&G Task Force believes that it is important that the activities of oil and gas license holders result in real economic activity in Palau, partly through the creation of new jobs, and partly through the creation of genuine added value (i.e. a positive contribution to the Palau national product).

Wherever possible, and where competitive with the international market, effort should be made to not only provide supplies at the local level, but to also provide employment, services, and manufacturing through local companies.

The O&G Task Force recommends that local content obligations be set forth in the future Hydrocarbon Law with the objective to facilitate local employment opportunities, training and transfer of technology, and the use of local goods and services. In particular:

- Oil companies operating in Palau's territory shall establish a branch or a local affiliate depending on the phase of development;
- The use of local goods and services of comparable quality and price shall be preferred;
- Training and transfer of technology provisions shall be included in all exploration and production contracts and licenses with the objective to maximize socio-economic advantages for the Palauan society;
- Personnel traffic to and from drilling rigs is to take place from the Palau International Airport; and
- If economically viable and environmentally safe hydrocarbon regulations shall require that produced hydrocarbons be landed in Palau.

License provisions on socio-economic advantages should be prepared and implemented in the light of special conditions in Palau, including the limited development of Palau's economy, institutional constraints and international commitments. The key to success for both government and companies is their ability to interact with a local, national and global environment, and manage different demands, expectations and constraints. Cooperation among the National and State Governments, IOCs and local communities is important to define socially acceptable development strategies, and transparency and accountability of the actors are the first necessary steps.

## 6. ENVIRONMENTAL AND SOCIO-CULTURAL IMPACTS

### EXECUTIVE SUMMARY

**Given that Palau's economy relies upon socially and environmentally sensitive industries like tourism and fishery which could be adversely affected by the oil and gas industry, particular importance should be given to the creation of appropriate environmental legal and institutional framework.**

The O&G Task Force recommends that, in the short term, the EQPB be re-organized and strengthened in order to increase its effectiveness and guarantee the availability of necessary human and financial resources. In line with international practice, in addition to the transfer from the state budget, direct sources of funding should be sought (administrative fees, environmental permit fees, etc). To improve transparency and accountability the EQPB shall be the sole agency entrusted with the regulation and monitoring of environmental aspects of oil and gas operations in territory of the Republic of Palau. Should the volume and complexity of activity justify it, the creation of a Ministry of the Environment could be considered.

Environmental regulations shall be developed that are specific to the oil and gas sector. In line with good industry practice, Environmental Assessments (EA), Environmental Management Plans (EMP), and Environmental Impact Assessments (EIA) shall be a pre-condition for approval of exploration, development and production activities. Depending on the level or risk associated with such activities, environmental protection and mitigation requirements will have different degrees of complexity. The appropriate level of regulation and oversight will be tailored to each specific situation. Conservations areas and fishing grounds shall be given particular consideration. Furthermore, actions taking place within one state may affect resources or environmental quality in other states or beyond the limits of national jurisdiction. These impacts may be direct (e.g. oil spill) or may illustrate more complex consequences (pollution of spawning areas that decreases fish population). Finally oil and gas industry standards and relevant international principles and rules shall be incorporated in the regulations. The Multi-donor trust fund administered by the World Bank will provide funding towards the drafting of the necessary environmental regulations.

Finally, the O&G Task Force recommends guiding the development of the petroleum sector with the objective of preserving essential aspects of the Palauan society. To this end, the Task Force proposes to organize awareness campaigns to underline the importance of environment and culture, and to invest in preserving the cultural, environmental and social aspects that at the basis of the Palauan economy and way of life.

## **6.1 INTRODUCTION**

Palau's existing economy relies upon environmentally sensitive industries, such as tourism and fisheries. Palauan society, cultural identity, economic development and its reputation world-wide are also heavily dependent on Palau's pristine environment. Particular attention must be paid and efforts made to minimize the potential adverse effects associated with an oil and gas industry on these aspects of Palau through the implementation of an appropriate environmental, legal and institutional framework.

## **6.2 EFFECTS OF OIL AND GAS ACTIVITIES AND DISCHARGE ON THE ENVIRONMENT**

Hydrocarbons, in the form of oil and gas, are the result of partially decomposed organic matter, mainly dead plankton, settling to the ocean floor millions of years ago where it was covered by thick layers of deposited sediment. After being subjected to intense heat and pressure for long periods of time, this organic material was converted into oil and natural gas that remained for the most part trapped under the seabed until the present day.

Oil and gas are therefore naturally occurring substances that actually contain little in the way of toxic materials. Although the oil and gas industry operates by locating and extracting large quantities of hydrocarbons for refinement and sale as energy sources, hydrocarbons are naturally present, albeit in minute quantities, in many ecosystems. Because of this, many organisms, such as some forms of bacteria, actually feed on hydrocarbons, while others, such as fish, can ingest, process and expel these substances in small quantities without noticeable negative effects.

The problems associated with oil in the environment occur mainly as the result of its presence in large quantities, the conversion of otherwise non-toxic hydrocarbon components into toxic ones through exposure to the elements and the presence of oil in certain ecosystems that are particularly sensitive to it.

The focus on environmental protection and conservation over the past few decades has created a political and social sensitivity to the activities of the oil and gas industry. When they occur, accidents of any significant magnitude are given a great deal of media attention, with the result that much of the public knowledge of this industry is of a decidedly negative nature. While it is true that accidents do occur, the accident record of the oil and gas industry is, on the whole, good. An analogy can be drawn to the airline industry, wherein a plane crash draws most public attention away from the fact that the vast majority of airliners safely reach their destinations without incident.

While unintentional discharges of oil into the surrounding environment may be relatively infrequent, the potential for short and long-term damage due to spills definitely exists. The environmental damage caused by a spill will depend to a large extent on the quantity spilled, the ecosystem into which the oil is introduced, as well as other factors including weather. As stated previously, the sensitivity of the surrounding environment will determine, to a large extent, the damage that will be incurred. Oil spills can cause damage to an ocean ecosystem by killing animals, including birds, as well as by

destroying marine flora and fauna. If conditions are right, the oil can drift ashore, disrupting beach ecosystems. Although recent research and observations of the effects of oil spills have resulted in the recognition that ecosystems negatively affected by oil spills recover more quickly than previously thought, the time for recovery, especially with regard to oil spills affecting coastal regions, is still measured in terms of years.

While oil spills are often times associated with the grounding or sinking of oil tanker ships, it should be recognized that accidental discharge of oil can occur at any point along the production line, including at the well head, at the stationary or floating rig and at the landing area to the loading area for transport by tanker. Furthermore, although oil spills are the most infamous cause of environmental degradation, other aspects of oil exploration and production also hold the potential for damaging environmental effects.

Seismic surveying is a commonly used technique for determining the geological structure of an area in order to ascertain the potential for oil and gas deposits. In this process, a ship tows a device that emits powerful sound waves which travel into the seabed. The sound waves travel down until they are reflected back up and detected by a second device towed by the same ship. The timing and angle of the reflected sound wave can be used to compose a picture, or profile, of the material underlying the seabed, which can then be processed and interpreted to determine whether oil and gas deposits are likely present. The sound waves emitted during this process may damage or even kill fish in the surrounding areas, although the effect is somewhat localized.

Drilling operations, whether for exploration or production purposes, utilize a thick, viscous material of varying composition, called drilling mud, to facilitate the drilling process. The chemical composition of this drilling mud can in some cases have a negative effect on sea-life in the area around the drilling location. Furthermore, cuttings, or the material brought to the surface of the seabed from below as the result of the drilling itself, have also been shown to be harmful to the environment. It should also be noted that the installation of permanent drilling platforms, or rigs, which rest on the seabed may have negative consequences on the sea-life in the areas surrounding the rig location.

In summary, the general public perception of the potential harmful consequences of accidents associated with oil production activities is likely more negative than research and historical data would indicate. That said, the potential for large scale, long-term damage to the environment as the result of an accidental discharge will always be present in areas where the petroleum industry operates. The scale of the damage, as well as time for environmental recovery, depend the area under consideration, with more sensitive ecosystems sustaining a heavier toll as compared to other areas. Also, the potential for environmental damage is not limited to large scale oil spills; the materials and methods utilized in hydrocarbon exploration and production activities on a daily basis can also cause discernable and long lasting damage, albeit on a smaller scale, if not properly controlled.

## **6.2.1 Mitigating Negative Environmental Effects**

The development of the oil and gas industry in a particular area will necessarily involve the modification of the environment in that area. “Pollution”, meaning the introduction of quantities of materials that will have a detrimental effect on the environment, cannot be entirely avoided. Mitigation, or the lessening of the negative effects of pollution, should be the focus of regulatory and, when needed, response efforts. In the best case, the overall legal and institutional framework that governs the workings of the oil and gas industry should be set up such that negative effects of daily operations are minimized, the probability of large scale negative effects due to accidents is minimized, effective response can be provided when accidents do occur and the overall negative effects of oil and gas activities are offset by the benefits derived for the population of that area.

### ***6.2.1.1 Legal and Regulatory Framework***

As a preface to the following discussion, it is noted that expertise in the legal and regulatory aspects of the petroleum industry is essential to successfully implementing and utilizing the framework that will accomplish the above. The oil and gas industry has a great deal of collective knowledge as well as resources that can be utilized in order to reduce the probability of undesirable environmental consequences both on a daily basis, as well as when accidental discharges occur.

The legal and regulatory framework should be structured to take full advantage of the contributions which oil and gas producers who desire to work in the area are able to make. Nevertheless, expertise must also be present on the side of the regulating authorities. In areas where no petroleum industry yet exists, this expertise will, at least initially, need to be supplied by outside consultants. With time and planning, local expertise will grow to fill this knowledge gap, reducing the need for outside help.

The environmental legal framework that governs oil and gas activities must be implemented such that responsibilities for mitigation of potential negative effects are clearly defined and known to all parties. Simplifying the legal structure can eliminate inefficiencies and confusion that can be caused by overlapping areas of responsibilities on the government side. Simplification also makes the prospects for gas and oil companies more attractive by helping to reduce perceived financial risks associated with unknowns. Mechanisms will need to be set in place that ensure compliance with environmental requirements and regulations, including compensation to be paid by oil and gas companies for damage to the environment, as well as loss of property and earnings on the part of citizens and residents as the result of accidental discharges and/or land occupation.

### ***6.2.1.2 Regulatory Authority for Environmental Protection***

In most countries the authority for regulation of environmental protection as it pertains to petroleum production activities is typically under the preview of the Ministry of Environment. The main objective in establishing the regulatory and monitoring

mechanisms that will guide the oil and gas activities is to ensure that responsibilities are clearly defined, and equally importantly, that the authority and available resources of an agency are commensurate with its responsibilities. Failure to achieve this end can result in gaps in the regulatory framework, which represent opportunities for environmental damage to occur.

### ***6.2.1.3 International Legal Principles and Rules***

Public international legal principles and rules (set forth in instruments such as treaties, conventions, or other multilateral, regional, or bilateral agreements) govern the conduct among states. Protection and conservation of the environment are frequently the subject of public international law. One reason is that many natural resources and environmental issues (e.g. pollution of the high seas) can be properly addressed only if states adopt common rules.

The past decade has seen significant developments in the area of international environmental law, particularly with the entry into force of the Convention of the Law of the Sea and of conventions addressing global concerns such as climate and biological diversity.

During Phase II of this process, identification, analysis, and consideration should be given to international treaties and conventions that Palau is a member to, as well as international agreements that may indirectly impact the oil and gas industry in Palau.

## **6.3 POTENTIAL CULTURAL AND SOCIAL IMPACTS OF PETROLEUM ACTIVITIES**

The creation of new business industries in developing nations results in economic impacts that are usually, though not always, beneficial to the population. This is the purpose of this activity. It should be understood, however, that the social and cultural structure of the population will also be impacted. Recognition of the possible impacts is the starting point for structuring an approach that will help preserve important aspects of the society.

Remembering that the essence of development is change, successful environmental protection does not aim to stop all development, it seeks to promote appropriate approaches and guide process in a positive direction. The same can be said of efforts to protect and preserve social and cultural resources, which, like environmental protection require resources, planning and effective execution. As developing nations become modernized and begin to assimilate into the world community, many pressures are brought to bear on their existing social and cultural systems.

Much of this is due to the process of modernization itself, wherein new conveniences are introduced that take the place of traditional practices. Examples of this range from automobiles to television and cell phones to canned tuna. Automobiles replace walking, so that the process of visiting relatives changes. Television keeps people inside, cell phones replace face to face conversations, and canned tuna means less of a need to fish.

Modernization for the average citizen depends on income flow; the more disposable income a person has, the more modern items they can afford. Thus, the creation of a new business industry, especially one that has the potential to bring large sums of money into a nation, does not create modernization but it will certainly accelerate the process.

As indicated in previous sections, the expertise to operate and regulate a new petroleum industry is unlikely to exist in a developing country. The influx of foreign workers needed to provide this expertise will have an effect on the host country's social and cultural impact by way of introducing new languages and customs. If the new industry requires a relatively large population of foreigners as compared to the indigenous population, then these new social and cultural elements may represent a threat by displacing the original elements through sheer volume.

Finally, in developing nations that still maintain a strong tie between environment and the social and culture structure of the society, degradation of the environment can destroy traditional practices by denying the population the ability to engage in them.

While it is certainly true that a new petroleum industry has the potential to negatively affect a society, the economic benefits of such an industry could be used to guard against this and even, if done correctly, strengthen the social and cultural foundations. With enough funding, programs can be created to ensure that essential aspects of the society are preserved and taught to new generations. Remembering that change is inevitable, and that modernization will occur no matter what industry drives the development of nation, an industry that brings in large amounts of capital that can be accessed for funding to implement preservation programs would be preferable to an industry that offers only a small cash flow.

Social and cultural practices and traditions evolve over time and form the foundations of a society by dictating the manner in which the population lives, works and interacts. In developing nations that have not seen excessive modernization, these elements continue to be tied to the environment that drove their development. As with a three legged stool, the loss of even one of these elements can lead to instability and the eventual loss of all three. Without these foundation elements, a society can lose its cohesion, resulting in social problems such as increased crime. Examples of this can be found in some islands such as Guam. Examples can also be found of the tremendous effort required to recover these aspects, such as Hawaii. Based on this, it would seem much better to minimize losses in the first place, rather than deal with the negative consequences of such losses and the difficulties associated with efforts to try and recover them.

It is important to mention that the loss of social and cultural resources can have a damaging effect to other economic industries as well. Today's tourism market is rapidly changing to focus on destinations that offer environmental and cultural diversity. Tourists travel to exotic locations to see something different, not the same thing they left at home, and the deeper and richer the differences the better the experience. The loss of environment and culture in a destination would make it less attractive to visitors,

especially the high end segment of the market, seriously degrading the ability of the destination to compete with others throughout the world.

To summarize, a new petroleum industry will bring changes to a nation's environment, as well as its social and cultural structure. Through careful study and planning, it should be possible to avoid the more serious negative effects and, in fact, guide the development process such that essential aspects of society are preserved and strengthened. The key will be awareness of the importance of environment and culture, and a willingness to expend the effort necessary to protect both. These protection efforts will not only benefit the society by keeping it stable, they will also help to preserve economic opportunities for those industries that rely on a locations environmental and cultural resources to attract investment and business.

#### **6.4 CURRENT CAPACITY IN PALAU**

Palau law currently mandates that all environmental protection regulations are to be promulgated and enforced by the Environmental Quality Protection Board (EQPB). This agency does not reside within a Ministry and is therefore referred to as semi-autonomous. The seven board members are nominated by the President of the Republic and confirmed by the Senate, one of the two chambers of the national legislature. The board in turn appoints an executive officer who is provided with a staff and handles all board matters including meetings, and is charged with carrying out the mandates of the board.

Aside from the EQPB, the Bureau of Environmental Health, under the Ministry of Health, also holds very limited jurisdiction over environmental matters. Additionally, Koror State publishes and enforces regulations which touch on environmental matters to a certain degree. Neither of these two agencies, nor any other national or state government agencies, have the authority to overrule the EQPB.

EQPB Regulations, which carry the force of law, were first published in 1981. These regulations set out the requirements that govern activities with environmental damage potential in order to minimize and mitigate such damage. The Regulations were modeled after the United States Environmental Protection Agency (EPA) regulations at the time, and have been revised and augmented on a number of occasions over the years.

The appropriateness and effectiveness of the EQPB in its role of environmental protection has been the subject of on going debate almost since the EQPB's inception. To be sure, there are many requirements in the EQPB Regulations that are quite difficult to fulfill given Palau's unique environmental situation as well as its economic capacity. Despite this, the EQPB has, over the years, been effective in preventing damage that would otherwise have occurred were there no review and enforcement capacity.

The section of the Regulations that most directly relates to petroleum exploration and production activities is entitled "Marine and Fresh Water Quality". The section governing "Earthmoving" is also relevant to a certain extent with regard to drilling operations. Although the Regulations set out acceptable levels of oil and petroleum

contamination, and also require written approval by the EQPB for activities such as storing, disposal or accumulation of petroleum products, little is written about actual procedures or requirements. In other words, the EQPB Regulations, as they currently stand, are totally inadequate with regard to policing petroleum exploration and production activities.

The current level of institutional knowledge, as well as human and equipment resources available to the EQPB to fulfill its mandate, are severely lacking. As a semi-autonomous agency, the EQBP must obtain its annual budget from the national legislature. The institutional set up of the EQPB, namely a semi-autonomous agency with an appointed board that must obtain its budget from the national legislature, should be critically examined with regard to its ability to take on the role of regulating a petroleum industry. As stated above, clearly defined and simplified requirements, as well as sufficient authority and resources necessary for fulfilling the agency mandate, are essential to an effective regulatory regime. Quite clearly, the situation with the EQPB is anything but this, and this may be in large part due to the institutional set up of the agency.

The creation of a new environmental authority that would regulate only the petroleum industry, leaving the balance of duties to the EQPB, would be one possible solution. This approach, however, would likely lead to increased complexity that could undermine the effectiveness of both agencies. Another approach that holds promise would be to either revamp the EQPB entirely in order to increase its effectiveness, or replace the EQPB with a Ministry of the Environment in order to guarantee resource availability. In either case, continuing to have one body, be it an agency or a Ministry, holding sole authority over all environmental regulation matters, would help to avoid increased complexity associated with multiple bodies.

## **6.5 RECOMMENDATIONS**

The O&G Task Force recommends the following:

1. Institutional arrangements for the management and oversight of environmental impacts of oil and gas activities:
  - a. In the short term, re-organize and strengthen the EQPB in order to increase its effectiveness and guarantee the availability of necessary human and financial resources. In line with international practice, in addition to the transfer from the state budget, direct sources of funding should be sought (administrative fees, environmental permit fees, etc). To improve transparency and accountability the EQPB shall be the sole agency entrusted with the regulation and monitoring of environmental aspects of oil and gas operations in territory of the Republic of Palau.
  - b. Should the volume and complexity of activity justify it, the creation of a Ministry of the Environment could be considered.

2. Environmental regulations for oil and gas exploration and production activities:
  - a. Environmental regulations be developed that are specific to the oil and gas sector. In line with good industry practice, Environmental Assessments (EA), Environmental Management Plans (EMP), and Environmental Impact Assessments (EIA) shall be a pre-condition for approval of exploration, development and production activities. Depending on the level or risk associated with such activities, environmental protection and mitigation requirements will have different degrees of complexity.
  - b. The appropriate level of regulation and oversight be tailored to each specific situation. Conservations areas and fishing grounds shall be given particular consideration. Furthermore, actions taking place within one state may affect resources or environmental quality in other states or beyond the limits of national jurisdiction. These impacts may be direct (e.g. oil spill) or may illustrate more complex consequences (pollution of spawning areas that decreases fish population).
  - c. Oil and gas industry standards and relevant international principles and rules shall be incorporated in the regulation.

3. Social and cultural impacts of petroleum activities:

- a. Guide the development of the petroleum sector with the objective of preserving essential aspects of the Palauan society. To this end, awareness campaigns should be organized to underline the importance of environment and culture, and targeted investment shall be made to preserve the cultural, environmental and social aspects that at the basis of the Palauan economy and way of life.

## 7. TRANSPARENCY AND ACCOUNTABILITY

### EXECUTIVE SUMMARY

**Transparency and accountability are key elements of a successful institutional set up for the management and oversight of the oil and gas sector.**

The O&G Task Force recommends that transparency and accountability become a primary concern during each and every phase of the oil and gas development process.

The O&G Task Force recommends that transparency and accountability be a major concern and be incorporated into the institutions and laws regarding each and every aspect of the oil and gas economy, including environmental monitoring, taxation, auditing, financial oversight, procurement, licensing and contracting.

The O&G Task Force, recognizing Palau's unique vulnerabilities and small size therefore recommends that careful consideration be given, in the development of a comprehensive oil and gas law, that existing national and state capacities be taken into account and incorporated therein.

This use of existing institutions and development of new institutions should take into account the Constitutional and existing laws pertinent to the oil and gas sector, most particularly, those relating to the environment, financial oversight, taxation, auditing, procurement and general executive and legislative oversight and management.

The O&G Task Force also strongly recommends that great consideration be given to public education and comment throughout the process of institution building and development of the oil and gas sector.

The O&G Task Force recommends that information from state and national entities and agencies at every level be given expert review and validation. The O&G Task Force further recommends that information (that is not commercially sensitive) be made publicly available to all citizens.

### 7.1 INTRODUCTION

According to the World Bank 2004 Aide Memoire,

“In a multi-stakeholder world, transparency becomes a key tool for both governments and companies. Transparency encourages the public debate and facilitates socially acceptable decisions lowering social tensions. It also leads to trust and mutual respect, and provides the foundation of the “license to operate”, and allows all parties to learn from the experience of others. The ability to understand and interact with the local context (and often international context), and to argue their case at any time is a recipe

for sustainable success for both governments and companies. (2004 WB Aide Memoire on Palau Oil and Gas Sector, P. 7)

Because an oil industrial development can be divided into four primary phases, 1) Preliminary Surveys, 2) Exploration and Appraisal, 3) Development and Production and 4) Decommissioning, the O&G Task Force recommends that transparency and accountability become a primary concern during each and every phase of the oil and gas development process.

Likewise, the O&G Task Force recommends that transparency and accountability be a major concern and be incorporated into the institutions and laws regarding each and every aspect of the oil and gas economy, including environmental monitoring, taxation, auditing, financial oversight, procurement, licensing and contracting.

## **7.2 LEGAL AND REGULATORY FRAMEWORK**

A clear, simple and non-discretionary legal and regulatory framework is an important factor for attracting foreign investment. This affects the entire value chain from the award of exploration and production rights to the disclosure of information that affects the citizenry. There are various ways of improving the transparency in the management and oversight of the oil and gas sector, for example:

- The standardization of the terms of exploration and production;
- The reduction of the discretion of the administrative authorities;
- The simplification of awarding and permitting procedures;
- The development of an efficient and functioning open title system;
- The adoption of standardized form of agreements;
- The predefinition of standard shape form of blocks;
- The granting of greater operating freedom to the contractors;
- The adherence to international arbitration (in particular where the local court system does not provide sufficient guarantees); and
- The respect of international disclosure practice.

Finally, the O&G Task Force recognizes that, due to the small size of Palau's public and private sectors, effective transparency and accountability may be difficult to achieve. In line with good industry practice the O&G Task Force recommends the adoption of modular legal frameworks.

“There is a trend towards the establishment of modular legal frameworks where all matters relating to hydrocarbon rights and their use are governed by the hydrocarbon law/regulations, all matters relating to taxation are defined in the tax code/regulations, all issues relating to environment protection are defined in the environmental law/regulations, and so on. Thus, the hydrocarbon law incorporates other laws by reference. Modularity increases transparency and accountability, reduces

administration costs, and facilitates compliance.” (2004 WB Aide Memoire on Palau Oil and Gas Sector, P. 3)

The O&G Task Force, recognizing Palau’s unique vulnerabilities and small size therefore recommends that careful consideration be given, in the development of a comprehensive oil and gas law, that existing national and state capacities be taken into account and incorporated therein.

This use of existing institutions and development of new institutions should take into account the Constitutional and existing laws pertinent to the oil and gas sector, as set for in Section 2, most particularly, those relating to the environment, financial oversight, taxation, auditing, procurement and general executive and legislative oversight.

Within these parameters, the O&G Task Force also strongly recommends that great consideration be given to public education and comment throughout the process of institution building and development of the oil and gas sector.

Recognizing the current limited expertise and capacity of the public and private sector in regards to the development of an oil and gas sector, the O&G Task Force also recommends that a process be developed that provides for:

- Sharing of information at each level of the permitting/licensing process; and
- Layering of accountability and clear separation of roles from the agency/ministry level and up to congressional level.

## **8. LEGAL FRAMEWORK AND FISCAL SYSTEMS FOR HYDROCARBON EXPLORATION AND PRODUCTION**

### **EXECUTIVE SUMMARY**

**High risks and long project cycles are key elements of the oil and gas industry. As risks can differ substantially by project and over time, a transparent and stable legal and contractual framework and an efficient fiscal system need are crucial to attracting foreign investments.**

The O&G Task Force recommends the development of a national hydrocarbon law and implementing regulations with the objective to ensure the consistency of approach at national and state level. Model contracts based on the concessionary system should also be developed which would apply to both the national territory and the sub-national territory. Nonetheless the hydrocarbon law will provide for the possibility of introducing production sharing and/or service contracts.

With respect to the design of the fiscal regime for hydrocarbon exploration and production in Palau, the O&G Task Force recommends that the following aspects be further analyzed:

- a. The structure and parameters of the future fiscal regime for hydrocarbon exploration and production activities that will include royalties, corporate taxes and/or resource rent tax;
- b. The existing general tax law and regulations, with the objective of establishing adequacy, vis-à-vis the specificities of hydrocarbon activities, and how they compare to international practice; and
- c. The capacity of the tax administration department to administer petroleum taxation.

On the bases of the above suggested analyses the O&G Task Force will propose alternative solutions with the objective to provide guidelines to policy makers for the choice of the future fiscal system (tax burden and taxation instruments), and tax administration for oil and gas exploration and production activities in Palau.

The drafting of the hydrocarbon law, model contract and tax law is to be financed by the Multi-Donor Trust Fund administered by the World Bank.

### **8.1 LEGAL AND CONTRACTUAL FRAMEWORKS FOR HYDROCARBON EXPLORATION AND PRODUCTION**

The geologic potential is only one of the elements that determine the attractiveness of a country: wellhead prices, development costs, political risk, and the fiscal regime are also taken into consideration by investors in evaluating potential investment opportunities. In general terms, countries with favorable geologic potential, high wellhead prices, low development costs and low political risk will tend to offer tougher fiscal terms than

countries with less favorable geologic potential, low wellhead prices, high development costs and high political risk.

The global nature of petroleum investments poses challenges to government policy makers who often are not in a position to make informed decisions to determine what types and levels of taxation and what types of legal arrangements can or should be applied to petroleum projects. In today's competitive market many diverging interests must be recognized and accommodated to establish an effective and attractive legal and fiscal framework for hydrocarbon exploration and production. Each country's circumstances, needs, and objectives define the key features of an appropriate legal and fiscal framework. Therefore, no ideal regime exists that can be readily adopted by policy makers in Palau. As these circumstances, needs, and objectives are likely to change in time<sup>9</sup>, the most effective and efficient legal and fiscal frameworks are those that are flexible enough to accommodate these changes.

Given the foregoing in order to design the legal and fiscal framework for hydrocarbon exploration and production in Palau, it is important to understand how its various components influence decision making and outcomes.

### **8.1.1 General Principles**

The legal basis for hydrocarbon exploration, development and production is normally set in a country's constitution. Normally, the hydrocarbon law, formulated at the parliamentary level, sets out the principles of law, while those provisions that do not affect principles of law, or that may need periodic adjustments (i.e. technical requirements, administrative procedures, administrative fees, etc), are set in regulations<sup>10</sup>.

The consistency of the legal framework with the constitutional foundation is an important factor affecting the security and stability of the legal framework. This issue is significant, in particular, because the constitutions of many countries differ significantly in the degree to which they recognize or guarantee private property rights or prohibit private parties or foreigners from acquiring property rights in general and mineral rights in particular; vest the authority to grant petroleum rights in the state or provincial governments or agencies rather than the national government, vest the authority to regulate specific matters in special agencies (i.e., environment protection) or in the executive branch (for example, taxation, foreign exchange, employment, and so on) or in the judiciary (settlement of disputes). Due to the capital intensive and long term nature of petroleum projects, certainty of rights is particularly important for private investors.

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<sup>9</sup> According to a study conducted by the Minerals Management Service in March 2004, each year a licensing round is launched in 25-50 countries; new model contracts or fiscal regimes are introduced in approximately 20 countries; and tax laws are revised by many countries during their annual budgetary process.

<sup>10</sup> These are normally issued at the executive or ministerial level, and do not require the approval of the legislative branch.

From the analysis of other countries hydrocarbon laws the O&G Task Force noted that legal frameworks for petroleum activities are generally established on the following pillars:

1. Definition of the role of national and state government;
2. Security of title;
3. Freedom to operate on a commercial basis (including various forms of private access to hydrocarbon resources);
4. Comprehensive environmental protection requirements; and
5. Competitive and stable fiscal terms.

The topics that are typically addressed in modern hydrocarbon laws are summarized in Table 1 below.

**Table 1 - Key Elements of Successful Petroleum Legal Frameworks**

<b>Area</b>	<b>Key components</b>
Government authority	Ownership of natural resources; powers granted to government officers; enforcement; penalties and fines; and the authority to negotiate contracts.
Access to the acreage	Qualifications for authorization to explore, develop, produce and process; areas closed to mineral activities; areas subject to special controls or conditions; right of ingress and egress; resolution of conflicting land disputes; and the relation between surface and subsurface right holders.
Exploration and production rights and obligations	Extent of the exploration and production area; duration of the term for exploration and production rights; renewal of exploration and production rights; unitization; cancellation or termination of a right; area relinquishment; minimum work programs; security of tenure; reporting; transferability of rights and mortgage ability; surface fees.
Protection of the environment	Environmental impact assessment; environmental impact mitigation; social or community impact; monitoring and reporting; abandonment liability; reclamation; and environment sureties.
Fiscal Terms	State participation; royalties; production sharing; custom duties; income tax rate and base; special petroleum taxes; other levies and taxes; gas production incentives and other incentives; ring fencing; and stability clauses.

Because certainty of rights is important to investors, a clear, simple and non-discretionary legal and regulatory framework is crucial to attract foreign investment.

The O&G Task Force believes that Palau could ensure the transparency in the management and oversight of the sector by implementing the following measures:

- Standardize the terms of exploration and production;

- Minimize the discretion of the administrative authorities;
- Develop simplified awarding and permitting procedures;
- Create efficient open title system;
- Adopt standard form of agreements;
- Predefine standard shape form of blocks;
- Require the respect of good industry standards;
- Develop clear, concise and comprehensive regulatory and response requirements;
- and
- Apply international disclosure practice.

## **8.1.2 The Grant of Hydrocarbon Exploration and Production Rights**

### ***8.1.2.1 Procedures for the Award of Petroleum Rights: Direct Award and Licensing Rounds***

To award acreage, producing countries use different systems. Some countries have adopted rather rigid systems with very limited biddable items that affect the take<sup>11</sup>. Other countries award their acreage on the basis of the work program. In still other countries “everything is negotiable”. There is no model bidding system or strategy for governments to adopt. Decision on the most appropriate bidding system can be supported by an understanding of general market conditions as well as of the relative prospectivity of the areas on offer. Ultimately the resource allocation is efficient if it satisfies the national policy objectives.

Governments allocate their hydrocarbon rights through licensing rounds, or direct allocation (sometimes on a first come first served basis as in South Africa). Intuitively a government would maximize its share of benefits by “letting the market work”. Many countries use licensing rounds to increase competition among oil companies to the benefit of the host government. With new companies coming into the market and acreage being offered in areas that are perceived as more difficult, this has in many cases resulted in overbidding. By letting oil companies compete against each other, host governments are spared from the difficult task of determining “what the market can bear”. However, in frontier areas (unknown hydrocarbon provinces like Palau) licensing rounds may not be the most efficient procedure: the low number of participants may not justify incurring the administrative costs of the tender process.

The O&G Task Force recommends that Palau collect as much information as possible on its geological potential. This would allow us to prepare information packages and promotional material that could be used to test the interest of the market before a decision is made on the most suitable award procedure for Palau. Furthermore, the information so collected and the feed-back from the market will form the basis for defining the potential contribution of the oil sector to Palau’s economy and devising suitable institutional, legal and contractual frameworks.

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<sup>11</sup> The division of profit between investor and government is called the “take”.

### 8.1.2.2 *Petroleum Contracts*

Exploration, development and production rights in particular areas or blocks are granted by host governments to investors by means of concessions (also called tax and royalty systems) and/or contracts (production sharing contracts – “PSCs”, service and risk service contracts).

In both concessionary and contractual systems the investor assumes all risks and costs associated with the exploration, development and production of hydrocarbons, and receives compensation adequate to the risk. Often the investment risks are assumed by oil companies rather than the state/owner of the resource. In general terms, the higher the risk of investment activities in a country, the higher the portion of the rent received by the investor.

The fundamental difference between concessionary and contractual systems relates to the ownership of the natural resources:

- Under a concessionary system, the title to hydrocarbons passes to the investor at the borehole. The state receives royalties and taxes in compensation for the use of the resource by the investor. Title to and ownership of equipment and installation permanently affixed to the ground and/or destined for exploration, and production of hydrocarbons generally passes to the state at the expiry, or termination, of the concession (whichever is earlier). The investor is typically responsible for abandonment.
- Under a contractual system the investor acquires the ownership of its share of production only at the delivery point<sup>12</sup>. Title to and ownership of equipment and installation permanently affixed to the ground and/or destined for exploration, and production of hydrocarbons generally passes to the state immediately. Furthermore, unless specific provisions have been included in the contract (or in the relevant legislation) the government (or the national oil company) is typically legally responsible for abandonment.

In both types of legal systems the issue of ownership is particularly significant as it affects the rights and obligations of the parties and their ability to dispose of these rights. Given the risky nature of the industry, the investor’s ability to share the risk by transferring all or part of its rights to other investors is an important element of the overall attractiveness of a country’s regime.

Table 2 below summarizes the key features of concessionary and contractual systems.

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<sup>12</sup> Under a service contract the contractor never acquires the title to the resource. On the contrary he is paid a fixed or variable fee for his services. In some service contracts the fee is paid in kind. The distinction between PSC and Risk Service Contracts lies in the nature of the payment.

**Table 2. Key Features of Concessionary and Contractual Systems**

	Concessionary Systems	Contractual Systems
<b>Ownership of nation's resources</b>	The Nation and/or the State in federal systems	The Nation and/or the State in federal systems
<b>Title transfer point</b>	At wellhead	At export point
<b>Company's Entitlement</b>	Gross production less royalties	Cost oil/gas plus profit oil/gas
<b>Ownership of Facilities</b>	Investor	State
<b>Management and Control</b>	Typically less Host Government control	More direct Host Government control and participation
<b>Government Participation</b>	Less likely	More Likely
<b>Basic components</b>	Three components: royalty; deductions (such as operating costs and capital depreciation); and tax.	Four components: royalty, cost recovery, profit oil, and tax.
<b>Royalty</b>	Unit or % of production or sale. Fixed or on a sliding scale; paid in cash or in kind; Negotiable or biddable. Tax-deductible.	Royalty is similar to Concessionary Systems. Normally not cost recoverable.
<b>Fiscal Costs</b>	Described in legislation/agreement. Royalties and opex normally expensed in the year in which they occur. Depreciation calculated according to applicable legislation. Some countries allow the deduction of investment credits, interests, and bonuses.	Defined in the legislation/PSC. Production remaining after payment of royalties and cost recovery in accordance, is split between Host Government and Contractor. Split is fixed/sliding scale. Parameters stipulated or negotiated. Fiscal costs often differ from cost recovery.
<b>Taxable Income</b>	Income taxed at the country's basic corporate tax rate/special resource taxes: flat rate or sliding scale. Investment incentive may apply. Tax loss carry forward: unlimited/limited. Tax may be paid by Host Government/National Oil Company on behalf of investor.	Income taxed at the country's basic corporate tax rate/special resource taxes -flat rate or sliding scale. Investment incentive may apply. Cost recovery limits often apply. Tax loss carry forward: unlimited/limited. Tax may be paid by Host Government/National Oil Company on behalf of investor.

Table 3 outlines industry's practice with respect to some of the key areas covered in petroleum contracts.

**Table 3. Areas Regulated in Petroleum Contracts: Industry's Practice**

Topic	Standard Practice.
Size of licensed area	It is extremely unusual for a State/Country to license the entire territory over which the State/Country has sovereign or control rights to a single company.
Licensee's rights, obligations, and the principles underlying the conduct of operations	Rights and obligations of the Licensee/Contractor and principles underlying the conduct of operations are normally clearly set forth in the License/PSC. Clarity is normally improved when such provisions are gathered under a common set of clauses.
Right to explore for and produce hydrocarbons	<ul style="list-style-type: none"> <li>• It is standard practice to separate exploration and production phases under Licenses and petroleum sharing contracts (PSC).</li> <li>• Usually the License or PSC is granted for a period of 6 to 10 years (the Exploration Period), subdivided in 2 or three sub-periods (the "first", "second", and "third" Exploration Period). During the Exploration Period, the Licensee or Contractor has the exclusive rights to explore for oil and gas, subject to the terms and conditions of the License/PSC. Furthermore, in each Exploration Period the Licensee/Contractor is required to perform a Minimum Work</li> </ul>

	<p>Program (MWP). Failure to perform the MWP entails the termination of the License/Contract and the payment of the corresponding sum to the Host Government. The MWP is usually made up of a certain number of line/square kilometers of 2D/3D seismic, reprocessing of existing data when available, and drilling commitments<sup>13</sup>.</p> <ul style="list-style-type: none"> <li>• MWP obligations normally apply from the date the License/PSC becomes effective and they are not conditional on the occurrence of particular conditions or events.</li> <li>• If a discovery is made that is deemed commercial, the Licensee/Contractor is required to apply for a production license. This requires the filing of a Field Development Plan and Field Development Budget, and the filing of an Environmental Impact Assessment and an Environmental Management Plan for the Host Government’s approval. An area that covers the discovery is “carved out” from the rest of the licensed area (there are standard rules for defining the extent of such area), and a production license/permit is granted to the Licensee/Contractor. The duration of the production license is generally between 15-25 years. Some countries allow for the extension of the production rights at terms and conditions to be negotiated between the parties<sup>14</sup>.</li> </ul>
<p>Health, safety, and environment protection</p>	<ul style="list-style-type: none"> <li>• A License/PSC would normally contain provisions on health and safety, notification of hazards, emergency procedure, and protection of national heritage. These set forth, inter alia, the power of the minister/relevant government authority to intervene to prevent imminent dangers or disasters, the general principles upon which the environment impact assessment and environment management plan should comply with, the principle of compensation of affected populations, flaring of gas, and applicable principles of international law.</li> <li>• Environmental assessment, impact assessment and mitigation plan are normally a condition for approval of the relevant field development plans and for the grant of the relevant licenses and permits.</li> <li>• The respect of international safety and labor standards is generally specifically mandated</li> <li>• Sureties to cover potential environmental liabilities are normally addressed in the License/PSC</li> </ul> <p>The accounting and cost recovery treatment of environmental mitigation structures and equipment is normally clarified in the Accounting Rules annexed to the License/PSC. Especially when environmental regulations do not exist, the principles for land reclamation are normally clearly defined.</p>

<sup>13</sup> This is because the Host Government’s interest is to collect as much information as possible on the geological potential of its territory. This is why many countries have relatively light drilling obligations but heavy seismic obligations.

<sup>14</sup> Host Governments are normally reluctant to extend the terms of a producing license. This is because the risk associated to the production of an already producing field is normally quite low. Therefore the commercial terms that the Host Government could impose to a third party interested in producing the existing accumulation are likely to be more attractive than the ones granted under the original license Exploration license.

Relinquishment obligations	At the end of each exploration phase the Licensee/Contractor is required to return part of the original licensed area (for example, if the Exploration period is divided into two phases, after the first phase the Licensee/Contractor must relinquish 50% of the original area). Except for areas in respect of which a production license/permit has been granted to Licensee/Contractor, at the end of the Exploration Period the Licensee/Contractor must relinquish the entire area under License/Contract.
Land use, right of access, compensation and resettlement	<p>Land use and reclamation obligations are normally clearly set forth in the Hydrocarbon law, License/PSC.</p> <p>The Licensee/Contractor is normally granted the right of ingress and egress to publicly and privately owned land (if required for the conduct of operations under the relevant License/PSC). Compensation is required for use of privately owned. The Hydrocarbon Law, Licensee/PSC normally treat long term and temporary land use differently.</p> <p>The principles and basis for compensation of land owners are normally clearly specified in the hydrocarbon law, regulations, and/or License/PSC.</p>
Ownership of data and confidentiality	<p>It is the norm that all geological, geophysical and petrophysical data are the ownership of the Host Government. The Licensee/Contractor is therefore required to provide the Host Government with copy of raw and interpreted data, cores and other relevant data as they are acquired/processed/reprocessed and interpreted.</p> <p>Confidentiality obligations normally apply to both the Licensee/Contractor and the Host Government. These refer to:</p> <ul style="list-style-type: none"> <li>• the use by the contractor of information acquired during the term of the contract;</li> <li>• the definition of what constitutes confidential information;</li> <li>• the limitations imposed on disclosures to regulatory agencies, security commission, or stock exchanges;</li> <li>• the use of the data by the Host Government.</li> </ul> <p>In some countries the Host Government can freely use the data and information after a certain number of years from acquisition (5 to 8 years).</p> <p>Example of standard confidentiality provisions can be found in the AIPN (Association of International Petroleum Negotiators).</p>
Licensee's/Contractor's Local Representative	When the Licensee/Contractor is not required to incorporate an affiliate/open a branch in the Host Government's country, it is standard practice to request that a legal representative of the Licensee/Contractor be appointed to represent it in all matters related to the License/Contract. The legal representative shall be based in the Host country.

Assignments and transfer of rights	The ability to transfer all or part of their rights and obligations in a contract area is very important in the petroleum industry where companies normally partner to decrease their risks. Generally transfers to affiliated companies do not require particular formalities. Transfers to third parties are more complicated, as the host government needs to ensure that the assignee has the financial (and technical if the operatorship is transferred) ability to fulfill the requirement of the contract. Normally the assignor is not required to guarantee the obligations of the assignee, especially when the assignee is not an affiliated company. The criteria for approval or rejection of the assignment or transfer of rights are clearly specified in the License/PSC. These are objective (NON DISCRETIONAL) criteria based on the assignee/transferee's financial and technical ability to fulfill contractual obligations.
Unitization	The obligation of the Licensee/Contractor to pursue the unitization and the right of the Host Government to order unitization in case a discovery straddles across two blocks is normally expressly provided for in the Hydrocarbon law, the License/PSC.
Abandonment	Abandonment procedures and related liabilities, and the accounting treatment of abandonment related expenses, are generally specifically addressed in the Hydrocarbon law, License/PSC.
Insurance and indemnification	Minimum requirements and liabilities are normally provided for in Licenses/PSCs. Copy of the insurance policy is required to be provided to the Government. The provider and the terms of the policy shall be acceptable to the Host Government and shall respect good oilfield practice.
Sub-contractors	It is standard practice to allow the Licensee/Contractor to use sub-contractors. The Licensee/Contractor is normally responsible for ensuring that the sub-contractors conform to the terms of the License/PSC. The Licensee/Contractor is normally required to hold the Host Government harmless from any damage, loss or liability arising out of or connected to the activity of the sub-contractors under the License/PSC.
Right of the Host Government to develop discoveries deemed non commercial by the Licensee/Contractor	The Host Government is normally granted the right to develop those discoveries that Licensee/Contractor do not deem commercial.
Conflict of interests	In line with good practice the License/PSC normally contains conflict of interest provisions.
Termination	Normally either party has the right to terminate the License/PSC with immediate effect in case of material breach. In case of non material breach, normally a notice period is given to the party in breach to remedy the same. Termination occurs if the breach has not been cured by the end of the notice period.

Fiscal terms	<p>There are two main families of fiscal terms:</p> <ul style="list-style-type: none"> <li>• Tax and royalties normally apply to Licenses/Concession agreements. The Licensee pays a royalty on hydrocarbon produced, or in some licenses, sold by it. Production is normally net of consumption. Corporate taxes apply to the taxable income. Rules for depreciation and amortization of investment are clearly set out in the Accounting Procedure annexed to the License. Personal income tax applies to employees of the License holder and its sub-contractor. Signature, commerciality, and production bonuses may apply. Training fees and training obligation normally apply. Incentives are sometimes granted. Losses may be carried forward until recovered or for a set number of years.</li> <li>• Production Sharing Contract. The contractor pays a royalty on net production or on sales. After allowing for cost recovery, production is shared between the Contractor and the Host Government, often on a sliding scale. Sliding scale profit sharing may be linked to reaching certain daily or cumulative production targets, or may be linked to return on investment (R-Factor and RoR). In many countries the cost recovery limits are imposed<sup>15</sup> The Contractors pays corporate taxes on its share of production (in some countries the host government pays corporate tax on behalf of the contractor and the percentage production share is adjusted accordingly). In some countries the Host Government (directly or via the National Oil Company) has the option to participate directly in petroleum operations. In these cases, normally the Host Government is “carried” through exploration (more rarely through development). Signature, commerciality, and production bonuses may apply. Losses may be carried forward until recovered or for a set number of years.</li> </ul> <p>The average government take ranges from 50-80% of the discounted net cash flow before tax.</p> <p>To accommodate different investment opportunities more and more countries make use of R-factor or return on investment based sliding scales.</p>
Customs duty	<p>Many countries grant the Licensee/Contractor an exemption from customs duties on equipment, machinery and goods that are exclusively and necessarily used in hydrocarbon operations. In some cases the exemption terminates at the beginning of the production phase.</p>
Surface fees or acreage fees	<p>Surface fees are normally paid annually by the Licensee/Contractor. During the exploration phase their amount varies between US\$15-100 per square kilometer, depending on the prospectivity of the area. Some countries apply a flat rate for the entire surface under contract/license. The fee is substantially increased (twice or three times as much) during the production phase. The fee is paid with respect to the licensed/contracted area only (in other words, relinquished areas are not</p>

<sup>15</sup> This means that the contractor is allowed to recover its cost each year up to a maximum amount set forth in the contract. The cost recovery limit is normally expressed as a percentage of Gross Revenue minus Royalty.

	included for the purpose of calculating the fee).
Other taxes and duties	Taxes or duties normally applicable to other sectors of a country's economy may or may not apply to the oil sector. For example, it is quite common for an oil project to receive special treatment for the purpose of application of personal income tax. This is due to the fact that most of the staff working on oil projects is on-rotation and does not remain in country long enough to be considered a resident for personal income taxes purposes. Transfers of rights and assignments may also be subject to special treatment with respect to the taxation of transaction gains.
Stability clauses	More than seventy percent of the countries provide some form of protection to the investor against changes in legislation, i.e. stabilization provisions. The various legislations around the world provide for different degrees of protection. The lightest form of stabilization provision consists in providing for contracts to contain provisions that have the effect of providing assurances in favor of the contractor that the contractor be protected against the financial consequences of laws, decrees, regulations or orders enacted or issued after the effective date of the contract. In its strongest form, the hydrocarbon law provides for a contract to contain provisions that ensure that the rights and obligations of contractor will be unaffected by changes in laws, decrees, regulations and orders enacted or issued after the effective date of such contract. The stronger the protection against changes in legislation, the better for the investor (the opposite applies to the host government).
Local Content	It is normal practice to require the Licensee/Contractor to make use of local goods and services of similar/suitable quality to that of imported goods and services and provided that the price is competitive (some countries define local goods and services as competitive if they are priced at no more than 10 % more than imported goods and services). Some countries mandate local landfall of products and material.
Contract Amendments	Amendments, supplements or modifications to contracts are usually required to be made in writing. These should be signed by the legal representative of the contractor and by the representative of the state, usually the sector minister. To be noted that amendments should follow the same procedure used for entering into a contract. In particular they should be authorized by law or decree as appropriate.
Settlement of disputes	Certainty of rights is a very important element for the investor, especially in respect of capital intensive, long term projects. The majority of the countries provide for international arbitration of contracts. Normally, amicable settlement of disputes is required to be attempted by the parties prior to referring the dispute to arbitration. The majority of contracts and laws provide for the application of the arbitration rules of the United Nations Commission on International Trade Law. Alternatively the Convention on the Settlement of Investment Disputes between states and Nationals of Other states could be used.

	<p>Usually when a contract provides for arbitration, it may also provide that the place for such arbitration be outside the country of operations, in this case outside Palau, and that any award resulting from such arbitration be final and enforceable in the country of operation upon application of any party to such arbitration to the appropriate courts in such country.</p> <p>If the contract provides for protection against changes in legislation, the arbitrator should be empowered, in the event of a dispute under said provision, to determine whether a material change has occurred, and the remedies, including modifications to the contract, necessary to protect the contractor against such changes.</p> <p>Where the state is a party to an arbitral proceeding, it is good practice to indicate who is empowered to represent the state, either as a claimant or as a defendant, both within Palau and abroad. This is normally the sector minister.</p> <p>Normally the host government law is the applicable law.</p>
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### 8.1.3 The Palauan Context

Although three exploration and production licenses have been issued to date (Kayangel State, Angaur State and Hatohobei State)<sup>16</sup> Palau has not yet developed general legal principles and regulations to govern the petroleum sector.

The starting position of Palau is the lack of local expertise regarding exploration and production of hydrocarbons. There are no private companies with the capital necessary to finance such activities. Palau's involvement in the exploration and production activities in the start-up phase will therefore be limited and the oil activities will primarily be carried out under the auspices of international oil companies. The selected legal system must ensure that these companies find it interesting to work in Palau. In addition the demands to the involvement of the Palauan civil service must be realistic.

A contemporary concession model should give society a desired and feasible degree of control to ensure that the hydrocarbon activities are conducted in a well-ordered manner according to the goals of the society. In such a model the political system will formulate the goals, the legislative power will draw up the main rules and the administration will elaborate them in the required degree of detail and supervise their performance. Under such a model, society can, as owner of the resources, secure a suitable remuneration in the form of fees and taxes and, subsequently, participation in a national oil company.

Given the foregoing, the O&G Task Force recommends the development of a national hydrocarbon law and implementing regulations with the objective to ensure the consistency of approach at the national and state levels. Model contracts based on the concessionary system should also be developed, which would apply to both the national

<sup>16</sup> In addition, one license is pending before the Peleliu State Legislature for ratification.

territory and the sub-national territory. Nonetheless the hydrocarbon law will provide for the possibility of introducing production sharing and/or service contracts. This activity will be financed under the Multi-Donor Trust Fund administered by the World Bank.

Because of the specialized nature of the sector and the complexity of petroleum contracts, Palau will need to ensure that the relevant expertise is developed within the civil service. The Task Force recommends that a specialized entity be created at the national level that will be tasked – inter alia – with the negotiation of all petroleum contracts. For petroleum contracts covering state territory only, suitable representation from the state will join the negotiation. The institutional framework recommended by the O&G Task Force is described in section 2 above.

## **8.2 FISCAL SYSTEMS FOR HYDROCARBON EXPLORATION AND PRODUCTION**

The development of a tax regime for a future hydrocarbon industry in the Republic of Palau is very important. If Palau's hydrocarbon potential is confirmed, the petroleum sector may become the most important source of revenue for the Republic. The taxation potential of the petroleum sector may be considerable. At the same time the fiscal regime will need to be competitive in order to attract the interest of oil companies. In this section an account is given of the main issues that need to be considered in designing fiscal systems for hydrocarbons, the problems that are specific to Palau and a possible fiscal regime suited to the Republic's purposes.

### **8.2.1 Tax and Non-tax Instruments**

Petroleum activities around the world are subject to a great variety of taxation instruments. These include taxes that apply to all other sectors of the economy and taxes that are specific to the oil industry. In addition, non-tax forms of rent collection (like surface fees, bonuses and production sharing) are typically used.

Special provisions are often included in petroleum fiscal regimes to modify the timing or magnitude of the revenue appropriations. These provisions are normally intended as incentives designed to attract investors, or to accommodate unique attributes of a petroleum asset, or to influence the choices of the investors towards specific public policy goals. Accelerated capital cost allowances,<sup>17</sup> depletion allowances,<sup>18</sup> interest deduction

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<sup>17</sup> Assets are depreciated in many ways over their expected life (useful life of equipment, economic life of the reservoir). The methods used in the industry are: (a) straight-line (equal annual deductions); (b) declining balance (straight-line depreciation calculated for the remaining value of the asset each year); (c) double declining balance (doubles straight-line depreciation for the remaining value of the asset each year); (d) sum of year digits (based on an inverted scale which is the ratio of the number of digits in a given year divided by the total of all years digits); and (e) unit of production (the capital cost of equipment, after deduction of the accumulated depreciation and of the salvage value, is multiplied by the ratio between the total production in a year and the recoverable reserves remaining at the beginning of the tax year).

<sup>18</sup> The depletion allowance is the deduction from gross income gross income allowed to investors in exhaustible commodities (such as minerals, oil, or gas) for the depletion of the deposits. The theory behind the allowance is that an incentive is necessary to stimulate investment in this high-risk industry: as the reservoir depletes the company will need to undertake more exploration to find new reservoirs. The depletion allowance is meant to subsidize further exploration. Very few nations grant/granted depletion

rules<sup>19</sup>, loss carry forward<sup>20</sup>, investment credits<sup>21</sup>, tax holidays<sup>22</sup>, and stability provisions<sup>23</sup> are among the most commonly used special provisions.

A variety of costs are also imposed on companies that affect the profitability of their operations. Some are fairly common while other reflect specific country's conditions. These costs include inter-company services, valuation of oil and gas, foreign exchange regulations, domestic market obligations, government equity, performance bonds, land owner compensations, local content obligations, and requirement intended to ensure good environmental practices and adequate site reclamation funding. Evaluating the impact of these costs on different investors is a very complex exercise.

A description of the main tax and non tax instruments commonly used in the oil industry and the evaluation of their effects on government revenues and investment decision is given in table 3 below.

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allowances (e.g. the Barbados, Canada, Pakistan and the USA. The Filipino Participation Incentive Allowance – FPIA - is similar to a depletion allowance) for various reasons, including the fact that in a global industry the depletion allowance may be used to subsidize exploration in other countries.

<sup>19</sup> Project financing is quite common for large projects or for small oil companies. Normally interests on loans are allowed in deduction of taxable income and qualify for cost recovery. Inter-company interests may also be cost recoverable and tax deductible, if calculated on an arm-length basis.

<sup>20</sup> This refers to the ability of a company to “carry forward” losses from one year to offset tax liability in future years. When limitations apply the loss can be carried forward for a set number of years (normally 5 to 7) after which the benefit expires. In most cases, unlimited loss carry forward is granted. Loss carry back are quite unusual.

<sup>21</sup> In some countries governments provide an incentive to investors by allowing them to recover an additional percentage of tangible capital expenditure (also known as investment uplifts). In some cases investment credits can be tax deductible.

<sup>22</sup> When capital investment in a project is considerable, host governments may grant tax holidays to investors, i.e. the investors will not pay taxes for a specified period of time.

<sup>23</sup> See box 11 below for a description of commonly used stability provisions.

**Table 4. Tax and Non-Tax Instruments Used in the Oil Industry**

Type	How does it work	Advantages/Disadvantages	
		Host Government	Investor
<b>Royalties</b>	Based on Volume or Value of production or export	<ul style="list-style-type: none"> <li>- Early revenues</li> <li>- Reasonably predictable</li> <li>- Easy to administer</li> <li>- Distort investment decision</li> </ul>	<ul style="list-style-type: none"> <li>- May distort level of recovery</li> <li>- Reduces the economic life of a project</li> <li>- May deter investment</li> </ul>
<b>Ring-Fencing</b>	Delineation of taxable entities	<ul style="list-style-type: none"> <li>- Protects level of current tax revenues</li> <li>- Levels the playing field</li> </ul>	<ul style="list-style-type: none"> <li>- Does not incentivize expl. and investment activities</li> </ul>
<b>Corporate Income Tax</b>	Taxes are payable when annual revenues exceed a certain measure of costs and allowances. Standard rate or higher than other industries	<ul style="list-style-type: none"> <li>- Part of the normal tax system</li> <li>- May be paid by HC/NOC on behalf of Investor (home nation tax treatment of foreign earnings)</li> </ul>	<ul style="list-style-type: none"> <li>- Fixed rate relatively regressive: burdens remains the same at different levels of profitability</li> </ul>
<b>Progressive Income Tax</b>	Uses stepped tax rates linked to prices, volumes, values, etc. These are add-ons to conventional Corporate Income Tax	<ul style="list-style-type: none"> <li>- Allows HG to parake in project upsides</li> <li>- Enhances the volatility of HC Revenue</li> </ul>	<ul style="list-style-type: none"> <li>- Parameters are not necessarily linked to return on investment ( neutrality issue)</li> </ul>
<b>Resource Rent Tax</b>	Ties taxation more directly to project's profitability (R-factor or Rate of Return)	<ul style="list-style-type: none"> <li>- Provides income to HG only when target return or target payback is reached</li> <li>- Key issue: defining an efficient target rate</li> </ul>	<ul style="list-style-type: none"> <li>- Relatively neutral to investment decisions</li> </ul>
<b>Government Participation</b>	Includes range of options: from carried interests to full equity	<ul style="list-style-type: none"> <li>- Non economic reasons</li> <li>- Rent capture vs efficient taxation</li> <li>- Increases administrative complexity and risk</li> </ul>	<ul style="list-style-type: none"> <li>- If on concessional terms: reduces cash flow and increases investment risk</li> <li>- May lead to suboptimal investment decisions</li> </ul>
<b>Cost Recovery Limit</b>	Defines the percentage of net crude oil that can be used for cost recovery. Carry forward of unrecovered costs may be limited or unlimited.	<ul style="list-style-type: none"> <li>- Similar to royalties but less regressive</li> <li>- Ensures that HG receives a share of production in each accounting year</li> <li>- More difficult to administer than royalties</li> </ul>	<ul style="list-style-type: none"> <li>- Affect return on investment</li> <li>- May discourage the development of marginal fields</li> </ul>
<b>Profit Oil Split</b>	Revenue remaining after deduction of royalty and cost recovery. This is split between HG and Investor, in most cases, according to a sliding scale.	<ul style="list-style-type: none"> <li>- Allow HG to tailor fiscal package without changing overall fiscal framework</li> <li>- Frequently linked to production: easier to calculate but insensitive to changes in price and costs</li> </ul>	<ul style="list-style-type: none"> <li>- Sliding scale P/O splits lower the project specific risk especially if linked to R-Factor /RoR</li> <li>- Flexibility is more likely to encourage development of marginal fields</li> </ul>

### 8.2.1.1 Corporate Taxation

The average government take world wide is between 60-70 percent of project pre-tax net cash flow. Corporate taxes and/or production sharing are normally the larger component of the benefit stream that host governments derive from the exploitation of hydrocarbons. Because of their potential impact on Palau's resource revenue, the O&G Task Force believes that a detailed analysis of the specificity of corporate taxation in the petroleum industry needs to be carried out.

Oil and gas exploration and production activities have some very specific characteristics:

- The exploration phase may cover several years and may or may not result in a discovery; and
- The development period often involves large capital expenditure.

For this reason, the profile of earnings from production activity would normally go from negative during exploration and development period to positive reaching their maximum level after cost recovery. Earnings will then decline thereafter to the point where further production is not profitable followed by a period with a negative income due to decommissioning expenses. These special aspects would normally entail a discussion on special rules, for instance the number of years in which deficits may be carried forward and depreciation rules for production installations.

A relevant tax policy issue will be whether and to what extent, transfer of profits and losses, respectively, from hydrocarbon production activities to other industries and vice versa will be allowed (the so called ring-fencing).

In the initial years of exploration and subsequent field development the companies involved will face losses. If that loss could be deducted from the income that the company derives from other activities in Palau, this would undermine the treasury's tax basis. To avoid this, a ring fence can be established between production and non-production based income. Some countries have such fences, while others do not. As far as Palau is concerned, the expected advantages and disadvantages (of Palauan companies entering into oil production, and/or the oil companies entering into other operations in Palau) should be weighed against the possible revenue loss.

A very significant aspect of oil taxation is to what extent the international oil companies will be able to obtain full "*credit*" in their home countries for taxes paid in Palau. It is important for both Palau and the oil companies that Palau's tax system be constructed in a way which will allow a domestic tax credit. If not, taxes paid in Palau will merely be treated as a deductible expense in the calculations of the home country's corporation tax. As a result, a large part of the profit made by the company's operations in Palau will be delivered to the home country's tax authorities.

Special emphasis is made on obtaining credit in USA and Great Britain, the home countries of several oil companies. Agreements with the home countries on the avoidance of double taxation are not strictly necessary, as most countries' internal legislation gives a domiciled company the right to full credit of income taxes paid abroad. The main requirements for a tax being considered creditable are that it is a genuine income tax based on actual receipts, deducted actual defrayed expenses, including depreciation on investments. Limitations of the right to deduct operating costs, transport of deficit, depreciation on investments or demands that calculated income be based on other prices than the actual market prices, can obstruct or prevent the obtaining of credit. It will often be a prerequisite for the credit that the oil production income has been taxed in line with other income.

Efforts to accommodate the home countries' conditions for allowing credit, will limit the scope for the formulation of the income tax regime for oil production. An important factor is the actual taxation rate, as the home country normally only gives credit for taxes corresponding to the country's taxation rate. Corporation tax is typically 30-35%. A lower Palauan company taxation rate (there is no corporate tax in Palau at present) will far from always convey any benefit to the companies, as their credit possibilities are reduced correspondingly, whereas a higher taxation rate often will be a real burden on the companies, as it as a rule cannot be offset by domestic tax savings.

Another question is whether the oil production companies should be allowed to operate in Palau in the form of branches or whether they should be incorporated as Palauan limited companies. The companies' possibilities to deduct preliminary surveys, exploration and investment costs from their current tax liable income in their respective home countries speaks in favor of allowing operations from a branch in the exploration phase.

The ideal tax is one which aims towards collecting a reasonable share of the economic rent and which over an oil project's life cycle will prove *robust* in the face of changes in the project's earnings and expenses and in external conditions, e.g. regarding price and exchange rate conditions. The classic corporate tax does not respond to this criterion. Many countries use progressive taxation, where the tax rate is linked to parameters that measure the profitability of the project (for example R-factor, RoR based systems). The tax burden would then change according to project conditions. In favorable times, Palau would collect more tax revenue from oil companies, while in less favorable times the amount of collection would be lower. R-Factor and RoR based fiscal systems lower the project specific risk by introducing flexibility in the fiscal package to suit the profitability of the particular project.

Because of the high risk and considerable investment involved in oil and gas exploration and development, the fiscal system would need to take into account the divergent interests of investors and the government. In particular the fiscal system would need to be able to allocate risks equitably. As risks can be substantially different for different projects and over time, it would be desirable to build enough flexibility into a system to allow for unforeseen changes, and to minimize the need and cost of negotiations and/or renegotiations. Furthermore, the probability of success, the expected average size of

future discoveries, and the average finding and lifting costs are key data for the design of an appropriate fiscal system, i.e. a fiscal system that is suited to the particular country circumstances. Especially in frontier areas like Palau, where little is known on prospectivity and cost of development, the O&G Task Force recommends the use of fiscal systems based on profitability indices, as they are more likely to capture the variability among projects. Because of their flexibility, these types of arrangement are more likely to encourage the development of marginal fields, and of complex projects with a long lead time for implementation.

### ***8.2.1.2 Government Participation***

The issue of government participation (the back-in option) in oil and gas exploration and production activities deserves special consideration. Nearly half of the countries around the world allow some form of participation through the National Oil Company (NOC), the oil minister, or other government entity. Countries that use PSCs are more likely to use government participation as means of rent extraction. Governments that allow participation may or may not reimburse exploration costs to the contractor. Those who do not, normally allow the contractor to recover expenses (its share and the “carried”) with a limited or unlimited carry forward.

The participation of a NOC does not necessarily have fiscal consequences, if the NOC participates on equal terms as the private oil companies, i.e. it assumes its share of the exploration, development and operating costs and the associated risk and receives a corresponding share of (value of) the produced hydrocarbons.

It is difficult to imagine, considering Palau’s present economic situation, that risk capital, to the extent needed for participation in exploration and production projects, can be raised by the public sector. Therefore, Palauan participation would have to be carried through the start-up phases. Carrying a company, which, for example, holds a 5% participating interest in a license through parts of the project – typically the exploration phase - means that the other companies holding 95% of the participating interest would pay for 100% of the expenses.

If no discovery is made the other companies would have carried the entire risk. If a discovery is made and the carried company participates 100% in the development and production costs, the 5% of the exploration costs, which were paid by the other companies would be deducted from the carried company’s share of production until “its debt” is settled (sometimes interest apply to the outstanding balance). By increasing the risk profile of the project for the other companies, the carried increases the risk premium that the investors will require to invest in the project. The Palau NOC will need to finance its share of development and production costs. The risk, cost and benefit of using public finances to invest in development and production activities needs to be carefully evaluated. If the economy of the project goes wrong and the development costs are not covered, the Palau NOC would carry the loss.

If it is assumed that the carried expenses shall not be refunded by the carried company, the carried participation can, from an economic point of view, be compared to a tax on exploration and development, respectively, or, in case of a full carry, as a duty of the same size, for example 5% of a duty basis corresponding to the production value, with the production related expenditure deducted. Even if the carried participation is repaid with interest, the other companies will see the carrying as an increase of an oil project's risk and a strain on their liquidity. Thereby it will reduce the other companies' ability and willingness to bear a specific tax burden. Carried participation of a national oil company will therefore imply a reduction of the revenues which otherwise could have been collected as taxes and duties.

From a purely financial standpoint, this has implications for the contractor's NPV and Internal Rate of Return. Because the contractor is allowed to recover expenses (its share and the carried) with a limited or unlimited carry forward<sup>24</sup>, this may result in an implied borrowing rate for the host government that is higher than its marginal borrowing rate. In some cases, the carry may result in an implied borrowing rate for the government that is higher than its marginal borrowing rate. Therefore, when a carried interest is involved, the decision to exercise the back-in option, and the consequent use of public resources, needs to be evaluated in light of the overall macroeconomic objectives and resource allocation priorities of the government.

Given the potentially wide implications that the establishment of a Palauan national oil company might have on the investors and on the Treasury, the O&G Task Force proposes to further examine and submit recommendations on whether and how such company should be established, with particular reference to ownership, governing bodies, the company's commercial and socio-economic objectives and its role in relation to the political and administrative systems and the Palauan business community. The analysis and recommendations of the O&G Task Force will be set forth in the final report on "Developing the Hydrocarbon Sector in Palau".

### **8.2.2 Issues to be Considered in the Design of Fiscal Systems**

Although the government and the potential investors may share one common objective - the desire for the project to generate high levels of revenue - their other goals are not entirely aligned. The government aims to maximize the rent for Palau over time, while achieving other development and socioeconomic objectives (job creation, transfer of technology, and development of local infrastructure). Investors' aim is to ensure that the return on investment is consistent with the risk associated with the project, and with their corporations' strategic objectives:

From the government's standpoint, this means the design of a tax system that supports macroeconomic stability by providing predictable and stable tax revenue flows; avoids the introduction of distorting effects through the fiscal instruments; and maximizes the

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<sup>24</sup> Usually unrecovered expenses are carried forward to the next fiscal year until they are fully recovered (unlimited carry forward) or until they are allowed for recovery (limited carry forward). The carry forward affects both the calculation of profit oil split and of the corporate tax, although the mechanism may be different.

present value of revenue receipts by providing for appropriations during the early years of production.

### ***8.2.2.1 Predictable and Stable Revenue Flows***

Naturally the government would prefer a fiscal system that generates predictable and regular revenue. Because of the volatile and uncertain nature of hydrocarbon revenue, this may be difficult to achieve. Hydrocarbon activities are characterized by uncertainty and instability on a number of fronts. At the beginning it is uncertain whether a given exploration will result in a commercially exploitable discovery. In case of a gas discovery, considerable infrastructure problems have to be solved, before the gas can be sold. The production volume will vary, not always in a predictable manner. The prices of oil and gas fluctuate both in the short and the long term. Exploration, development and production costs can be difficult to predict and to manage, and the host government may have difficulty to control and assess them correctly. Consequently the taxation basis for income taxes could fluctuate drastically.

Instead of trying to design the tax system with a view to revenue stability, Palau could consider the use of risk management strategies designed to smooth revenue volatility. The costs and benefits of this approach will need to be carefully analyzed<sup>25</sup>.

### ***8.2.2.2 Effect of Fiscal Systems on Investors' Behavior***

The fiscal regime can be used to send economic signals to the market, and influence investment decisions. Many countries have used some form of incentive to foster oil and gas exploration and production activities whether in frontier acreage or in mature provinces. Their experience shows that the effectiveness of a specific form of incentive cannot be judged in isolation from the rest of the terms applicable to oil and gas exploration and development activities, nor can it be de-linked from the supply and demand conditions. An important policy decision that would need to be made is whether the fiscal systems should aim at neutrality or seek to optimize (potential) investors' behavior, either in the short (capital allocation within an existing portfolio of assets) or the long (the decision to invest in or reject a project) run. Intuitively:

- a) All taxes reduce the net present value of a project and make it less attractive to investors. Therefore, the higher the level of taxation, the lower the number of possible investments under prevailing market conditions;
- b) The timing of revenue collection is a major determinant of the net present value of the project. Fiscal systems that reduce or defer revenue collection are preferred by investors because they increase the net present value and accelerate the investment's pay-back;

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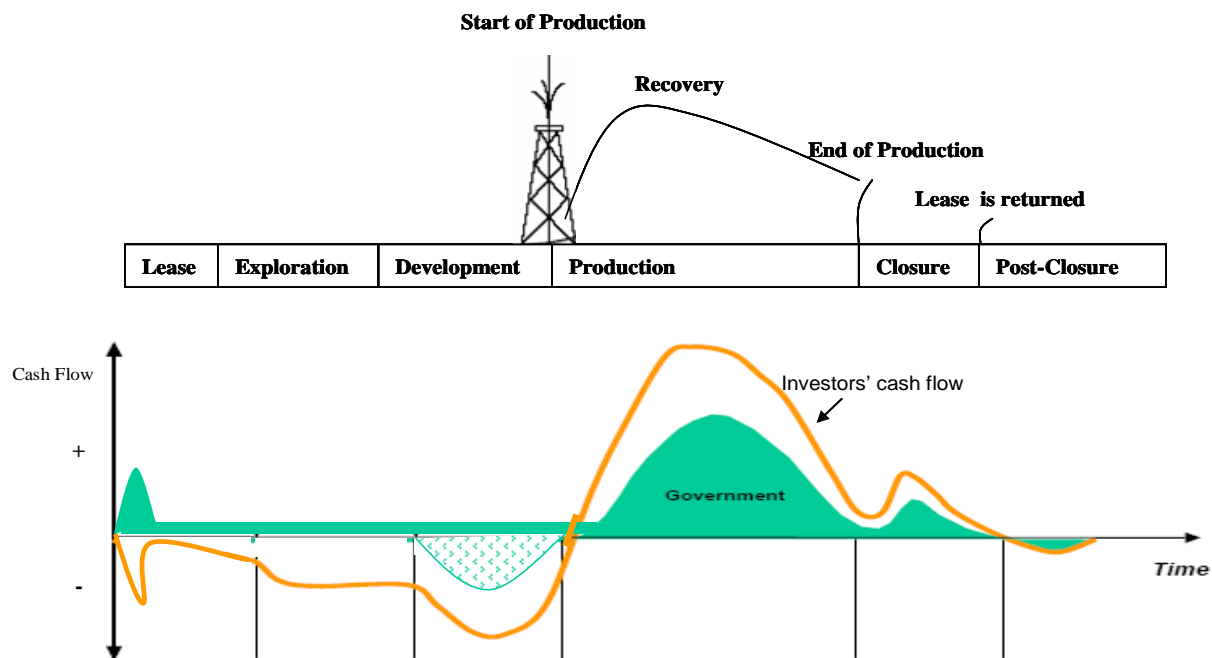
<sup>25</sup> These range from hedging to the use of resource revenue funds. These are discussed in Section 7.

- c) The net present value is significantly influenced by the risk profile of the investment. Therefore, fiscal systems that reduce the perceived political or economic risks are preferred by investors.

Because many of the variables that affect the NPV of a project are project specific (quality discount or premium, operating and capital costs, risk profile, etc), the impact of the same fiscal regime on different projects may differ substantially.

It is difficult to generate an unambiguous picture of how oppressive a fiscal system is. It does not only depend on the total level of taxation but also on the mix of different types of taxes. Because oil projects are capital intensive and long term, the defrayment of expenses takes a long time, often years. In the meantime, the project would not generate taxable earnings and/or positive cash flows (see figure 1). For this reason, a tax system that imposed taxes and duties early on during exploration and development phase would necessarily increase the investor’s perception of risk, and decrease the project’s NPV.

**Figure 1 – Typical Profile of a Petroleum Asset**



Palau’s challenge is to design an efficient fiscal system that is able to induce maximum effort from the oil companies while ensuring that Palau is adequately compensated. To this end, the O&G Task Force believes that it is important to design transparent institutional arrangements and flexible<sup>26</sup>, neutral<sup>27</sup> fiscal regimes. In addition, the stability

<sup>26</sup> A “flexible” fiscal regime is one that provides the government with an adequate share of economic rent under varying conditions of profitability. This type of regime targets the economic rent. One of the most important advantages of establishing a flexible structure (a progressive mechanism for rent extraction) is its

and predictability of the fiscal terms is an important consideration in ranking investment opportunities, with obvious effects on a country's future prospects. This is particularly true for the oil and gas industry, in which long project cycles are coupled with great uncertainty with regard to resource prices and project output. The stability of the fiscal regime also impacts business confidence and affects the level of investment in and pace of development of exploration and production projects.

### **8.2.2.3 Maximum Revenue**

Because hydrocarbon resources are non-renewable and their exploitation is limited in time, the government would want the resource to be exploited with a view to ensure the maximum benefit to the citizenry as a whole. To this end, the government would need to design a fiscal system that captures the maximum share of the potential resource rent. The resource rent is defined as the profit of exploiting the resource after wages and capital (including adequate compensation for the risk) have been paid, in other words the extra revenue that is not required to persuade the investor to continue with the investment and that, if taxed away, will still allow the investor to realize an acceptable return on its investment. The O&G Task Force believes that this objective can be achieved partly by introducing terms and conditions, including taxation terms, allowing production to take place in an optimal way, so that largest possible values for sharing are created.

### **8.2.2.4 Secondary Taxation**

If the government decides to place *restrictions* on freedom of planning, such as local manpower recruitment and supply of domestic goods and services (the so called "local content obligations"), given the structure of our economy these restrictions may result in higher exploration, development and production costs, thus reducing the NPV of the project and its taxable income. On the other hand, the development of the oil industry is likely to broaden the tax base by spurring the development of local services, the production of local goods and increase the level of local employment. Therefore, local content obligations would need to be defined within the context of broader socio-economic and tax policy objectives.

## **8.2.3 Recommended Tax Policy for Oil and Gas Exploration and Production Activities**

The fiscal regime for hydrocarbon exploration and production is currently set forth in licenses issued at state level. This includes:

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stability over time: as market and project conditions change over time, flexible fiscal systems limit the need for renegotiation.

<sup>27</sup> A "neutral" fiscal regime neither encourages over investment nor deters investments that would otherwise take place. The advantage of a neutral fiscal regime is its economic efficiency. A neutral tax does not impact resource allocation. With respect to the investing company, a tax is neutral when it leaves the pre-tax ranking of possible investment outcomes equal to the post-tax ranking. With respect to a particular industry, a tax is neutral when it does not divert investments to or from that industry.

- A fixed ad valorem royalty (between 10 and 15% of the value of sales or the value of production of hydrocarbon); and
- Surface taxes (a fixed amount in US\$/acre) payable by the licensee yearly during the exploration phase.

As per all other sectors of the economy, corporate taxes do not apply. Because corporate taxes normally account for a very large share of a host government's petroleum revenue, the O&G Task Force strongly recommends that the introduction of corporate taxes be considered. In addition, the absence of corporate taxation in Palau will merely transfer the tax base to the home country of the investor. In other words, part of the oil wealth of our nation will be transferred to other nations. The use of progressive taxation systems (R-factor or RoR based) should also be investigated.

The O&G Task Force recommends that the following aspects be further analyzed:

1. The structure and parameters of the future fiscal regime for hydrocarbon exploration and production activities, that will include corporate and/or resource rent tax;
2. The existing general tax law and regulations, with the objective of establishing their adequacy, vis-à-vis the specificities of hydrocarbon activities and how they compare to international practice; and
3. The capacity of the tax administration department to administer petroleum taxation.

On the bases of the above suggested analyses the O&G Task Force will propose alternative solutions with the objective to provide guidelines to policy makers for the choice of the future fiscal system (tax burden and taxation instruments), and tax administration for oil and gas exploration and production activities in Palau.

## 9. HYDROCARBON REVENUE ALLOCATION AND MANAGEMENT

### EXECUTIVE SUMMARY

**A transparent revenue management system will need to be established whereby clear and equitable allocation principles between states and national government are established and excess revenue is set aside to allow the smoothing of expenditure over time.**

Given the economic and social structure of Palau, and the constitutional provisions related to resource revenue assignments and expenditure responsibility at national and sub-national level, the O&G Task Force recommends that a detailed analysis be carried out to determine the present and expected magnitude of vertical and horizontal imbalances, with the objective to define clear and efficient revenue assignment rules.

This would include an assessment of the efficiency of current expenditure responsibility at the national and sub-national levels, and recommendation for the future. Finally, because Palau's revenue potential from oil and gas production is currently unknown, at this stage it is not recommended that a special legislation be developed to establish a petroleum fund. Nonetheless, the O&G Task Force proposes to collect information on other countries' experience in setting up and managing petroleum funds for information and dissemination purposes. Guidelines should be developed for possible future implementation.

The proposed additional information and analyses will be provided by the O&G Task Force in the report on "Developing the Hydrocarbon Sector in Palau" currently under preparation.

### 9.1 REVENUE ASSIGNMENTS AND TRANSFERS BETWEEN NATIONAL AND SUB- NATIONAL GOVERNMENT LEVELS

Tax revenues, the government share of production and royalties normally flow from private investors directly to the Treasury. The assignment of oil revenues in federal states raises a number of issues, including the right of the sub-national governments to raise revenues on natural resources, the ability of sub-national jurisdictions vis-à-vis the central government to stabilize revenues in response to oil price volatility, inter-jurisdictional equity and redistribution, and the financing of a stable level of public services provided by both the central and the sub-national governments.

It is common practice to use a centralized system where the central government defines the tax base, sets the rates and administers the tax system. Most federal countries use some form of revenue sharing or assignment of tax bases. In the revenue sharing model, oil revenues are collected by the central government and redistributed to all or some levels of government. Alternatively, specific tax bases are assigned to different levels of government, some of which might be overlapping bases. The assignment of specific revenue bases (such as production excises that tend to be more stable as they are linked to

oil production instead of oil prices) to sub-national governments, accompanied by a transfer system that address distributional and equalization concerns, is generally the most efficient solution.

### **9.1.1 Current Status of Intergovernmental Relations in Palau**

In FY 2006, revenues of the national government accounted for about USD 84 million and additional financing USD 5 million (Withdrawal from Compact Trust Fund), for total expenditure of USD 89 million. The main transfers to states are in FY 2006 block grants (4.7 million, presumably USD) and fishing rights (895 thousand), with some (far) more limited revenues being collected by the state themselves (mainly licenses and fees). Excluding own source revenue mobilization (where estimates are not available), the states account for 6.5 percent of total consolidated public expenditures in Palau. The states must have a balanced budget, and may not borrow.

Table 1 summarizes the main revenue and expenditure assignments across Palau's sixteen states. Koror is the largest state in the country, with well over two thirds of the national population. As such it receives the largest share of revenue assignments (mainly land-lease, license fees) and revenue transfers from the national government (block grants). Transfers from the national government are by far the most important source of revenue for most states. Fishing rights are assigned on a derivation basis, while land lease and license fees are collected directly as own source revenues by the respective states.

At the state level, wages and public works are the key expenditure item. Public works mainly relate to the building and maintenance of roads, landfill operations and other maintenance expenditure. The national government is responsible for the bulk of expenditures in health, education, police, and water services.

**Table 5: Fiscal Decentralization in Palau**

	State Revenues by Importance										State Expenditures by Importance		
	Population (2005)	Block Grants	Fishing Rights	Land Lease 1/	State Boat	Water Utilities & Fees 2/	Licenses & Fees 2/	Block Grant (USD, 2006)	USD, 2006	Salary & Wages	Public Works 1/	Community Services 2/	
Aimeliik State	270	SRS	IRS	RS			RS	269,625	999	SEI	IEI	EI	
Airai State	2,723	SRS	IRS	IRS			RS	330,625	121	SEI	IEI	EI	
Angaur State	320	SRS	IRS		RS		RS	232,625	727	SEI	IEI	EI	
Hatohobei State	44	SRS	IRS		IRS		RS	165,625	3,764	SEI	IEI	EI	
Kayangel State	188	SRS	IRS				RS	207,625	1,104	SEI	IEI	EI	
Koror State	12,676	SRS	IRS	SRS			SRS	867,625	68	SEI	SEI	EI	
Melekeok State	391	SRS	IRS	RS			RS	258,625	661	SEI	IEI	EI	
Ngarard State	581	SRS	IRS	RS		RS	RS	303,625	523	SEI	IEI	EI	
Ngarchelong State	166	SRS	IRS	RS			RS	303,625	1,829	SEI	IEI	EI	
Ngardmau State	317	SRS	IRS	RS			RS	252,625	797	SEI	IEI	EI	
Ngarenlengui State	464	SRS	IRS	RS		RS	RS	261,625	564	SEI	IEI	EI	
Ngatpang State	254	SRS	IRS	RS			RS	247,625	975	SEI	IEI	EI	
Ngchesar State	488	SRS	IRS	RS			RS	269,625	553	SEI	IEI	EI	
Ngiwal State	223	SRS	IRS	RS			RS	252,625	1,133	SEI	IEI	EI	
Peleliu State	702	SRS	IRS	RS	IRS	RS	RS	321,625	458	SEI	SEI	EI	
Sonsorol State	100	SRS	IRS				RS	165,625	1,656	SEI	IEI	EI	
<b>Total/Average</b>	<b>19,907</b>							<b>4,711,000</b>	<b>237</b>				

**Revenues**

- 1/ Residential; commercial; mining & quarrying
- 2/ Building permits; business licenses; vehicle registration; various entry and recreational fees, e.g., diving

Memorandum:

- "SRS": Significant Revenue Source
- "IRS": Important Revenue Source
- "RS": Revenue Source

**Expenditures**

- 1/ Roads and facilities maintenance; landfill operations
- 2/ Sports, youth and old age programs

Memorandum:

- "SEI": Significant Expenditure Item
- "IEI": Important Expenditure Items
- "EI": Expenditure Items
- National Government provides health, education, police and water services
- Most capital expenditures/infrastructure improvements provided by National Government

### 9.1.2 Lessons from other Countries' Experience

Countries organized in both unitary and federal systems have some level of revenue and expenditure assignments. An important lessons that can be derived from their experience is that both expenditure and revenue assignments should be considered as a system, with advantages and disadvantages/trade-offs that need to be considered for each type of design. While there is a natural tendency to focus on revenue assignments, an important principle for good intergovernmental fiscal design is that finance should follow function. In addition, sub-national governments should operate within a hard-budget constraint, so as to avoid inefficiencies in the intergovernmental fiscal design (e.g., unsustainable expenditures or reckless borrowing).

***Revenue Assignments:*** Generally it is useful to distinguish between three types of revenue assignments: (i) own source revenues, (ii) shared revenues, and (iii) various types of fiscal transfers (e.g., rules base block grants, special earmarked grants). The ability of a sub-national government to generate its own revenue provides it with a higher degree of control and wider autonomy in respect of its use. This is normally counterbalanced by greater accountability to local citizens. Shared revenue and fiscal transfers are normally defined with the objective of providing the sub-national government with a level of funding that is sufficient to cover the expenditure for which it is responsible. In other words, revenue assignments and transfers aim at addressing imbalances between revenue and expenditure at sub-national level.

***Fiscal Decentralization and Non-Renewable Natural Resources:*** Natural resource revenues, such as oil, presents a host of particular challenges given that they are uncertain, volatile, do not last forever and are typically spatially concentrated: Save for large, economically diversified federations such as the U.S. and Canada, experience has shown that the national government is normally better equipped to manage this type of revenue. Arguments in support of the centralization of the collection of resource revenue range from the superior ability of the national government to address revenue volatility, the fact that natural resources are often defined as national endowment in countries' constitutions, and the uneven spatial distribution of natural resources.

Arguments in support of the assignment of resource revenue range from the need to compensate the producing area for social and environmental impact of exploration and production activities, to the need to respond to the producing regions' heritage/political demands. Even countries that share oil revenues with producing regions on a derivation basis (e.g., Indonesia), introduce other equalizing transfers as part of their intergovernmental system to ensure that all regions are able to meet some basic service delivery standards. The wide range of international experience with fiscal transfer and revenue allocation criteria shows that rule-based, transparent, simple and equitable allocation criteria based on credible data are crucial elements of good fiscal policy design.

***Expenditure Assignments:*** Sub-national governments are generally assigned expenditure responsibility in areas that are more efficiently and effectively managed at

the local level. For example, one argument for decentralization is that local leaders have better information as to the needs of their citizens. In contrast, particular tasks might be subject to significant economies of scale/coordination, spillovers/externalities, and capacity needs. While some tasks, such as defense, are typically assigned to the national or even supra-national level, exact expenditure assignments vary significantly from country to country. Whatever the level of expenditure assignment, lack of clarity and lack of accountability normally promote inefficiencies.

Given the economic and social structure of Palau, and the constitutional provisions related to resource revenue assignments and expenditure responsibility at the national and the sub-national level, the O&G Task Force recommends that a detailed analysis be carried out to determine the present and expected magnitude of vertical and horizontal imbalances, with the objective to define clear and efficient revenue assignment rules. This would include an assessment of the efficiency of current expenditure responsibility at national and sub-national level and recommendation for the future.

## **9.2 RESOURCE REVENUE MANAGEMENT**

Three aspects related to the existence of revenues from the exhaustible natural resource will pose special problems for decision makers. First, the resource revenues may be very large in relation to the rest of the economy, but will not be permanent, the resource being exhaustible; second, the size of the revenues may be so large in relation to the economy itself that it would be difficult to identify productive uses for all of it, were it to be immediately spent; and third, the volatility of resource prices and the variability of volumes can result in substantial changes in government resource revenues from year to year.

Should Palau suddenly discover sizeable amounts of hydrocarbons, the government would face a number of management problems both at macro-economic level and at sectoral level. These include:

- Choice between current and future welfare benefits;
- Design of policies that will be sustainable against fluctuations in the price of the resource and the eventual depletion of the resource;
- Improvement of domestic capacity to use the funds so received in an efficient manner; and
- Pursuit of policies for the use of resource revenues for public benefit that have general support.

These issues revolve largely around the decision on how much of the resource revenue to spend each year, what to spend it on, and how to ensure accountability and public support for these decisions. A well-designed macroeconomic strategy will take into account choices between present and future consumption, sector allocation, the efficiency of

spending, and the desirability of this allocation. To minimize suboptimal decision making, these steps should all be taken in a transparent manner so that accountability to all interested parties is guaranteed.

Palau will then have to make the following decisions:

- ***Spend all revenue on current consumption.*** A policy of devoting all the revenues to current consumption, whether public or private, or to a reduction in non-oil taxes, will fail to provide for future generations but is likely to be politically popular because all the benefits are felt immediately by agents who can influence political outcomes. Private individuals can make decisions about saving for their own future needs (including those of their descendants) and may therefore be attracted to schemes whereby the oil revenues are immediately distributed to citizens. This policy can also be achieved by cutting tax rates, thus leaving households with more spending power.
- ***Invest in non-financial assets.*** A policy of spending the revenues on non-financial investments expected to yield further benefits will raise the future level of income that in turn will benefit individuals. Given the small size of Palau's economy, such a policy would be constrained by the ability to find domestic investment opportunities that yield a return greater than the alternative of saving the revenues and investing in financial assets. In other words, Palau is likely to face an "absorption" problem: the benefits from such investments decline as various supply bottlenecks result in higher prices rather than higher output. Also, civil services may find it difficult to identify which public sector projects will yield a satisfactory social and economic return.
- ***Saving oil revenues.*** Palau would have several reasons to save all or part of its oil revenues and use them to purchase financial assets (or reduce public debt):
  - ***Exhaustibility and future generations.*** The resource revenues from the production of hydrocarbons are only temporary, with their duration dependent on the size of reserves, the rate of extraction, and future prices of hydrocarbons. In order for Palau to achieve intergenerational equity and ensure that benefits accrue to all citizens, both present and future, the revenues themselves should generate future earnings streams. Saving part of the revenues and obtaining a return from their investment in financial instruments, or from reducing gross public debt, can be the most effective way of providing benefits for future generations and future needs of current generations, such as pension payments.
  - ***Revenue volatility and stabilization.*** The potential volatility of oil revenues, relative to the expected path determined by projected production levels and oil prices, can be very large. The national government and the states may have to face the possibility that their planned spending programs may have to be suddenly changed. Because it is difficult and costly to suddenly cut back spending on current items, or to halt a public

investment project, national and sub-national levels of government should have a strong incentive to adopt a strategy that can provide a fairly smooth government expenditure path. This requires a stabilization approach in which a share of revenues is set aside at times of higher than average expected receipts, which can be used to supplement current revenues in times of below average receipts<sup>28</sup>.

- *Precautionary saving.* As well as the “normal” volatility of revenues, there can be extraordinary shifts in the fiscal situation of Palau. Unexpectedly large needs for current expenditures (for example, following a natural disaster) or unexpected loss of revenue of a magnitude beyond that normally experienced in volatile markets (for example, following a blow-out, civil disturbance requiring shutdown of facilities, or war) would face the national and sub-national governments with an urgent need for extra financing. Accumulated resources, possibly held in an oil fund, will (if large enough) provide a precautionary cushion against such incidents.
- *Lack of absorption capacity.* Palau is likely to lack sufficient current opportunities for domestic investment or consumption expenditure that provide the same current benefits as financial investment. Too high a level of domestic spending, relative to available capacity to produce, will result in an increase in prices of non-tradable goods. In such a case, it may be better to partially restrict public spending until the capacity of the economy to respond has improved. This decision is often particularly difficult as popular sentiment may push the government to be seen to spend the newly acquired revenue, even though its benefits may be rather limited.

The choice between the various uses of oil revenues then depends on a number of factors, both economic and political, which partly explains why the oil funds established in different countries (as explained below) have very different characteristics.

Once the objective of the fund is clear, its establishment involves a number of practical issues, which include the harmonization of the fund with the overall fiscal policy; the legal foundation of the fund; the rules determining the payments into and out of the fund;

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<sup>28</sup> Instead of creating an oil fund a government could borrow abroad to weather temporary shocks or to adjust to permanent price shocks. In practice, the government may not have easy access to foreign capital markets on reasonable terms especially in period of low commodity prices, and repaying the debt when the situation reverses may be difficult. Another way of dealing with price volatility could be to set fiscal prices for the purpose of calculating royalties, production sharing and corporate taxes. The fiscal price could be defined as a fixed value over a certain period of time, or it could be indexed to an international commodity price index or a portfolio of indices. It is important to underline that although the use of fiscal prices may allow the government to reduce revenue volatility, it is likely to have a distortive effect on investment decisions. Alternatively, Palau could transfer the risk of price shocks to those better able to bear it. This can be done by trading in derivatives. Although they mitigate price volatility, it will be difficult for Palau, given the structure of its economy and the limited capacity of the civil service, to be able to manage the complexities of these instruments and bear the related level of risk implementation costs.

the arrangements for the financial management of the fund; the nature of the oversight of the fund.

Other countries' experience shows that oil funds are best created after the discovery of the resource but before revenues from it have started to arise. This is because the size and distribution of revenue over time is an important element for defining the most suitable fiscal and revenue management policy. In addition, once revenue starts being produced, the government may find itself under a lot of political and social pressure to spend it immediately, and efficiency and fairness principles may become more difficult to apply.

In federal states, oil funds are normally established at central level. This is because the different components of revenues (bonuses, surface taxes, corporate taxes, royalties, production shares, etc) may vary substantially in terms of relative size, volatility and distribution. These differences are more easily "averaged out" by applying a portfolio strategy.

Because Palau's revenue potential from oil and gas production is currently unknown, at this stage it is not recommended that a special legislation be developed to establish a petroleum fund. Nonetheless, the O&G Task Force proposes to collect information on other countries' experience in setting up and managing petroleum funds for information and dissemination purposes. Guidelines should be developed for possible future implementation.

## **10. INSTITUTIONAL PROVISIONS, CAPACITY BUILDING, AND FUNDING ARRANGEMENTS**

### **EXECUTIVE SUMMARY**

**Given the lack of local expertise dealing the management of a petroleum sector, Palau will have to determine the most appropriate and realistic sustainable funding arrangements for acquiring the needed expertise internationally.**

The development of a petroleum sector will be the largest, most expensive, and complex project ever undertaken in Palau to date. Currently, Palau does not have the infrastructure or expert capacity to manage a petroleum sector that meets international standards and protections. In order to develop a petroleum sector that meets international standards and protections and also takes into account Palau's socio-economic reality, Palau will have to determine appropriate sustainable financing mechanism that provides for the lowest possible risk to the Republic. Therefore, the following recommendations address the institutional provisions, capacity building, and funding arrangements that should be addressed in order to facilitate the development of an effective petroleum sector in Palau.

1. The O&G Task Force recommends the creation of a sector ministry within the Executive Branch. This will avoid the proliferation of agencies while also maintaining political control and oversight of the respective institution.
2. At the on-set, the O&G Task Force will need to be able to contract the services of sector experts to assist in the development of the petroleum operations reference framework for Palau.
3. In the immediate, Palau should retain the services of international experts dealing with legal frameworks, fiscal policy, and environmental protections to aid the Republic develop an institutional framework for petroleum production and management.
4. Over the long-term, the educational policy for this sector should be focused on technical traits that are pertinent to the industry but are also adaptable and valuable to other sectors of Palau.

It is expected that relatively little costs will be incurred by Palau for Phase I and II of this 3-phased approach to develop a petroleum sector in Palau. However, Phase III consists of the on-going management of the sector and Palau will be required to determine a financing mechanism to address the costs associated with the day-to-day operations of the institutional structure, personnel including industry and geological experts, and other expenses associated with the management and monitoring of the sector. A decision must be made on who Palau will choose to address the costs. Borrowing the funds may create financial difficulties for the Republic, particularly if oil exploration potential is not successful. The second option is for Palau to access grant funds. However, grant or donor funds are difficult to source and will require a longer timeframe to secure the funds.

## **10.1 INTRODUCTION**

The development of a Palau petroleum sector raises several significant constraints to be overcome. Palau, as with many Small Island Developing States (SIDS), has limited financial, human, and technical resources to address the numerous and often times unique development issues faced by SIDS. This holds particularly true in the development of highly specialized sectors. In the case of the petroleum sector, all resource constraints must be significantly upgraded to effectively develop and manage the sector in the immediate, medium and long-term.

Palau's current regulations and institutional capacity are not sufficient to regulate and monitor petroleum operations and ensure the implementation of local and applicable international law. The existing authorities in Palau will face unprecedented challenges entering the oil industry. The development of this sector will be the most complex and expensive undertaking by the Republic to date. In addition, the possible petroleum exploration and production projects will be far larger than any sector projects faced by Palau in the past.

If Palau pursues the development of a petroleum sector, the following institutional provisions, capacity building requirements, and funding arrangements should be reviewed and established and/or upgraded to ensure Palau's social, economic, and environmental stability.

## **10.2 INSTITUTIONAL PROVISIONS**

The requirements of a petroleum administration should include responsibility for the administrations' daily management of oil activities. These include, but may not be limited to, general management functions, petroleum geological functions, health and safety, environmental protection, emergency functions, and economic and commercial functions.

### **10.2.1 Institutional Arrangement**

The creation of a sector ministry is the preferred choice for countries that are new to the petroleum sector and therefore are limited in human resource capacity. A sector ministry also avoids the proliferation of agencies and is subject to the political control and oversight of the respective country.

#### ***10.2.1.1 Administrative Functions***

Ideally the administrative functions of the petroleum administration consists of selecting area of exploration, preparation of a model license based on Palau's infrastructure reality and industry standard license conditions, and regular progress reports to the Olbiil Era Kelulau.

### ***10.2.1.2 Geological Functions***

Geological functions play a key role in effective petroleum administration. Detailed knowledge of Palau's subsoil's prospectivity is crucial when negotiating with oil companies. This base knowledge is also a requirement for stipulating appropriate safety and environment safeguards for oil exploration and, in the event that oil is found, production management.

### ***10.2.1.3 Health, Safety, and the General Working Environment***

Offshore exploration and production activities necessitate regulations for health, safety, and the general working environment. Deep drillings are carried out under high pressure with the risk of uncontrolled blow-outs. In general, offshore oil activities are exposed to the same maritime risks as traditional shipping operations. An emergency plan that clearly depicts the protection of human life, the environment, and property should be a prerequisite for offshore hydrocarbon activities. In addition, the plan should detail the response activities, including the response chain of authorities that will be undertaken to minimize the damage to personnel, the environment, and/or property.

## **10.3 CAPACITY BUILDING**

Proper administration of hydrocarbon activities will require adept administrative capacity. Capacity constraints must be addressed in the implementation phase through targeted recruitment and training. At the outset, the O&G Taskforce will need to be able to contract the services of sector expertise to assist in developing the Palau petroleum operations reference framework.

### **10.3.1 Immediate Requirements**

In the immediate, Palau should retain petroleum sector experts dealing with legal frameworks, fiscal policy, and environmental protection to aid the Republic develop an institutional framework for petroleum production and management in accordance with accepted industry standards and protections. This is a necessary element to promote the harmonious development of the sector and its integration with Palau's economic reality. Although capacity building is not the main focus of this task, a certain amount of knowledge sharing and capacity building will occur by interaction between Palau's designated representatives and the international experts.

### **10.3.2 Short-Term Requirements**

In the short-term, the Faroe Islands have offered the services of their geological experts to provide unbiased interpretations of the geological data collected in the sites to be explored for hydrocarbon potential. However, Palau will need to retain the long-term services of a geological expert to advise the Republic's petroleum administration. The petroleum geological surveys include geological mapping and interpretation,

prospectivity appraisals, and oil field evaluations. Therefore, data management will constitute an important aspect of the proposed petroleum administration's total workload.

### **10.3.3 Long-Term Training and Education**

The situation of the hydrocarbon sector in Palau will determine the general employment qualification requirements of the industry. A trained workforce is not expected in the exploration phase because most of the tasks connected with exploration drilling will be highly specialized and relatively short in duration. Conversely, the production phase activity will be more stable and significantly longer-term. In light of the relative small size of Palau's population and workforce, it will not be possible to participate in all aspects of the production phase. Therefore, the education policy developed for this sector must be selective, focusing on technical traits that are pertinent to the oil industry but are also adaptable and valuable to other economic sectors.

## **10.4 FUNDING ARRANGEMENTS**

There are significant costs associated with the development of a hydrocarbon administration in Palau. The development costs include the contracting of international experts and capacity building during Phase 1 and II. Additional costs will include the retention of a geologist, establishment of an institutional regime, and on-going capacity building for Phase III implementation and beyond.

### **10.4.1 Phase I and II Technical and Financial Assistance**

Palau has secured the support of the World Bank and the Faroe Islands for Phase I activities. The product of Phase I activities will be the Preliminary Report that will be provided to Palau's leadership. The World Bank and Faroe Islands are providing technical support for Phase I Assessments, which include a:

- Prospectivity Assessment: focused on assessing the hydrocarbon potential of the Velasco Reef Block, but will also result in a preliminary evaluation of the potential of Palau's offshore.
- Environmental Impact Assessment: will concentrate on the Velasco Reef Area, but will also provide a general assessment of the impact of petroleum development in other areas of potential petroleum interest.
- Socio-economic Impact Assessment: will include a macro-economic model that will include revenue management options, evaluation of alternative sector policies, evaluation of alternative institutional arrangements, and an assessment of local capacity in both the public and private sectors.

Completion of Phase I will activate the World Bank Trust Fund, provided for by the Faroe Islands and the Government of Australia, for Phase II activities. Phase II activities will consist of contracting international petroleum experts to assist Palau develop its

hydrocarbon institutional framework. Phase III will involve implementing the hydrocarbon framework and continued capacity building.

#### **10.4.2 Phase III Financing Requirements**

The costs that will be incurred by Palau will be, for the most part, associated with Phase III activities and beyond. This will consist of the on-going expense of the day-to-day operations of the institutional structure, personnel including industry and geological experts, and other expenses associated with the effective management and monitoring of the hydrocarbon sector. Palau may opt to borrow funds to address these expenses. However, borrowing may create financial difficulties if oil exploration potential in Palau is not successful. An alternative option for Palau is to access grant or donor funds. Grant or donor funds may not be readily available, and if sourced, will require a longer time frame to secure the funds.