STEAMING THROUGH PERILOUS STRAITS: SPECIAL PROBLEMS IN REFORMING AND RATIONALIZING THE LAWS AND REGULATIONS FOR PHILIPPINE OFFSHORE PETROLEUM EXPLORATION AND DEVELOPMENT*

*Jay L. Batongbacal***

INTRODUCTION

The *Deepwater Horizon* disaster in the summer of 2010 brought the risks of offshore petroleum exploration and development back under worldwide public scrutiny after several decades of relative obscurity.[1] The humbling might of Nature unleashed in the waters of the United States, the very birthplace of modern offshore petroleum technologies, highlighted the dangers posed by the failure of even small components (suspected, in this case, to be the blow-out preventer) of the such highly complex technologies in the oceanic environment.[2]

While the Philippines is no stranger to disaster, it has been largely spared from similar occurrences throughout its history of petroleum exploration. The *M/T Solar I* incident off Guimaras in August 2006 is reputedly its worst experience with a major petroleum spillage, with the effects reaching fishing grounds and coastal habitats.[3] Its avoidance of a *Deepwater Horizon*-like tragedy, is also due to the fact that exploratory drilling in the offshore since the 1970s have not revealed really significant oil reservoirs.[4] Instead, some large natural gas fields have been discovered, the most locally well-known being the Camago-Malampaya structure off the Palawan coast, and lately the Sampaguita

---

* *Cite as* Jay L. Batongbacal, *Steaming through Perilous Straits: Special Problems in Reforming and Rationalizing the Laws and Regulations for Philippine Offshore Petroleum Exploration and Development*, 85 Phil L.J.523, (page cited) (2011).

** Assistant Professor, UP College of Law. BA Pol, Sci., UP 1987; LLB, UP Law 1991; MMM (Master of Marine Management), Dalhousie (Canada) 1997; JSD, Dalhousie (Canada) 2010.

1 *Deepwater Horizon: A Timeline of Events* (2010)., *available at* http://www.offshore-technology.com/features/feature84446/ (last visited: February 4, 2011)

2 Kate Ravillous, *Deepwater Horizon: scrutiny falls on blowout preventer,* NEW SCIENTIST. (2010)., *available at* http://www.newscientist.com/article/dn18853-deepwater-horizon-scrutiny-falls-on-blowout-preventer.html (last visited: February 4, 2011).

3 *Guimaras Oil Spill Frequently Asked Question.* PETRON PUBLIC AFFAIRS. (2006) *available at* www.doe.gov.ph/popup/faqs guimaras.pdf. Other oil spills have also caught attention in the media, though such spills have been relatively minor incidents. It is fair to state that since *M/T Solar I*, public awareness of even those smaller spills has increased considerably due to heightened sensitivity of reportage in the mass media.

4 G. R.Balce, & E. F. Pablico, *Philippine Natural Gas Resources: Maximizing their Potential.* (2007). *available at* http://www.doe.gov.ph/ER/ngreports.htm (last visited: February 4, 2011).

field in Reed Bank.[5] Nonetheless, with the country's promotion of petroleum exploration in the last decade, resulting in three major petroleum contracting rounds,[6] and the expected increase in exploration activities thereafter, it is but logical to take a step back to consider and assess the risks anew.

It is important to keep in mind that such an assessment must be undertaken with a broader and more comprehensive view of the offshore petroleum exploration and development activities. Policy reform initiatives, even on something apparently limited to a specific area such as enforcement of marine environment safety laws, be viewed within their broader context. Prior academic discussions on the Philippine regime appear to have largely concentrated on the capitalization requirements for petroleum investments based on the 60/40 rule in the 1987 Constitution. However, these discussions barely scratch the surface of the regulatory problems and issues implicated in complex petroleum operations; moreover, they have discouraged more detailed discourse on the actual and practical problems of petroleum exploration and development already taking place.

CURRENT LEGAL AND POLICY FRAMEWORK

Offshore petroleum development in the Philippines is presently governed by anachronistic legislation whose implementing rules have evolved significantly at a much faster rate. Although the current basic rules were constitutionally defined in 1987, particularly the fundamental claim of State ownership under the Regalian Doctrine,[7] the legislation that defines the State apparatus regulating the exploitation of petroleum resources date back to the 1970s. The Oil Exploration and Development Act of 1972,[8] subject to minor amendments by subsequent laws, is still the same legislative framework upon which current petroleum exploration and development activities are based. But neither the 1987 Constitution nor 1970s-era legislation appear to be in step with current requirements of offshore petroleum operations for a simplified contractual regime; definite costs and expenditures; and unrestricted mobility of capital, personnel, logistics, and equipment.

---

5 *Forum Energy plc.. SC72 (Formerly GSEC101).* (2010). *available at* http://www.forumenergyplc.com/operations/oilandgas/reed-bank.aspx.(last visited: February 4, 2011)

6 "Contracting rounds" refer to a system of public bidding instituted by the DOE in 2003, to replace the previous system of petroleum concessions secured through individual negotiations. For the current implementing rules, *see* Department of Energy. (2009). Transparent and Competitive System of Awarding Service/Operating Contracts. DOE DC 2009-04-004.

7 CONST., art. XII, §2, par. 1.

8 Pres. Dec.No. 87. (1972). Oil Exploration and Development Act.

To address this desynchronicity, the Department of Energy (DOE) issued a number of Department Circulars to define the administrative structure and procedures for offshore petroleum contracting. Similar to the Norwegian concessionary system, the Philippine petroleum energy contracting system now allows foreign companies to openly bid for petroleum concessions: the State identifies prospective areas for exploration, provides the basic data and information required by petroleum companies to assess their prospects, and then allows companies to compete for contracts by offering expenditures and work programs.[9] Successful bidders are awarded a service contract based on a standard Model Service Contract (Model SC) with fixed terms and conditions,[10] which is a comprehensive agreement that governs all stages of petroleum operations from initial exploration to production. The service contract is a production-sharing agreement, wherein all exploration risks and expenses are borne by the contractor in exchange for a share in any future production; the contractor is able to maintain ownership and control of most of the oil proceeds until their sale (at which point the State may then receive its share).[11]

Even though the 1986 Constitutional Commission inserted provisions that were apparently intended to enable closer and more restrictive State regulation of all natural resource exploitation activities, with emphasis on a 40% limit on foreign capitalization (40%) of natural resource exploitation, the Supreme Court in the *La Bugal B'laan* case[12] liberally interpreted the clause on financial and technical assistance agreements (FTAAs) covering petroleum, mineral, and mineral oil resources[13] to be apparently beyond the ambit of this limitation. Other constitutional terms and conditions, such as the specific modes of exploitation (co-production, joint venture, or production-sharing agreements), term limits (25 years, renewable for another 25 years), likewise did not apply in these cases. The Court reasoned that FTAAs were contained in a separate paragraph of Article 12, s. 2, apart from the general rule. Despite

---

9 Department of Energy. *Transparent and Competitive System of Awarding Service/Operating Contracts.* (2009).(DOE DC 2009-04-004); Department of Energy. Procedures for Contract Area Definition and Public Contracting Rounds in Petroleum Prospective Areas. (2003). (DOE DC 2003-05-005).

10 Department of Energy. *Model Service Contract.* (*hereinafter* "Model SC") (2006). *available at* http://www.doe.gov.ph/PECR2006/Petroleum PECR 2007/pdf/Model contract.pdf. (last visited: March 3, 2011), The Model SC was introduced in 2003 with the first Philippine Contracting Round for Petroleum.

11 Simon Brinsmead, *Oil Concession Contracts and the Problem of Hold-up.* 1-36 , 23-24 17(11)CEPMLP INTERNET JOURNAL, , (2007).. *available at* http://www.dundee.ac.uk/cepmlp/journal/html/Vol17/article17_11.asp (last visited: March 1, 2011).

12 La Bugal B'laan Tribal Assoc. et al v. Ramos, et al., GR. No 127882, January 27, 2004., *available at* http://sc.judiciary.gov.ph/jurisprudence/2004/dec2004/127882.htm(last visited: February 4, 2011)

13 CONST., art. XII, §. 2, par. 4.

this, however, the Court declared that FTAAs were "service contracts with safeguards."

Regardless of this interpretation of the first two paragraphs of Article 12, s. 2, the *parens patriae* duties of the State (e.g., protection of marine wealth for exclusive use/enjoyment of citizens, priority for subsistence fishers and fishworkers) in other parts of the Constitution remain. These protective duties of the State are presently provided for in the Model SC by requiring the contractor to "be subject to the laws, decrees and regulations on environmental protection, indigenous peoples rights and safety."[14] However, it may reasonably be asked whether the enumeration "environmental protection, indigenous peoples rights, and safety" should be construed restrictively to the exclusion of other bodies of law, or liberally as being only indicative in nature. Although "environmental protection" and "safety" may be construed broadly and benefit all people, there are many sectoral classifications of law that may be of interest to only certain groups, e.g., fisheries, local taxation, immigration, etc.

Of special interest is the application of the Environmental Impact Statement (EIS) System decree.[15] Under a memorandum of agreement between the DOE and the Department of Environment and Natural Resources (DENR), all activities conducted during the exploration phase, including all "activities that do not cause significant earthmoving and ecological/vegetative disturbance" are exempt from the Environmental Impact Assessment (EIA) requirement,[16] Only activities during the production phase are definitely subject to EIA. Thus, it may be asked whether development activities (e.g. development drilling) prior to production would still be classified as within the "exploration" phase. The exemption of exploratory activities (including exploratory drilling) is a significant issue, since some of the most prominent platform-related accidents and spills took place during the exploratory stage (e.g. The *Deepwater Horizon* disaster in 2010, and the *Ixtoc-1* spill in 1979).

REGULATORY CHALLENGES

This exercise is by no means an easy one. Although only a relative handful of laws were directly and specifically enacted to regulate offshore

14 Model SC, *supra* note 10 at par. 25.01

15 Pres. Dec. No. 586. (1978). Environmental Impact Statement System Law.

16 Department of Energy. *Memorandum of Agreement on Streamlining the EIA Process between the DOE and DENR.* (1999).

petroleum exploration and development, it is an undertaking that is faced with multiple challenges from multiple vectors. The apparent legislative simplicity of the regulatory regime[17] masks the operational regulatory complexity generated by petroleum exploration in practice.[18] Overall, the challenges are mainly directed against the key conditions that petroleum companies themselves require for their viability and success: fiscal certainty, operational security, social acceptability, and regulatory regime stability.

Fiscal Certainty

Financial certainty is a condition *sine qua non* for the viability of any petroleum exploration and development activity. Given the high financial risks in the offshore (the industry "odds" being only 1 in 10 chances of making a commercially-significant discovery for every exploratory well drilled), the economics of the petroleum business play an overarching role in all decisions. Petroleum companies require absolute assurances of cost-recovery and profits over the long-term, and the large companies are especially averse to increasing exploration costs especially due to unknown or uncontrollable risks. Without such assurances, they will not even bid for offshore leases in the Philippines since there are many other places where they can do business.

Challenges to financial certainty may be located in two main areas. The first is the royalty regime of the petroleum contracts, dealing specifically with the agreed arrangements for production or profit-sharing with the Philippine government should exploration lead to actual development and production activities. The national regime in this respect is defined by the Art. 12 of the 1987 Constitution as a 60/40 equity and benefit-sharing ratio, i.e., at least 60% of capital for and net proceeds from the exploitation of petroleum resources should be Filipino, since the Philippines is the owner of the offshore petroleum resource. However, in the *La Bugal B'laan* case, the Supreme Court

17 The illusion of simplicity is marked in the DOE's own materials for prospective petroleum investors. For example, in its website for the petroleum contracting round held in 2006, it lists the relevant legislation to be comprised of only the Oil Exploration and Development Act and it amendments, the Philippine Environmental Policy and Philippine Environmental Code, the EIS System Law, the National Integrated Protected Areas System (NIPAS Act), and the **Indigenous Peoples Rights Act** (IPRA), plus some implementing rules and regulations. Department of Energy. *Petroleum: Philippine Energy Contracting Round 2006* (2006). , *available at* http://www.doe.gov.ph/PECR2006/Petroleum PECR 2007/petro.htm (last visited: February 4, 2011)

18 Regulatory complexity in the offshore petroleum industry is not unusual. For example, in British Columbia, Canada, some 98 federal and provincial statutes were found to have bearing on offshore petroleum operations. O.Rourke, P. *Smart Regulation of BC□s Offshore Oil and Gas*. Victoria, BC: BC Ministry of Energy. (2005). , *available at* http://www.empr.gov.bc.ca/OG/offshoreoilandgas/ReportsPresentationsandEducationalMaterial/Documents/ORourkeMar16_05.pdf (last visited: February 4, 2011).

interpreted the Constitution very liberally, permitting 100% foreign ownership of capital and after-tax income in FTAAs for the petroleum, mineral, and mineral oils sector.[19] Although by law, petroleum service contracts maintain that the Philippines should receive 60% of the net profits from production,[20] many different fiscal incentives are offered by the government through Pres. Decree No. 87, The Oil Exploration and Development Act of 1972. To date, among the incentives listed by the DOE are the following:[21]

- Service fee of up to 40% of net production
- Cost reimbursement of up to 70% gross production with carry-forward of unrecovered costs
- Filipino Participation Incentive Allowance (FPIA) grants of up to 7.5% of the gross proceeds for service contract with minimum Filipino company participation of 15%
- Exemption from all taxes except income tax
- Income tax obligation paid out of government's share
- Exemption from all taxes and duties for importation of materials and equipment for petroleum operations
- Special income tax of 8% of gross Philippine income for subcontractors
- Special income tax of 15% of Philippine income for foreign employees of service contractors and subcontractors

In addition, the Philippines has offered various signature and production bonuses and permits accounting of capital depreciation costs and training allowances.[22] Based on a sample computation of the fiscal terms by the DOE (Table 1), it does appear that the Philippines currently receives less than the 60% benefit mandated by the 1987 Constitution.[23]

---

19 La Bugal B'laan Tribal Assoc., *supra*note 12 , *available at* http://sc.judiciary.gov.ph/jurisprudence/2004/dec2004/127882.htm (last visited: March 03, 2011)

20 Model SC, *supra*note 10 at par. 10.4(a); Pres. Dec. No.87. (1972). Oil Exploration and Development Act, §8.

21 Department of Energy. *Energy Resources: Oil.* DOE PORTAL ONLINE. (2010), from http://www.doe.gov.ph/ER/Oil.htm.(last visited: February 4, 2011).

22 *See*, for example, the fiscal terms for the First Philippine Petroleum Contracting Round in 2003, *available at* http://www.doe.gov.ph/ER/archives/pcr/legal.html.

23 The *La Bugal B'laan* case is somewhat unclear on whether or not less than 60% benefit is permissible. On one hand, one part of the decision declares that in the case of FTAAs for petroleum, mineral, and mineral oils, the 60/40 equity and benefit rule, term limits, and other qualifications in Art. 12, sec. 2, para. 1 does not apply (FTAAs being mentioned in a separate paragraph). But on the other hand, another part validates the 60% rule in the case of the petroleum industry by treating the latter as very different from the mining industry.

Table 1. Breakdown of financial benefits under fiscal terms and conditions in the Model Service Contract for petroleum offered in 2006, according to DOE.[24]

Gross Proceeds	**100.00**
Less: FPIA, if any	7.50
Recoverable cost	70.00
Net Proceeds	**22.50**
Less: Contractor's share/allowances	9.00
Balance	13.50
Less: Income tax (Contractor's share/65%) x 35%*	4.85
Government share	**8.65**
Less: National government share (60%)	5.19
LGU share (40%), if applicable	3.46

**tax rate in 2006*

Disregarding *La Bugal B'laan* for the moment, whether the computation in Table 1 above runs afoul of the 60/40 requirement under the 1987 Constitution obviously depends partly on whether or not certain legal incentives, such as the Filipino Incentive Participation Allowance, recoverable costs, and income taxes are properly attributable as deductions in favor of a foreign contractor. In the case of the Malampaya Deepwater Gas-to-Power Project, for example, the fiscal term allowing the contractor's corporate income taxes (amounting to 35% of earnings) to be paid out of the government's 60% share was questioned by no less than the Commission on Audit.[25] In 2004, legal uncertainty over the equity arrangements aborted the conversion of Geophysical Survey and Exploration Contract No. 100 (GSEC 100), which was awarded to Philippine National Oil Company Exploration Corporation PNOC-EC and farm-in foreign partner Petronas, into a service contract.[26] The pegging of 70% of production as recoverable costs may also be questioned, since costs of production should vary over time and theoretically should decline after an initial period (unless justified by expansion

24 Department of Energy. *Petroleum Philippine Energy Contracting Round 2006: SC Profit Sharing.* (2006). , *available at* http://www.doe.gov.ph/PECR2006/Petroleum PECR 2007/profit sharing.mht (last visited: March 3, 2011).

25 Commission on Audit. *Annual Audit Report on the Department of Energy for CY 2004.* Quezon City. Executive Summary (2006).at 2.

26 I. U. Ocampo, *Status of Upstream Petroleum Activity in the Philippines.* (2004).

in operations or additional expenditures to increase the extractable reserves).

The second area of challenges to financial uncertainty are with respect to the scope of "recoverable costs" that can be equivalent to up to 70% of the gross proceeds from petroleum operations. The Model SC attempts to exempt the Contractor from some of the listed regulatory fees and charges, especially those not directly connected with the signing of the service contract and payable directly to the national government. These exemptions all appear to be related mainly to national taxes and revenues, such as exemption from all national taxes except income tax;[27] exemption from import levies, tariffs, duties and taxes subject to certain conditions;[28] and exemption from export restrictions,[29] which presumably include restrictions that are manifested through export taxes, licenses, and charges.

However, the Petroleum Accounting Procedures annexed to the service contract enumerate a much longer and more detailed list of costs and expenditures that may be allowed for cost recovery, production sharing, and participation purposes.30 It is in this list that costs and expenses other than those related to national tax and revenue regulations appear. The allowable costs and expenditures, being necessarily general in nature, are subject to interpretation. For example, the Accounting Procedures includes in recoverable/allowable costs "[a]ny duties, levies, fees and charges imposed by any governmental or taxing authority in connection with the Contractor's activities under the Contract and paid directly by the Contractor's except those charges and assessment for which the Contractor is solely liable under the terms of the Contract."[31] This actually serves as a catch-all provision after a very long list of exemptions, which may be subject to resistance from national agencies outside the DOE and local offices like the local government units (LGUs).

Although the apparent intention of the government through the DOE is to substantially reduce, if not practically eliminate, the costs of doing business in the Philippines in exchange for the Contractor having to bear all the financial risks of exploration and investment, it certainly clashes with the presumed intention of other government agencies to maximize revenues from regulation and administration. One problem here is that the fiscal regime has

27 Model SC at par. 7.02(a).
28 *Id.* at par. 7.02(b).
29 *Id.* .at par. 7.02(d).
30 *Id.* at Annex B.
31 *Id.* at art. III.2(j).

been determined administratively by the DOE through the Model SC (and the annexed Petroleum Accounting Procedure), on the strength of laws dating back to the 1970s, but without the same kind of influence over those other agencies' decision-making. In the absence of a new petroleum act that definitively sets forth the fiscal regime, arrangements between the government and service contractors may be subject to legal challenge, or at least implementation problems with agencies which see it at cross-purposes.

There is thus a measure of fiscal uncertainty in current fiscal arrangements on account of the incentives themselves, and the manner in which the 60% share is computed. While the national government has interpreted them in favor of the contractors in order to attract investments in the petroleum sector, the absence of a definitive legal interpretation turns the issue into a veritable Sword of Damocles over all current service contracts. This is a major fiscal uncertainty that needs to be addressed in a deliberately manner, rather than under sudden conditions of crisis.

Operational Security

Physical security concerns refer to safety and unhindered conduct of petroleum operations, facilities, equipment, and personnel, including safety from natural or man-made threats, whether intentional or accidental. Such issues arise in connection with the operation of specific vessels in particular places, such as seismic and hydrographic survey vessels, drill-ships and rigs deployed during the exploration and development phase; barges, supply ships, pipe-laying ships, and construction/support vessels during the development phase; and production platforms, tankers/carriers, tenders, and support vessels during the production phase, all in either the field area, the staging area, or in transit.

All major petroleum companies of course have their own standards and policies for operational safety; for example, Shell has a Health, Safety, and Environment (HSE) policy that provides overarching guidance at all levels of operation and administration from exploration to production.[32] Vessels involved in the petroleum industry are also very likely compliant with international standards established by the International Maritime Organisation, which include maritime security measures.[33] It could therefore be expected

32 Shell Philippines Exploration. MALAMPAYA PROJECT: HEALTH, SAFETY AND ENVIRONMENT (leaflet). Shell Group of Companies. (2002).

33 It is widely accepted that IMO conventions and instruments contribute to the prevention of marine pollution in addressing operational maritime safety concerns. Among these are the 1974

that even without the prodding of national regulation, international petroleum companies already conform with very high standards of operational safety and security. It remains an open question, though, whether the many different petroleum companies can be said to conform with a clearly defined minimum standard as far as the Philippines is concerned. The Model SC commits a service contractor to only "best efforts" and "reasonable endeavors" standards in addressing issues on occupational health, operational safety, pollution prevention, and environmental protection.[34] The ambiguous scope of such "best efforts" and "reasonable endeavors" are naturally open to debate and conflicting views should a major health, safety or environment problem arise in the course of petroleum operations, such as a spill or blow-out. This makes both the DOE and the service contractor easy targets for public and political controversy should there be some regrettable unforeseen event.

Operational safety and security policies can extend only to activities and areas that the service contractor can actually and directly control. The service contractor has minimal or no influence over issues that arise from marine uses by other parties, such as fishing vessels, cargo and passenger vessels, and other private marine activities. This is especially problematic in the Philippines, where most of the adjacent and inter-island waters are subject to long-standing marine resource uses like coastal fishing and coastwise trade. Operational security issues arise on account of competing marine uses; and in certain cases, one must necessarily give way to the other, almost always not without major public controversy.

Threats to operational security need not arise from malicious intent, and may be due to legitimate grievances and concerns. Implementation of the Malampaya Deepwater Gas-to-Power Project was threatened when fishing communities from Mindoro declared that they would stage a water-borne protest and blockade the pipelaying vessel *Solitaire* in 2000 after initial pipelaying operations led to the destruction of fishers' *payao*, or fish-aggregating devices.[35] The conduct of seismic surveys for SC 49 in Tanon

---

Conventon on Safety of Life at Sea, the 1972 International Regulations for Preventing Collisions at Sea, and the 1978 Standards of Training, Certification, and Watchkeeping. Recently, the IMO also adopted the Code for the Construction and Equipment of Mobile Offshore Drilling Units (the 2009 MODU Code) through IMO Resolution A.1023(26), which supersede the previous 1989 and 1979 MODU Codes. The MODU Code deals specifically with standards for offshore petroleum exploration and development platforms.

34 Model SC, *supra* note 10 at pars. 25.01 & 25.02.

35 J. A. Z. Carpio, *Shall Malampaya Deepwater Gas to Power Project: A Model for Integrating Sustainable Development into the Business*. (Thesis) Asian Institute of Management, (2002). at 48-49; Chanie Marie Solleza & J. Barnes, *Shell Malampaya* (Case Study). (2003). Makati (Philippines) and New York (USA) at 11.

Strait, a protected area hosting municipal fisheries and coastal tourism, resulted in a howl of protests from local communities in the adjacent municipalities bordering the strait and claiming municipal water jurisdiction, including the filing of an innovative case before the Supreme Court seeking an injunction against exploration by asserting biotic rights.[36]

Fortunately there have been no reports of really serious criminal or terrorist threats to petroleum operations in the Philippines to date;[37] exploration activities appear to have been conducted without major incident thus far. This may be due partly to coordination between petroleum exploration companies and the Navy and Coast Guard; but the small number of floating assets of the marine services definitely limit the ability of the government to provide continuous naval protection from, say, possible pirate attacks. Coast Guard personnel may accompany seismic exploration or support vessels to provide at least the nominal protection of a person in authority, but this is certainly no assurance against criminal or terrorist activity. In the case of the Malampaya Project, a Joint Task Force was established and based in El Nido, Palawan and provided with 3 light patrol vessels specifically to provide military security to the production platform on a daily basis; the platform and its surroundings are also surveilled from Lalutaya Island off the coast of El Nido. Security concerns about Malampaya are not only with respect to maritime piracy, but also naval threats, as some years ago there were reports of sightings of periscopes surveilling the platform.[38] Its day-to-day security problems arise from fishing municipal and commercial vessels that tend to follow their target fish toward the platform's exclusion zone.

Social Acceptability

Social acceptability, as used in this paper, refers simply to the issue of whether or not people and communities located in or adjacent to petroleum exploration and development blocks will accept the entry and operation of such activities. Given the importance that the Philippine legal system gives to

36 J. Bulambot, *Marine mammals are petitioners in case vs oil exploration.* Philippine Daily Inquirer, Dec. 18, 2007 , *available at* http://globalnation.inquirer.net/news/breakingnews/view/20071218-107585/Marine_mammals_are_petitioners_in_case_vs_oil_exploration (last visited: February 8, 2011); M.Frialde, *Protected marine life go to court.* Philippine Daily Inquirer, Dec.25, 2007.

37 Although it was once reported in Mindoro that the NPA threatened to blow up the Malampaya pipeline, this was not taken seriously.

38 Military operations by submarines around petroleum platforms are not unusual for the British Navy; sliding up close to platforms and photographing them by periscope is part of the standard training curriculum/qualifying course for submarine captains. *See* for example, T. CLANCY, SUBMARINE: A GUIDED TOUR INSIDE A NUCLEAR WARSHIP. 154-(New York: Berkeley Books)(1993). It is not known whether other navies capable of submarine operations in the region do the same.

local autonomy, consultation, and consent, social acceptability has become a major requirement for the viability of any petroleum operation. In the 1990s, the main venue for determining social acceptability was the environmental impact assessment (EIA) process, which made it a requirement for the submission of the EIA.[39] Two decades later, it may be said that this has shifted to the local government units (LGU) endorsement process, as required under s. 26 of the Local Government Code.[40] Recently, the Supreme Court in *Alvarez v. PICOP* ruled that local approval by LGUs of national government projects that "may cause pollution, climatic change, depletion of non-renewable resources, loss of crop land, rangeland, or forest cover, and extinction of plant and animal species" is an essential legal requirement, effectively granting LGUs a veto power over such national projects.[41]

The question of who may be considered as exercising the veto over marine areas subject to offshore exploration and development is a looming controversy. Although the jurisdictional limits of LGUs extend at maximum to only 15 km offshore and are encompassed within municipal waters,[42] it has not prevented Palawan, for example, from claiming rights over petroleum resources some 50 km offshore against the national government. This arises partly from lack of clarity as to the precise extent of local jurisdiction over resources offshore, and from the absence of delineation of local maritime boundaries, It is logical to assume that in the absence of clarification, LGUs will continue to attempt to claim the right to approve offshore exploration and development activities in the future. Now, in cases where the contract areas include the 15 km municipal waters, the LGUs' claim to the right of prior approval appears quite strong,[43] given that municipal waters are intended as reservations in favour of local fishers and are a major resource base for most coastal LGUs. However, questions arise with respect to municipal waters that have been placed under the National Integrated Protected Areas System as a protected seascape; technically, these are not included in municipal waters,[44] but the municipalities to which they would have pertained are still represented in the Protected Area Management Boards that have jurisdiction over the protected seascape.[45] Likewise, when offshore exploration takes place in waters

39 DENR AO 96-37. (1996). Revising DENR Admin. Order No. 21, § 1992, to further strengthen the implementation of the Environmental Impact Statement System. DENR.

40 Rep. Act No. 7160. (1991). Local Government Code.

41 Alvarez v. PICOP, GR 162243.December 3, 2009 (last visited: February 8, 2011 *available at* http://sc.judiciary.gov.ph/jurisprudence/2009/december2009/162243.htm.

42 Rep. Act No. 8550. (1998). Philippine Fisheries Code, § 16.

43 Many SC areas in the "inner regions" of the country encompass municipal waters, such as SC 40, 43, 44, 47, 49, 51, 53 60, 61, 69.

44 Rep. Act No, 8550. (1998). Philippine Fisheries Code, § 4(58).

45 Rep. Act No. 7586. (1992). National Integrated Protected Areas System Act No., § 11.

adjacent and in close proximity to municipal waters, local residents are not likely to simply ignore the possible effects such exploration activities may have.

Regulatory Regime Stability

The foregoing challenges contribute to the final category overall, that of the stability of the current regulatory regime. It could be said that the situation is one of "quiet crisis." Stringent constitutional requirements for minimum local/foreign capitalization have been recently liberalized by administrative fiat through contractual stipulations impliedly supported by judicial interpretation, while the existing legislative framework is more than 30 years old and has not been amended to keep up with the demands of the offshore petroleum industry. This creates a standing clash between execution and legislation, presently held together only by a single instance of judicial interpretation, but vulnerable to legal/political "flashpoints" of conflicting views and interests.

While the government and service contractors have achieved a *modus vivendi* by providing for the presumptive stability of the contractual regime[46] and the hope that the judiciary will not interfere in the contractual relations between the State and foreign companies, it remains vulnerable to legal and political challenge by the public. This vulnerability is greatest in times of serious controversy and crisis, which are certainly not the best time or condition under which the questions should be resolved. If a serious accident involving offshore exploration were to occur in Philippine waters at the present, all of the previously mentioned issues would come under intense scrutiny, and the executive officials and agencies (primarily the DOE) in charge of the administration and regulation of petroleum exploration and development would probably be hard-put to defend the legality and/or constitutionality of petroleum operations as presently allowed. As executive officials and agencies are probably most prone to capricious political winds, it is probably not wise to allow this situation to remain the same for long.

The constitutional mandate for minimum local/foreign capitalization and benefits allocation is only one part of the problem, albeit it is an important foundational component. At present, *La Bugal B'laan* provides some of the legal stability and assurances needed by the petroleum industry that the capitalization requirements will not be unduly restrictive. So in the meantime, as petroleum operations continue, there is a pressing need to address the

46 Model SC, supranote 10 at pars. 21.01 - 21.04. Paragraph 21.03 is bound to be particularly controversial, as it largely insulates the service contract from Philippine law and policy.

competing and fragmented regulatory requirements of various offices and agencies with specific or limited jurisdictions over maritime activities. Service contractors are still required to comply with all existing Philippine laws, rules and regulations, especially those pertaining to labor, health, safety, environmental protection, and indigenous peoples rights.[47] Offshore petroleum operations still need to be conducted in a safe and efficient manner without sacrificing compliance with these other laws, ensuring the safety and protecting the interests of Philippine coastal communities while accommodating the legitimate interests and concerns of service contractors.

UNDERLYING CAUSES

An assessment of any current problem in offshore petroleum exploration and development in the Philippine setting requires an understanding of the underlying causes of the legal and practical issues confronted by service contractors, government regulators, and the wider public. These highlight the complexity of the task of regulating offshore petroleum operations, and the fact that there are no easy unilateral solutions to any particular problem or issue at hand.

Multiple uses in confined maritime spaces

First and foremost is the fundamental complexity of regulation of relatively confined marine spaces subject to multiple uses. The marine component of the Philippine archipelago has long been subject to direct access and usage by its inhabitants, not the least of which are fishing (for both subsistence and livelihood) and transportation. Marine protection is a relatively recent usage, having rapidly gained ground in the 1990s, and coastal tourism even more recent still. These uses are facilitated by relatively direct and easy access from adjacent coastal settlements.

47 *Id.* at pars. 7.01(b) & 25.01.

Petroleum exploration and development operations, with their higher standards and requirements for efficiency, safety, and security, represent technological systems[48] that are often incompatible with other marine uses like fishing, transportation, and habitat protection. This may be due in part to the arena in which offshore petroleum technologies developed: vast open spaces in the Gulf of Mexico and the North Sea, where it is possible to actually allocate marine spaces exclusively for particular resource uses without depriving the competing uses of alternative areas, and where the number of users themselves were relatively small in number and did not have to depend on the seas for subsistence or mobility. This is certainly not the case in many petroleum prospect areas in the Philippines; Tanon Strait is a clear example of how it is simply impossible to undertake petroleum exploration without displacing existing users (e.g. fishers and tour boat operators) from the area for at least a period of time to give way to the seismic survey. Even though the seismic survey may take only a few days, the "public impact" is magnified because it affects the very core of peoples' subsistence and livelihood.

Perhaps, it is assumed by foreign service contractors that petroleum operations automatically take precedence over other marine uses, as they probably do in other jurisdictions. But this may simply be impossible or at least extremely difficult on account of the grave inconvenience that even the loss of a day can cause poverty-stricken coastal residents. The sensitivity of coastal fishing communities to even temporary displacement by competing marine uses has never been adequately and deliberately studied. In particular, the social-psychological impact has largely been ignored. It is assumed that it is enough for contractors to provide food or some small community-relations project during the displacement.

Uncoordinated and fragmented jurisdictions and regulations

The problem of multiple marine uses in confined maritime spaces is aggravated by uncoordinated and fragmented jurisdictions and regulations. These arise because of multiple legitimate regulatory concerns, such as health, safety, environmental quality, labor standards, and security. Each of these concerns are handled by different officials and agencies under different legal mandates, which more often than not were developed without adequate consideration of their impact on marine uses and users other than their own.

48 "Technology" is used here in the broader sense of not just machineries, devices and techniques, but also practices and behaviors that accompany the use or deployment of such implements.

As a result, government agencies are prone to offshore regulation with tunnel-vision, i.e. focused on only one or a limited aspect of a marine activity, disregarding its impact on others, thus setting the stage for a situation of conflict or crisis.

An example of this is the manner of identifying exploration blocks: the delineation of concession areas to either offer or lease seems to be determined exclusively upon geological criteria without considering prior environmental management decisions (e.g. Tanon Strait) and pre-existing political jurisdictions (e.g. municipal waters). It is only when the actual exploration starts that the result of overlooking these considerations are seen, often taking the form of political controversy and a hostile public. If these had instead been already anticipated and considered in the identification of areas to offer, then perhaps the public reaction could not have been as averse in the case of SC 49 and 51. This procedure actually puts the service contractor in a bind, as it is then left to "mediate" between the local communities and the national government in order to carry out its contractual obligations.

Tunnel-vision is exacerbated by the general lack of adequate capacity and understanding on the part of the multiple regulators (apart from the DOE) and the general public about the nature, scope, and details of petroleum operations. Petroleum exploration, development, and production operations comprise a complex and integrated technological package, yet there seems to be no venue for individuals and offices outside the industry and DOE to learn and familiarize themselves with any aspect of it, especially as it relates to their concerns. This leaves both regulators and the public in the dark about offshore petroleum operations, perpetuating either the old image of gushing derricks, or lately the burning wreck of *Deepwater Horizon* and its billowing undersea oil plumes. There seems to be no entity that provides even basic and impartial information to government regulators (especially locally-based ones) and the public about petroleum operations, in order to at least minimize the possibility of people either being carried by passions or acting out of pure ignorance. Even in the academe, it is difficult to find persons who can give the public impartial advice that they can trust.

The information, education, communication (IEC) campaigns about petroleum operations seem to take place on a limited project basis. When the service contract is to be implemented, IEC then accompanies the operation, but only in places adjacent to the contract area and where the contractor assumes the interested audience to be. It is submitted that this should not be

the case. If IEC is only conducted at such a late stage, the affected public would have already been polarized on the issue, making it more difficult to establish a rational and impartial dialogue, while government regulators would be unable to effectively respond and act upon the public's demands upon them. Also, the wider general public is excluded from the benefit of additional information.

At the minimum, the public will demand certain assurances from other regulators that their concerns will be addressed; but if those other regulators themselves have no competence or capacity to give such assurances, then opposition will all the more be amplified. For example, if the locals seek the advice of the local office of BFAR on the effects of seismic surveys on fish, and the latter responds that they have no information on it, or that they do not know enough about how seismic surveys are conducted, it is more likely that the locals will demand a stop to the seismic surveys because they will have no assurances against the apparent risks to which their source of subsistence or livelihood.

Limited Participation of Non-DOE Regulating Agencies in Contracting Process

The Model SC contains comprehensive terms and conditions that cover areas and issues beyond the regulatory jurisdiction of the DOE, such as those pertaining to tax exemptions, labor standards, customs and immigration rules, environmental protection, safety and security. During the contracting rounds and contract negotiations, however, it does not appear that agencies whose regulatory jurisdictions will be affected are active participants. Such details are left to contract implementation, which means that the service contractor will have of find and face them on its own as it carries out its obligations.

Since the terms of the service contract are generally worded and leave much room for interpretation by such other regulatory agencies, if those agencies did not have a hand in crafting the clauses relevant to them then there are no real constraints upon the direction their interpretation will take. This is exacerbated by the likelihood that the agencies that interpret the clauses may not have adequate background, competence, and understanding of petroleum operations. This increases the potential risks for the service contractor to run into unanticipated and uncontrollable problems, such as local opposition or bureaucratic hitches like adverse rulings on certification and exemption requests, during the service contract's implementation. This adds an element of instability and the possibility of unexpected variations as the years pass.

Absence of Published and Identified Operational Standards

Offshore petroleum operations usually take advantage of the latest technologies as a means of minimizing costs and risks, and maximizing the chances of success. Such technologies are often in use long before any regulatory frameworks are set up for them. For example, it is standard practice to use submersibles and remotely-operated devices in offshore petroleum operations, but there is no regulatory instrument in the Philippines directed toward such operations. Many different aspects of the petroleum industry are similarly situated. The sheer complexity of offshore petroleum operations, the number and scope of technologies employed, and the pace at which they advance, make it virtually impossible for the top-down, command-and-control regulatory framework (normally used by governments) to work effectively.

To be sure, offshore petroleum companies internally have their own high operational standards, as a matter of good business sense, and no doubt demanded by own insurers, financial backers, and labor and employment laws in their home States. But since each contractor is of a different nationality and may be used to working only with certain places and rules, individual standards may not be the same among all the current service contractors. This presents a problem for regulators who will then be perplexed as to why different companies have different rules for the same activity.

Apart from company standards, the number of available possible standards contributes to the problem of regulatory complexity faced by petroleum contractors worldwide; one study by the International Association of Oil and Gas Producers found 14 countries referring to 1,348 different standards drawn from international, regional, national and industry organizations; just one regulator could refer to as many as 989 different standards.[49] However, some standards were found to be dominant,[50] and there was an overall trend toward internationalization of standards.[51] (See Table 2)

Table 2. Standards most frequently used in the petroleum industry in 14 key countries. In many cases, originally 'national' standards were subsequently adopted by the International

49 International Association of Oil and Gas Producers *Regulators' use of standards. London: International Association of Oil and Gas Producers.* . (2010). , *available at* www.ogp.org.uk/pubs/426.pdf at 1, 66-67(Last visited: March 3, 2011).

50 Two were noted to be referenced most: the API Spec 6A Wellhead and Christmas Tree Equipment/ISO 10423, and the IMO Mobile Offshore Drilling Units Code. Majority of standards were either American (40%) or European (23%) in origin. *Id.*, at 58-59.

51 *Id.* at 1, 55-56.

Standards Organization (ISO).

Standard	Origin
API Spec 6A Wellhead and Christmas Tree Equipment / ISO 10423	US
IMO Mobile Offshore Drilling Units (MODU) Code	International
API Spec 17J Unbonded Flexible Pipe (ISO 13628-10)	US
IEC 60331-11 Fire resisting characteristics of electric cables	International
API RP 14C Analysis, Design, Installation and Testing of Basic Surface Safety Systems for Offshore Production Platforms (ISO 10418)	US
API RP 521 Guide for Pressure-Relieving and Depressuring Systems (ISO 23251)	US
API Spec 14A Subsurface Safety Valves (ISO 10432)	US
NFPA 13 Installation of Sprinkler Systems	US
ANSI/ASME VIII-1 Pressure Vessels	US
NACE MR 01-75 Standard Material Requirements, Metals for Sulphide Stress Cracking and Stress Corrosion Cracking Resistance in Sour Oilfield Environments (ISO 15156)	US

But for the most part, these petroleum industry standards and best practices remain highly specialized knowledge that "outsider" (i.e., those not involved with the petroleum industry) government regulators and the general public are unaware of. The latter, therefore, have no real reference points with which to compare a service contractor's performance. In the absence of well-known standards, each regulator/public entity will naturally attempt to apply that with which it is familiar, but may not necessarily be relevant or appropriate. An example of this tendency is seen in the operation of the Malampaya platform in 2006-2007, where in the absence of a water quality standard for offshore marine areas, the DENR sought to apply its water

quality standard for freshwater lakes.[52]

Risk-benefit Sharing Issues

Offshore petroleum operations represent significant contingent benefits and risks: it heightens expectations of economic prosperity as well as fears of environmental accidents. But the current legal and policy framework does not provide a mechanism for systematically threshing out and deciding upon the distribution of these benefits and risks. This hinders a more rational and refined process of public decision-making essential for social acceptability.

To a great extent, the social acceptability of energy projects is linked to the assurance of direct local benefits. Affected communities are likely to demand some form of direct benefits as a condition of social acceptability; this is actually risk-benefit sharing decision on their part. In the case of power generation, there is already mechanism for channelling direct benefits in exchange for the risks associated with hosting a power generation plant. Energy Regulation 1-94 (as amended) allows a small proportion of power producers' profits to be channelled directly to their facilities' host communities, and provides a standard system for allocating such benefits for the communities' use.[53] This provides a better incentive for affected communities to make deliberate decisions about the entry of power projects.

Unfortunately, the offshore petroleum exploration and development laws do not provide for a similar system of allocating direct benefits. While the Local Government Code does recognize in favor of LGUs an entitlement to a 40% share in the benefits of exploitation of the national wealth within their territory,[54] such rules do not necessarily apply to the offshore because the term "territory" as it pertains to LGUs has been legally defined to encompass land only, not the marine waters. At most, LGUs could be entitled to such share if the operation intrudes into the 15 km municipal waters that are under their exclusive resource jurisdiction. But this has not prevented LGUs from claiming rights to and interests in their adjacent maritime spaces either.

In the past, the EIA consultation process provided the venue for risk-

52 Personal interview with representative of the Palawan NGO Network, Inc., 23 March 2007.

53 Department of Energy. *Rules and regulations implementing Section 5(i) of Republic Act No. 7638, otherwise known as the Department of Energy Act No. of 1992.* (1994). DOE Energy Regulations 1-94. Whether or not the system works satisfactorily is a question for another day. Having been in force since 1994, there should be adequate data and information by now that can establish its practical advantages and disadvantages and whether or not they are achieving their original purpose.

54 Rep. Act No. 7160. (1991). Local Government Code, § 290.

benefit sharing discussions, but actually did not guarantee substantial agreement on an equitable risk-benefit distribution. The EIA, after all, only goes as far as securing a commitment from the project proponent to establish mitigation measures; in one sense, damage-prevention and -control obligations. It is of limited utility in establishing direct benefit-sharing mechanisms, since the EIA system was not designed for that purpose, and the very small fine for violation of EIA conditions provides no incentive for compliance.

With the recent change in the EIA process, the risk-benefit sharing discussion must now take place at the LGU level, assuming that the petroleum operations will take place within 15 km from the coast of a municipality. However, there is no standard framework provided for this deliberation: the parameters of the discussion between service contractors and LGUs is therefore wide open, and this makes it more difficult on the part of the former to plan for and respond to local community demands for either direct benefits or protection from risks.

IMMEDIATE CONCERNS IN OFFSHORE EXPLORATION

The underlying causes for the major challenges facing the offshore petroleum industry in the Philippines all bear upon each major stage of offshore petroleum operations, and produce issues with respect to either environmental protection or revenue collection. The former may be considered as a practical "field" issue revolving around the impact of petroleum operations on its immediate surroundings, which provide the link to other regulators and the public's interests in regulatory activity. The latter is an "administrative" issue concerning incidents involving administrative requirements of other government regulators as the service contractor undertakes its activities within Philippine jurisdiction.

Environmental Protection

Offshore petroleum operations create a number of potential environmental effects. On account of these numerous effects, various laws and agencies are affected and would likely claim some involvement in the process. Table 3 enumerates the broad stages, activities, impacts, and law/regulatory agencies that need to be considered carefully.[55]

55 For simplicity, the table excludes consideration of the special situation of Palawan due to Rep. Act No. 7611 (1992), The Strategic Environment Plan of Palawan Law (SEP Law), which is relevant

A cursory examination of the table sheds light on the multiple regulatory and public interests that converge upon offshore operations. It may be noted that in all stages of petroleum operations, certain agencies in particular, the Philippine Coast Guard (PCG) and the Department of Agriculture – Bureau of Fisheries and Aquatic Resources (DA-BFAR) or the LGU, are most affected in the sense that the petroleum operations involve activities that concern their respective jurisdictional interests (marine environment protection and fishing, respectively). They are not directly involved in the actual initial processes of service contracting, which is the exclusive jurisdiction of the DOE; yet, on a day-to-day and normal operational basis, their regulatory jurisdictions would be most likely to be affected by petroleum operations. Previous experience with Malampaya allowed affected LGUs and NGOs to join in the multi-sectoral monitoring team (MMT) established as a consequence of the EIS. However, this mechanism is basically concerned with the monitoring of compliance with the conditions imposed by the environmental compliance certificate issued after submission of the EIS; such monitoring is the only reason why the EIS Law appears in the post-exploration/development operations. The EIS however is not an appropriate regulatory instrument against contingent events (e.g. accidental spills), since EIS violations are punishable only with a nominal fine and the mere fact of violation is not an express ground for revocation of a license or service contract.

Table 3. Activity matrix for offshore petroleum exploration and development.[56]

Category/ Operation	Activity	Potential Effects	Affected Law/Agency
Seismic operations		▲ Temporary navigation restrictions ▲ Physical impact on marine life ▲ Temporary displacement of marine life	▲ OEDA, DOE ▲ PCG Law, PCG ▲ Fisheries Code, DA-BFAR ▲ LGC, LGU (if MW) ▲ NIPAS Act DENR-PAWB, PAMB (if NIPAS

only if the contract area is within Palawan land territory and marine jurisdiction.

56 Table based on an activity standards matrix by Maritime New Zealand. Maritime New Zealand. (2010). Pollution Prevention: NZ Standards Activity Matrix. Wellington NZ: Maritime New Zealand.

Category/ Operation	Activity	Potential Effects	Affected Law/Agency
			site) ⮝ WCA, DENR-PAWB ⮝ MARINA Decree, MARINA
Platform installation (temporary)	Temporary deployment of anchors/jack up rig	⮝ Physical disturbance of seabed	⮝ OEDA, DOE ⮝ Fisheries Code, DA-BFAR, LGU (if MW) ⮝ NIPAS Act, DENR-PAWB, PAMB (if NIPAS site) ⮝ TCC, DOJ-Customs ⮝ IL, DOJ-Immigration
	Temporary drill rig	⮝ Hull fouling/ballast water threat	⮝ PCG Law, PCG ⮝ Fisheries Code, DA-BFAR, LGU (if MW) ⮝ WCA, DENR-PAWB ⮝ NIPAS Act, DENR-PAWB, PAMB (if NIPAS site)
Platform installation (permanent)	Permanent installation of jacket	⮝ Physical disturbance of seabed	⮝ OEDA, DOE ⮝ Fisheries Code, DA-BFAR, LGU (if MW) ⮝ EIS Law, DENR
	Permanent installation of	⮝ Hull fouling/ballast water threat	⮝ PCG Law, PCG ⮝ Fisheries Code, DA-BFAR, LGU

Category/ Operation	Activity	Potential Effects	Affected Law/Agency
	FPSO/FSO		(if MW) ⅄ WCA, DENR-PAWB ⅄ NIPAS Act, DENR-PAWB, PAMB (if NIPAS site) ⅄ TCC, DOJ-Customs ⅄ IL, DOJ-Immigration
Drilling	Physical damage	⅄ Underwater noise ⅄ Local physical damage	⅄ Fisheries Code, DA-BFAR, LGU (if MW)
	Discharge of drill cuttings	⅄ Accumulation of contaminated material ⅄ Smothering of benthos ⅄ Physical obstruction ⅄ Turbidity	⅄ PCG Law, PCG ⅄ Fisheries Code, DA-BFAR, LGU (if MW)
	Discharge of drilling fluids	⅄ Toxicity ⅄ Turbidity	⅄ PCG Law, PCG ⅄ Fisheries Code, DA-BFAR, LGU (if MW)
Discharge to water (operational)	Produced water	⅄ Toxicity ⅄ Floating oil	⅄ PCG Law, PCG ⅄ Fisheries Code, DA-BFAR, LGU (if MW) ⅄ EIS Law, DENR
	Cooling water	⅄ Thermal ⅄ Toxicity	⅄ PCG Law, PCG ⅄ Fisheries Code, DA-BFAR, LGU (if MW) ⅄ EIS Law, DENR

Category/ Operation	Activity	Potential Effects	Affected Law/Agency
	Organic waste	⮝ Pathogens ⮝ Turbidity	⮝ PCG Law, PCG ⮝ Fisheries Code, DA-BFAR, LGU (if MW) ⮝ EIS Law, DENR
Discharge to water (accidental)	Oil spills	⮝ Wildlife ⮝ Physical/ shoreline/ amenity ⮝ Economic ⮝ Toxicity	⮝ PCG Law, PCG ⮝ Fisheries Code, DA-BFAR, LGU (if MW) ⮝ EIS Law, DENR
	Chemical spills	⮝ Toxicity ⮝ Wildlife	⮝ PCG Law, PCG ⮝ Fisheries Code, DA-BFAR, LGU (if MW) ⮝ EIS Law, DENR
Discharge to air	Flaring	⮝ Climate change ⮝ Possible impact on seabirds	⮝ PCG Law, PCG ⮝ Clean Air Act, DENR ⮝ EIS Law, DENR
	GHG emission (from flaring)	⮝ Climate change	⮝ PCG Law, PCG ⮝ Clean Air Act, DENR ⮝ EIS Law, DENR
	Plant & machinery emissions	⮝ Operational discharges	⮝ PCG Law, PCG ⮝ Clean Air Act, DENR ⮝ EIS Law, DENR
	Tank venting	⮝ Climate change	⮝ PCG Law, PCG ⮝ Clean Air Act,

Category/ Operation	Activity	Potential Effects	Affected Law/Agency
			DENR ⮝ EIS Law, DENR
Presence of structure	Exclusive occupation of platform footprint	⮝ Access restriction	⮝ PCG Law, PCG ⮝ NDA, AFP (PN, PAF) ⮝ EIS Law, DENR
	Exclusion zones	⮝	⮝ PCG Law, PCG ⮝ NDA, AFP (PN, PAF)
	Restricted areas/ protection zones	⮝	⮝ PCG Law, PCG ⮝ NDA, AFP (PN, PAF)
	Security	⮝	⮝ PCG Law, PCG ⮝ NDA, AFP (PN, PAF)
Operation and maintenance		⮝ Noise ⮝ Light ⮝ Handling of hazardous materials	⮝ PCG Law, PCG ⮝ Hazardous/Nuclear Wastes Act, DENR ⮝ EIS Law, DENR
Waste management	Food waste	⮝ Pollution discharge	⮝ PCG Law, PCG ⮝ EIS Law, DENR
	Garbage	⮝ Pollution discharge	⮝ PCG Law, PCG ⮝ EIS Law, DENR
	Commercial waste	⮝ Pollution discharge	⮝ PCG Law, PCG ⮝ EIS Law, DENR
Ancillary	Helicopters	⮝	⮝ CAA Act,

Category/ Operation	Activity	Potential Effects	Affected Law/Agency
operations			CAAP ➢ PCG Law, PCG
	Support vessels	➢ Operational discharges	➢ PCG Law, PCG ➢ MARINA Decree, MARINA
At sea disposal	Abandoned platform and ancillary structures	➢ Navigation hazard	➢ EIS Law, DENR
	Drill cutting accumulation	➢ Smothering of benthos	➢ EIS Law, DENR

Likewise obvious from the above table is the most prominent involvement of the PCG, on account of its marine environmental protection mandate.[57] This mandate of the PCG invokes both domestic legislation and international law, since the PCG is also responsible for observance of minimum international safety and environmental protection standards, notably those issued through the International Maritime Organization. The IMO codes, memoranda, and circulars cover an extensive range of maritime operations, including those applicable to offshore petroleum activities and platforms. The PCG's concerns with respect to marine pollution alone involve a broad range of activities, since offshore petroleum operations create many possible types of pollution discharges (See Table 4).[58]

Table 4. Types of pollution discharges from offshore operations.[59]

Nature of discharge	Drilling and well intervention operations	Production Operations	Construction and maintenance
Drilling fluids	x		
Drill cuttings	x		

57 Rep. Act No. 9993. (2010). Philippine Coast Guard Law.

58 Maritime New Zealand. *Pollution Prevention: Types of Offshore Discharges by Operation.* Wellington NZ. (2011).

59 *Id.*

Nature of discharge	Drilling and well intervention operations	Production Operations	Construction and maintenance
Completion, stimulation, and fracturing fluids	x		
Cements and slurries	x	x	
Sand	x	x	
Produced formation water	x	x	
Flushing and washdown	x	x	x
Process water (blowdown, cooling water)	x	x	
Engine cooling (generators, etc.)	x	x	x
Hydrotest and construction water	x	x	x
Sludges	x	x	
Ballast and tank bottoms	x	x	
Contaminated run-off and stormwater run-off	x	x	x
Grey water and sewage	x	x	x

It should be noted that the highest amount of marine pollution discharges are generated at the exploration stage, which as noted is exempted from the EIA process. This means, therefore, that the burden of protective regulation on behalf of the wider public rests mainly with the PCG, as enforcer of both domestic and international law relating to the protection of the marine environment.

Revenue Collection

Apart from those related to the environment, regulatory issues arise with respect to the regulatory licenses, fees, permits, and charges, or exemptions therefrom, or other certifications in the course of exploration and development operations. These are all separate from the offshore lease rentals and committed exploration or development work. They occur largely in connection with the 'mobilization' and location of equipment and personnel into the contract area, which are complicated by the maritime nature of the operations, ranging from mere certifications to additional licenses or other fees. In addition to the regulatory fees/exemptions/certifications themselves, one must also consider the practical costs associated with actually securing or paying such fees/exemptions/certifications, such as travel costs. Exploration, development, and production activities each involve such issues (and corresponding fees) as shown in Table 5.

Table 5. Tabulated listing of additional regulatory incidents, including any pertinent fees/charges after the award of a service contract, based on stage of implementation of the same. For purposes of brevity, regular reporting requirements have been omitted.[60]

Operation	**Agency**	**Law/Regulation**
Exploration Stage		
LGU Endorsement Resolution	LGUs (all pertinent levels)	Local Government Code
Notice to fishing companies	DA-BFAR, concerned companies	Fisheries Code
Coordination for maritime security purposes	PN, PNP, PCG, PAF	
Vessel exemption permit	MARINA	MARINA Decree
Vessel safety certifications	PCG, MARINA	PCG Law, international conventions

60 Consolidated from information provided by the Philippine Coast Guard, Shell Philippines Exploration B.V., and Supply Oilfield Services, Inc.

Operation	Agency	Law/Regulation
Helicopter operations safety certifications	CAAP	CAAP Law
Port safety inspections	PPA, PCG	PPA Charter, PCG Law
Issuance of Certificate of Non-Coverage	DENR-MGB	EIS Law
Notice to fishers	DA-BFAR, LGUs	Local Government Code, Fisheries Code
Issuance of tax exemptions for equipment imports/exports	DOJ-Customs	Tariff and Customs Code
Issuance of work visas for foreign nationals	DOJ-Immigration	Immigration Law
Medical clearances	DOH-Quarantine	
Tax exemptions	DOF	OEDA, Internal Revenue Code, Tariff and Customs Code
Other clearances	DA-Plant Industry, DA-Animal Industry	
PCSD Clearance (Palawan only)	PCSD	SEP Law
Development Stage		
Environmental impact assessment (at production stage)	DENR-EMB	EIS Law
Oil spill preparedness inspection & certification	PCG	PCG Law, Marine Pollution Decree, international conventions
International sewage prevention certification	PCG	PCG Law, international conventions

Operation	Agency	Law/Regulation
Archaeological artefacts certification	National Museum	
Consultations & endorsement resolution (if any part within MW)	LGU	Local Government Code
Free prior informed consent (if any part within ancestral domain)	Indigenous peoples' community, NCIP	Indigenous Peoples' Rights Act
Notice to fishers, fishing companies of construction	LGUs, DA-BFAR	Fisheries Code, Local Government Code
Import/export permit for hazardous substances	DENR-EMB	T/H/N Wastes Control Act
Storage/transport/disposal permit for hazardous substances	DENR-EMB	T/H/N Wastes Control Act
Transportation permits for hazardous substances	DENR-EMB, PCG	T/H/N Wastes Control Act, PCG Law
Generation/production permit for hazardous wastes	DENR-EMB	T/H/N Wastes Control Act
Hazardous wastes contingency plan submission	DENR-EMB	T/H/N Wastes Control Act
Import permit for explosives	PNP	PNP Law
Transportation permit for explosives	PNP	PNP Law
Permit to use/store radioactive substances	DOST-PNRI	T/H/N Wastes Control Act, PAEC Regulations
Import permits/licensing of radio communition devices	DOTC-NTC	Public Telecomm Policy Act
Occupation health & safety certifications	DOLE	Labor Code

Operation	Agency	Law/Regulation
	(multiple)	
Health certifications	DOH, LGU health offices	Sanitation Code
Sanitation permits	LGU	Sanitation Code
Equipment installation/operation permits	DOLE, LGU	Labor Code, local ordinances
Notification of facility location	PCG, NAMRIA, DOE, MARINA	International convention
Establishment/notification of safety zone	PCG, NAMRIA	International convention
Special vessel permits	MARINA	MARINA Decree
Health/quarantine notification (in re. special vessel)	DOH-Quarantine	International convention
Permit for cargo unloading at sea (in re. offshore facility construction)	DOJ-Customs	Tariff and Customs Code
Departure clearance	DOJ-Customs	Tariff and Customs Code
Special visas/permits for expat technical personnel	DOJ-Immigration, DOLE	Immigration Law, Labor Code
Permits/calibration of custody transfer meters	DOST-ITDS, DOF-BIR	
Building permits/clearances (if on land)	LGU, DENR-EMB, DPWH, DENR-NWRB	Local Government Code, etc.
Fire safety inspections	DILG-BFP	DILG Law
Effluent/wastewater discharge monitoring/mitigation	PCG, DENR	PCG Law, international conventions, Clean Water Act

Operation	Agency	Law/Regulation
Air quality monitoring/mitigation	DENR-EMB	Clean Air Act
Approval of sale/disposition of tax-exempt imports	DOE, DTI, DOF, BSP	Tariff and Customs Code

The fact that Table 5 above is a shortened list vividly illustrates the degree of regulatory complexity involved in petroleum operations. A high number of regulations indicates a marked public interest, presumably in order to ensure the pursuit of public interest and the protection of the public welfare. However, an inordinately complex regulatory structure that arises without any form of coordination and review is more likely to become self-defeating and ineffective in the long run. In this instance, the extreme fragmentation of regulatory responsibilities and accountabilities is only likely to cause turfing, finger-pointing, and deadlock, which ultimately works against the interests of the public. Neither the public, nor the contractor, is benefited by such regulatory complexity. With some 30 service contracts signed and awaiting implementation, it is necessary to take immediate action in order to reduce this complexity through an approach that considers carefully the inherent challenges of working in the offshore environment. An effective regulatory system is the first and foremost requirement in ensuring safety and efficiency in petroleum operations; without such a system, a government cannot even figure out issues of responsibility and accountability, much less liability concerning any unwanted contingency.

RECOMMENDATIONS

The common challenge posed by regulatory complexity in any form is that it is an extremely tedious and time-consuming problem to solve. Since much of it arises out of disharmonized and disparate legislation, the solution is a complex problem in itself, as altering one piece of legislation to address one particular issue might end up creating more problems in other areas. Considering that more than 30 service contracts are already in place, it is suggested that a law-reform track not be considered as an immediate solution, but rather a long-term goal. Instead, attention should be focused on coordinating and simplifying the implementation of regulations that are involved in petroleum operations. What follows is a package of proposals to enable the Philippine government to address the issue of regulating offshore petroleum operations in a more effective and efficient manner:

Public-Private Partnership Mechanism Establishing Industry Self-regulation Complemented by Government Oversight

Given that offshore petroleum operations are dependent on technology, and the development and application of technology is primarily driven by the private sector, a public-private partnership mechanism is proposed that will allow the offshore petroleum industry to rely primarily on self-regulatory processes to manage its day-to-day operations, with the government taking an oversight role of monitoring and observing industry compliance with the self-regulation that the industry undertakes. The industry is allowed to define its own norms of conduct by commonly identifying and agreeing to follow industry-defined standards. Government's role is not to predetermine and prescribe, but rather ensure that industry complies with its own declared rules. Liability attaches to a company on account of its failure to follow its own norms.

For example, all contractors operating in the Philippines agree to comply with the ISO 10423/API Spec 6A Wellhead and Christmas Tree standards in their design and operation of undersea wellheads and associated equipment. These standards are already well-known in the industry, and should pose little problem since they themselves were defined by industry players. The national government can then check designs and operations against these standards. If it does not have certified/competent personnel, it may instead call for a "pre-audit" by an appropriate and independent certification agency which will then be able to advise the government whether the designs or operations comply with ISO 10423/API Spec 6A or not. Such inspections/certifications take place as part of the planning and pre-implementation phase, so that standards-compliance is already built-in by the time the contractor commences with the activity.

Industry agreement on the standards to apply can take place on a regular basis in order to update the applicable standards as the technology improves. The Philippine Association of Petroleum Producers can serve as the main forum and venue for discussing such industry agreements, and represent the companies before the government in establishing the commonly agreed standards. If the government does not have the capacity/personnel to validate the standards agreed upon, it can employ an independent standards certification body to verify that the agreed standards are appropriate, applicable, and reasonable.

Principles

A public-private partnership mechanism must operate on the basis of certain ground rules. The following are suggested to serve as the underlying terms and conditions of the partnership:

1. Self-regulation must be accompanied by strict accountability. Since it is the service contractor who identifies and chooses the rules/standards it will follow, then it must be held strictly accountable under them.

2. Government may rely on inspection/certification by independent private entities (e.g., classification societies, certification bodies/registrars, insurers) to fill any gaps in capacity to determine compliance with rules/standards. Such inspections/certifications will be binding on the service contractor and the government.

3. Government agencies must work under a framework of cooperation and coordination with respect to the petroleum exploration and development process. This requires pro-active inter-agency work to coordinate, harmonize, and simplify different regulatory demands.

4. Regulatory complexity must be reduced substantially, if not eliminated, and government agencies must work in a manner that enables service contractors to meet all regulatory demands, as much as possible, prior to actual conduct of operations. Redundant and fragmentary regulation must be eliminated, and procedures must be simplified in order to make the regulatory process shorter and more transparent.

5. The allocation of regulatory power must be in accord with capacity and resources of the regulators. The establishment of regulations without the ability to monitor and/or enforce them are pointless. In the offshore petroleum industry, emphasis must be laid on the maritime nature of the operations and the demands this places on agency capacities and capabilities.

6. Offshore petroleum exploration and development must be seen not only within a framework of risk-reduction, but also pro-active benefit-sharing. This entails the transparent and accountable channelling of direct benefits to affected and adjacent local communities.

The above principles provide the terms and conditions of partnership between government and service contractors to the end that the partnership benefits not only them, but more importantly, the communities that their operations may affect.

Structure

Given the breadth and scope of regulations involved, it is suggested that an inter-departmental Committee on Offshore Petroleum Development (COPD), chaired by the DOE and comprised of the various departments and agencies with regulatory functions over offshore petroleum operations, be established.[61] The COPD's main function is to oversee implementation of petroleum service contracts (and any new petroleum contracting rounds in the future) with a view to providing a central venue for all regulatory incidents. As a "one-stop shop," COPD must harmonize and facilitate compliance with the various regulations that are currently complied with by service contractors on an incremental, "as-they-are-encountered" basis. The rationale for a one-stop shop is that since the government has chosen to work with service contractors through contractual arrangements (the Model SC), then the contract should include all incidents necessary to ensure its implementation. Items such as the issuance of certifications, permits, exemptions should be undertaken as part of the government's undertakings in the MSC, i.e., they should issue as a matter of course with the Model SC approval. The COPD therefore serves as a unified mechanism for such due diligence tasks on the part of the service contractor.

Within the COPD, specialized sub-committees led by Committee Vice-chairs will attend to specific areas of concern. A Maritime Safety and Marine Environment Protection Committee with the PCG as Vice-chair will attend to all issues concerning implementation of domestic and international marine environmental protection and maritime safety, since these two are compatible objectives. A Fiscal Committee led by the DOF will be charged with all issues pertaining to all taxes and revenue regulations (including import and export rules) relevant to the transfer of money or materials into and out of the country connected with the service contract, as well as the distribution of financial benefits/royalties. A Human Resources Committee led by DOLE will then be concerned with issues pertaining to personnel, such as immigration, health, occupational safety. A Maritime Security Committee led by the PN can address security concerns, whether from natural or man-made threats. Membership in the Committees is not exclusive, and it is possible that the lead agency in one committee may be the deputy lead agency in another; this

---

61This idea is based on a proposal in British Columbia, Canada for a BC Oil and Gas Commission. *See* ORourke, P. *Smart Regulation of BC's Offshore Oil and Gas.* Victoria, BC: BC Ministry of Energy. (2005). *available at* http://www.empr.gov.bc.ca/OG/offshoreoilandgas/ReportsPresentationsandEducationalMaterial/Documents/ORourkeMar16_05.pdf. (Last visited: February 4, 2011)

depends on the existing functions/mandates of each agency. The function of the lead agency/Vice-chair is really to establish responsibility/accountability and leadership with respect to the tasks/functions that they are to carry out.

The COPD also functions as a special technical committee that will be well-versed in the offshore petroleum industry. Agency representation in the COPD must be specific and continuous for a definite term (e.g. 3 years); it is not enough that agencies send representatives randomly on a meeting-to-meeting basis. This is because COPD members must also be capacitated with specialized knowledge about the petroleum industry; in addition, each participating member must also be accountable to government, private sector, and the general public.

The COPD becomes the overall enforcer of the terms and conditions of the service contract. It is responsible and accountable to the public for the performance of the service contractor, while the service contractor is in turn responsible and accountable to the COPD. It stands as a collegial body that directly represents the State, not individual departments, in its dealings with the service contractor, so there can be no finger-pointing or buck-passing among the different government departments.

Adoption of a Goal-oriented "Safety Case" Management System for Offshore Petroleum Operation.

The "safety case" management system was developed in the UK after the Piper Alpha disaster in 1988.[62] A safety case document might be described as a very advanced form of EIS, but focused on operation safety, which is subject to periodic audit and updating. A "safety case" document establishes goals for a service contractor to meet with respect to health, safety, and environment, but does not prescribe the methods by which such goals are to be met; it mainly provides reference points against which the performance of service contractors can be measured. Monitoring is combined with enforcement through a periodic safety "audit" that checks whether the contractor has put in place adequate equipment, systems and procedures that will achieve the

62 J. R. Inge, *The Safety Case, its Development and Use in the United Kingdom.* (2007)., *available at* safety.inge.org.uk/20070625-Inge2007_The_Safety_Case-U.pdf (last visited: March 3, 2011); *see also* P, Bishop, & R. Bloomfield, A Methodology for Safety Case Development. *Proceedings of the Sixth Safety-critical Systems Symposium, Feb 1998.* (1998). Adelard. , *available at* www.adelard.com/papers/sss98web.pdf (last visited: March 4, 2011); and S.P Wilson,. T.P .Kelly, & J. A. McDermid, *Safety Case Development: Current Practice, Future Prospects.* SAFETY AND RELIABILITY OF SOFTWARE BASED SYSTEMS - TWELFTH ANNUAL CSR WORKSHOP, BRUGES, BELGIUM. (1997). *available at* http://www.cs.york.ac.uk/~tpk/scdcpfp.pdf (last visited: March 3, 2011).

defined goals. These safety aduits can be performed by reputable and independent standards and certification organizations (e.g., Det Norske Veritas). Moving away from prescriptive regulation to goal-oriented regulation allows technological developments to be incorporated as they are used or implemented.

Baseline-setting Activities

The creation of COPD will not be effective without a corresponding set of preparatory activities that establish its baseline for working with the offshore petroleum industry. The following are suggested:

1. *Capacity-building on offshore petroleum operations.*- It is suggested that petroleum contractors, working perhaps through the Philippine Association of Petroleum Producers, pool resources and personnel to provide regular capacity-building orientation and training for COPD members, prospective resource persons (academe and NGOs), and the general public. The rationale is that having more people who are actually knowledgeable about petroleum operations contributes to a better, more rational and more robust discussion and debate on petroleum policy, rather than keeping such information exclusive to a few. For the COPD, it is doubly imperative that they are familiar with petroleum operations so that their implementation of respective regulations are properly guided. Government can provide counterpart funding using royalties and earnings from service contracts.

2. *Nationwide strategic marine oil pollution risk assessment.*- Since pollution is one of the major concerns of the public, an updated nationwide marine oil spill risk assessment needs to be conducted that considers the general risks of petroleum spills coming from any one of the current service contract areas. This is to assist the PCG and private sector in pre-positioning assets for oil pollution response, as well as to enable the identification of concerned LGUs that could potentially be affected and thereby allow them to participate in capacity-building for oil pollution response. A strategic assessment could also be useful in anticipating potential liabilities, environmental damage, and compensation claims. The PCG is responsible for oil pollution response, it is suggested that such an activity be one of the main baselines for the COPD work.

3. *Marine use allocation policy.*- Philippine waters are congested multiple-use zones, where petroleum operations may be viewed by established users as intruders and competitors. A national marine use allocation policy taking into account such marine uses and establishing clear rules for allocation of marine space is required. Such a predetermination could have avoided, for example, the problems in the Tanon Strait, had protected seascapes been simply excluded from areas on offer for exploration in the first place. Or in the

future contracting rounds, municipal waters can be initially excluded from service contract areas in order to avoid antagonizing local claims to marine resources, with the coastal municipalities being given the option to be excluded or included subsequently in the survey area.

4. *An inter-agency MOA prescribing a single and clear "compliance routing" for service contractors.*- One of the main tasks of the COPD is to be a "one-stop shop" for regulatory compliance and due diligence requirements imposed upon the service contractors. This can be done through an inter-agency MOA in which redundant and unnecessary requirements are eliminated, or conflicting ones harmonized, and provides a single office from which service contractors can procure all necessary permits, exemptions, and certifications. Assigned members of the COPD should be fully-empowered representatives of their respective offices; they should be capable of signing off on applications and certifications as if the service contractor actually went to their home offices. Each application can be decided upon in consultation with the other members of the COPD if necessary, enabling a faster and more focused coordination of decisions and approvals. For example, the Maritime Safety and Marine Environmental Protection Committee should process and issue all necessary and incidental permits, exemptions, and certifications pertaining to either vessel safety or marine environmental protection once all documentation has been submitted; any internal routing of applications/documents should be taken care of by the necessary COPD members. Centralizing the submission/issuance will allow the COPD to consolidate requirements and create a simplified "checklist" so as to minimize repeated and separate trips to different offices and agencies.

Implementation Options

Since the COPD is meant to coordinate and facilitate execution of existing laws, it is proposed that the mechanism be established through an executive order which provides for the basic structure, including committees, functions, and qualifications for assignment of personnel. Individual departments/offices affected can then take care of any internal memorandas or circulars necessary to ensure that the COPD is able to carry out its functions.

Organization of the COPD may take time depending on the measure of support from the petroleum industry and the concerned agencies. In the meantime, it may be necessary to establish interim measures to at least improve coordination between the different regulatory agencies. Short of an executive order from the top, the inter-agency memorandum of agreement mentioned in no. 5 above could be feasible. This depends on the support of the petroleum industry and the ability of the DOE to lead and persuade its co-

equal departments and other agencies that an inter-agency MOA would be the best way to deal with the regulatory complexity in the offshore petroleum industry. Nothing less than Secretary-level support and leadership would suffice.

Longer-term Reform Activities

The above suggestions deal with the administrative aspect of the problems facing the offshore petroleum industry. But administrative rules do have their limits, and are subject to a certain degree of instability due to their vulnerability to changes in politics or administration. Much of the current offshore petroleum regulatory system today relies on executive and judicial fiat, while legislative framework is become more and more anachronistic. It is necessary that for the long-term, a serious effort be initiated and sustained for law reform with respect to petroleum resources. There are too many factors that can put pressure or provoke crisis situations that spur legislation; crisis response legislation are often not the best way to deal with long-standing problems. There have been many developments since the OEDA was promulgated in 1972, and it is necessary to finally review and revise this legislation to bring the laws up to date and more in accord with the current demands and practices in the petroleum industry. In this respect, the DOE has made several proposals over the years; it is suggested that discussions of these proposals be opened up to wider audiences and inputs.

CONCLUSION

The general public generally view offshore petroleum operations as representing a trade-off of extremes between economic benefits and environmental risks. These create both expectations and reservations about such operations to extremes: well-springs of economic development or disasters-in-the-making. Some of these expectations and reservations may be justified and others not, but the diametric opposition results in their being framed as "either-or" choices.

The apparent simplicity of the choice as framed, however, ignores the enormous complexity and difficulties faced by government agencies, service contractors, and the public at large in dealing with offshore petroleum operations. This paper has hopefully shed some light on these issues; but the more immediate problem is that offshore petroleum operations are indeed taking place right now in the Philippines, and it is imperative that government

and the public it serves should have a good grasp of both the complex problems and the possible solutions. Administrative and legal reforms in offshore petroleum law and regulations require a combination of technical, legal, professional, and practical competencies and skills, guided by clear goals and feasible pathways. It is high time that a deliberate, detailed, and focused process be initiated to enable the country to carefully and rationally pursue its energy development goals while protecting its environmental and social interests. Engaging in regulatory reforms is a significant first step.

- o0o -