INTERNATIONAL RULES ON DECOMMISSIONING OF OFFSHORE INSTALLATIONS: SOME OBSERVATIONS

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What is decommissioning?

One of the difficulties in dealing with offshore platform decommissioning is the absence of a definitive legal definition on what constitutes decommissioning. Indeed the word “decommissioning” is not even found in major international legal documents on offshore platform decommissioning.

The term decommissioning does not appear in the 1958 Geneva Convention on continental Shelf; it is missing from the 1982 United Nations Convention on law of Sea (UNCLOS); it is also not defined in the 1989 International Maritime Organization (IMO) Guidelines and Standards. It is also not defined in 1992 Oslo and Paris Conventions (OSPAR) and other regional treaties that deal with marine pollution. Although not defined, all the above-mentioned international treaties mention of the need to abandon offshore platforms no longer in use.

Evidently the word decommissioning in respect of offshore installations has a recent origin. It became a concern to the international oil industry following the 1995 Brent Spar controversy; before the incident many would
refer to the concept of removing an abandoned offshore platform as abandonment. As a concept, decommissioning has a more comprehensive application and it is more inclusive than the term abandonment found in many treaties dealing with offshore installations. Both terms were often used interchangeably before the Brent Spar incident in 1995.

The process of decommissioning usually takes place after the offshore platform (in this case oil & gas platform) has been abandoned or ceased to be productive or operative. When production of gas or oil from a field becomes uneconomical, a decision may be made by the relevant regulatory agencies in conjunction with the operator of the platform to cease production, abandon the field and decommission the infrastructure. In Europe oil companies are legally required to submit to the Government, a decommissioning plan, a few years (2 to 5, depending on countries) before platform operations cease.

In practice, decommissioning and abandonment tend to describe the same process. The process to initiate platform decommissioning is usually undertaken by the operator of an oil or natural gas installation often in consultation with the regulatory agencies. The decision to decommission or not is usually the prerogative of the Government as in Europe and in the United States. In the United Kingdom, the process includes plan, gain approval for and implement the approval from the Department of Trade and Industry. Disposal or reuse of an installation when it is no longer needed or ceased to produce oil or gas as well site rehabilitation are treated as part of the decommissioning process in the UK.

Among the legal community, the term abandonment is widely used. The 1958 Geneva Convention on Continental Shelf, 1982 UNCLOS, 1989 IMO Guidelines, 1992 OSPAR refer to abandonment as the process of dismantling and disposal of the unused platform.

According to AM Forte, the confusion is an "unfortunate choice", and the word "decommissioning" is preferable substitute to describe the process and procedures associated with disposal of installations as well as site rehabilitation after they are no longer needed.²

In the UK, Norway and Holland, an environmental impact assessment is mandatory before an abandoned platform is decommissioned. The EIA is a process for anticipating the effects on the environment caused by a development. The objective of the EIA is to incorporate environmental considerations into the project planning and design stages, to ensure best environmental practice is followed. The EIA process also provides for an early airing of the concerns of stakeholders, which must be adequately addressed. Through an EIA it is possible to ensure that planned activities are in line with company policy and legislative requirements.
The process to decommission an installation is long and tedious. Getting the approval from the relevant authority for every step of the operation can be quite a challenge. In the UK the process can take between three to six years; but in countries where the legal framework and technical experience is still undeveloped, the process may take much longer.

In the UK, the procedure for platform decommissioning is spelt out in detail in *The Guidelines Notes for Industry: Decommissioning of Offshore Installations and Pipelines Under the Petroleum act 1988.* Different countries have different policies.

The DTI's Offshore Decommissioning Unit in Aberdeen is responsible for coordinating the consideration and approval of decommissioning programmes for installations and pipelines in the UK. The Unit acts as a one-stop-shop whenever possible and will consult with the other Government Departments and Agencies who have an interest in the consideration of decommissioning proposals. There may, however, be occasions when the DTI will ask the Operator to make direct contact with a particular Government Department, for example, with the Ministry of Agriculture, Fisheries and Food (MAFF) on an aspect which may have specific implications for fisheries.

The decommissioning process differs between countries and does not necessarily follow the phases adopted by the DTI. For example, the proposed PETRONAS PMU Guidelines (Malaysia) have identified four phases: *pre-decommissioning, implementation, post decommissioning and field review.* Another approach is to divide the decommissioning process into four phases mainly for the purpose of environmental assessment: *cold phase, removal and disposal.* Whatever it is, the purpose of the decommissioning is to ensure a balanced and complete process.

For ease of understanding, the implementation process can be further divided into three practical phases:

- A first phase consists of rendering the redundant structure hydrocarbon and chemical free by, where appropriate, abandoning the wells, removing conductors/risers, flushing and cleaning the process/utility systems, ensuring all the vessels and pipe work are gas and oil free and preparing the components for the lifting/removal operations.

- A second phase involves the deconstruction and removal of the installation and associated components

- A third phase involves site restoration and regular monitoring and inspection of the site.

The scope of decommissioning will depend on the type of installation and what options are foreseen for the redundant installation, or whether deferral of final decommissioning is possible. Anyhow, irrespective of the option for decommissioning, the licensee or operator shall submit well in
advance a decommissioning plan to the relevant authorities once a decision has been made to abandon a platform. The operator must furnish adequate information, which shall include the necessary, technical, safety, environmental, fishing, navigation and financial information to the authorities. In the UK it is the Government through the DTI that has a final say on platform decommissioning often in consultation with all the stakeholders as well as the operator.

There seems to be a fine line between decommissioning and dumping. According to London Dumping Convention, 1972 dumping is defined as any deliberate disposal at sea of wastes or other matter from vessels, aircraft, platforms or other man made structures at sea. It also includes the deliberate disposal at sea of vessels, aircraft, platforms or other man-made structures at sea. The 1996 Protocol to the London Dumping Convention expanded the definition of dumping to include any storage of wastes or other matter in the seabed and the subsoil thereof from vessels, aircraft, platforms or other man-made structures at sea; and any abandonment or toppling at site of platforms or other man-made structures, for the sole purpose of deliberate disposal. The 1996 Protocol, however, is more flexible. It allows for the disposal of platforms and man-made structures at sea so long as licensed by the national authorities.

Article 5 of Annex 111 to the 1992 Paris Convention For The Protection of The Marine Environment of the North–East Atlantic equates the whole or partial non-removal of disused offshore installations to dumping tolerated only if a permit has been issued by the competent national authorities again on-a-case-by-case basis. Indeed this policy becomes the corner stone for OSPAR. Similarly, the Baltic Convention, Reg 8 of Annex V1 on the prevention of pollution from offshore activities obliges the contracting parties to ensure that all abandoned offshore units are essentially removed and brought ashore under the responsibility of the owner. Anything left behind (i.e., partial removal) would be considered dumping.

Based on the practice in the UK, in evolving a policy on platform decommissioning, Third World oil-producing countries can benefit from the following conclusions:

Firstly, the Government, in this case the DTI, plays an important role in regulating and facilitating the process of platform decommissioning undertaken by the operator. The Government enacts the relevant legislation and maintains close liaison with the external parties and monitors the entire process. In the UK the Government provides tax breaks to the operator. In Norway, the Government pays the oil operator for undertaking the decommissioning activities.

Secondly, the process for decommissioning is long and tedious and that each platform is unique and no generic solution applies. The options for disposal have to be carefully analysed and they should be as transparent as possible for the stakeholders to support. In the case of the Brent Spar, the
Green Peace movement was able to mobilize support from the civil society against deep sea dumping although Royal Dutch Shell has received the blessing from the UK Government to dispose of the Brent Spar in the deeper part of the North Sea, as it was safe to the environment and shipping. It was not the question of failure in planning through or technical incompetence, but it was the failure of misjudgement on the part of Shell to underestimate the pressure from the Green Peace.

In the DTI Guidelines, due mention is made on the need to comply with international agreements & obligations, consultation with the stakeholders as well as the need to effectively monitor the various phases in the decommissioning process. While the onus is on the operator to undertake the task, a suitable monitoring regime must be in place and specified in the decommissioning programme.

The DTI requires that the operator submit inspection reports on a regular basis including proposals for any maintenance and remedial work that may be required. The reports should also be published by appropriate means. In the case of the UK, OSPAR requires that the operator submit a satisfactory EIA and monitoring regime before permission for decommissioning could be given. The DTI also requires that a post disposal report is submitted indicating how the disposal operation was carried out, any immediate consequences of the disposal that have been observed and confirmation that the disposal has been implemented in accordance with the terms of the decommissioning programmes.

What became very obvious in the UK decommissioning experience was the need for transparency, in balancing stakeholders' interest especially the citizen groups and that nothing should be taken for granted. In the case of the Brent Spar, the failure to deal effectively with pressure from the Green Peace movement has dented slightly Royal Dutch Shell's deep pocket. The company's initial estimates to decommission the Brent Spar was only 10 million pounds sterling; but by the time the floating storage was finally decommissioned in 1995 it cost Shell 60 million pounds sterling. Although the company recouped its reputation, as the Green Peace did admit it went overboard with its scientific calculations, the damage has been done.

Issues

Worldwide there are close to 7000 oil and gas installations/platforms; some 4000 in the Gulf of Mexico, one thousand thirty of them are in South East Asian waters. The rest are off Japan, Europe, Latin America and the Middle East. Many of them have been in service for more than fifteen years; some are over twenty years old. Many have been abandoned, waiting to be decommissioned. One can imagine the amount of steel structure and concrete to be removed from the bottom of the sea, some permitted to be left in situ.
Of course it costs money to decommission an installation. As an example, in 1995 it cost UK Shell sixty million pounds sterling to decommission the Brent Spar, a floating storage buoy. The total cost to remove all offshore installations in the North Sea alone would be colossal; imagine the cost to remove all the offshore installations in the world, which potentially will be abandoned as the fields mature.

In Malaysia alone a study has conservatively estimated it will cost PETRONAS, the national oil company, some 8 billion Malaysian ringgit (approximately US$2 billion) to remove some two hundred plus installations in offshore Malaysia.4

A legal framework to govern every aspect of platform decommissioning has been put into place in Europe through various treaty mechanisms. The two most important treaties that deal with platform decommissioning in Europe include the Oslo and Paris (OSPAR) conventions for the protection of Marine Environment in Northeast Atlantic. These regional treaties are intended to complement the international treaties on marine environment, most prominently the 1972 London Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matters and its 1996 Protocols as well as the MARPOL 73/78 Convention. But such legal framework is still absent in Third World countries; not a single oil producing state in the Third World has a comprehensive national legislation on platform abandonment.

The current interest on decommissioning preceded the controversial Brent Spar. There are at least three primary reasons rekindling interest on this topic. Firstly, the maturing of a large number of offshore oil and gas fields worldwide has raised the question of accountability, third party liability and good practices in the oil industry. Secondly, the issue of cost became an important concern to both oil industry and oil producing states. The cost of removing and disposing all the unused platforms is expectedly high. Removing the large structures in the deep sea can be costly. The question of who should bear the cost of platform decommissioning became a hot topic in Europe and elsewhere. Secondly, accompanying the unfinished debate of who should pay to remove the unused platforms was the growing global concern for a more responsible marine environment management regime. Coastal states came under pressure to adopt a more responsible approach to ocean governance, including taking steps to remove unused offshore platforms. Thirdly, concern for the freedom of navigation and, its corollary navigational safety has inspired the IMO to develop guidelines on removal of offshore platforms.

For the above reasons and, no doubt, for other reasons too, a consensus of opinion has emerged by the middle of 1980s on the need to establish a legal framework to deal with this topic. With the introduction of basic international standards on the continental shelf, some coastal states have
demanded for more teeth in dealing with this matter. National legislation to deal with platform decommissioning was introduced as in the UK and USA.

The earlier legislation in most Third World countries was found to contain nothing more than elementary requirement for the contractors or operators to plug wells once abandoned. The national legislation often imposed standards that were weak and unenforceable, such as “good oil field practices” and “normal oil field practices”. The early oil contracts did not spell out details on decommissioning with regard to substantive issues like funding, responsibility and who should pay for what i.e., allocation of costs between oil companies and host states. In the absence of negotiated contractual obligations the burden is on the latter as the platforms are stuck to their seabed.

For countries-mainly Third World-with state oil companies a worst scenario has appeared. In the absence of specific contractual obligations with the operators/contractors, the ownership of about-to-be decommissioned structures was conveniently transferred to the state Oil Company or to the host government. Once the ownership of the platforms changes hands, the oil operators can no longer be held responsible for any decommissioning work.

It is a well-established practice that oil companies operating in Third World countries are reluctant to dismantle and dispose of disused platforms they had installed. To overcome this discrepancy many oil-producing countries (e.g. Malaysia and Indonesia) in the Third World are now considering legislation to provide for a platform abandonment regime. Such legal regime would of course incorporate a variety of legal rules under international law, national law and, of course, contract law.

For more than a decade now the oil and gas industry has been aware of a problem looming on the horizon: how to manage the costs of decommissioning the thousands of offshore oil and gas platforms all over the world? Within the last decade or so there has been a heightened concern over environmental issues with the industry being the target for greenhouse gas emissions. The need to be extra cautious with issues relating to ocean governance, in particular, the role of the industry in managing the fragile marine environment has made ocean dumping an awkwardly sensitive issue. At the same time, knowledge of economic, legal as well technical aspects of platform decommissioning has grown considerably over the years with the industry gaining invaluable experience from their decommissioning projects in the shallow Gulf of Mexico waters and in the deeper depths of the North Sea.

Many oil producing-developed states have specific laws and legislation dealing with platform decommissioning. In these countries, the legal framework is drawn up by the relevant Government agencies in consultation with the oil industry. The legal framework would define clearly the scope
of functions and responsibility for the removal as well as disposal of unused platforms due for decommissioning. In the developed world this legal framework is put into place prior to oil exploration and rightly so, as decommissioning forms an integral part of oil production and thus it should dovetail nicely into the process. This is also done to ensure fairness, predictability and a sense of certainty. But the Third World is only about to venture into platform decommissioning. This comes at a very awkward time: the resources are running out and the states are not able to raise new fund to undertake the costly task. The truth is, most developing states never plan for decommissioning purposes including earmarking of funds.

In the Third World, the burden of platform decommissioning remains with the Government or the responsibility of the national oil companies. In developed countries the oil industry accepts the responsibility of removing and disposing of their installations that are no longer in use. In the third world, the oil industry takes very little interest in the decommissioning of oil and gas platforms citing the absence of a national legislation on this matter. It is only lately that many production-sharing agreements in the third world, for example, are designed with the decommissioning in mind. Even then the oil industry will still look for fine prints or loopholes to escape responsibility and, in the process avoid cost and liability. Where they agree to undertake decommissioning, as in the case of Malaysia, the national oil company absorbs the costs; oil companies are allowed to claim their expenses through the mechanism of cost recovery.

In Malaysia under the current production-sharing contract, the oil industry can even recover their contribution to a special fund (managed by Petronas) on platform decommissioning. While the post 1998 production-sharing contracts (PSC) in Malaysia do contain a provision for the contractor to decommission unused platforms, it lacks details and does not oblige the PSC contractors to remove and dispose of any abandoned installation.

Many oil production agreements stipulate a requirement to plug wells and undertake unspecified measures as appropriate to good oil field practices or industry practices in oil field operations before abandoning an oil field. What constitutes best practices is often determined by the oil industry and they tend to vary between companies and locations. Those considered best practices in European waters, for example, are not necessarily transferred to other parts of the world.

The oil industry always claims their operations are governed by the agreements they sign. Very often these agreements do not spell out the best practices except to state a general phrase in the agreement such as "appropriate oil field good measures". Such phrase is intended to be ambiguous and an escape hatch. To a good lawyer of an oil company such general phrase means nothing and provides the clients a certain comfort level.
As more platforms begin to mature world wide, the oil industry began to put increasing pressure on the international community to come out with international rules and guidelines before some oil producing states start drawing up unilateral legislation that could undermine their activities. Some states took up the call from the industry and began a process of consultation between like-minded parties. The result was the 1958 Convention on Law of the Sea, which among other important provisions has a special provision obligating state parties to remove in entirety all offshore installations.

The 1982 Law of the Sea Convention contains more flexible provisions. In particular, it allows for partial removal. UNCLOS has also widened the scope by enlisting the help of a competent organisation (i.e., the International Maritime Organisation). The mandate of the IMO covers navigational safety and marine environment. The resulting Guidelines and Standards produced by the IMO in 1989 set out a minimum for states to adopt.

However, the debate on platform decommissioning has triggered an examination by some oil-producing states of their exposure to risk in this area. For those states with production sharing agreements, it came as a surprise to discover that the transfer of title to installations that had seemed so important to them implied a transfer of liability for decommissioning and the attendant bills. While states agreed some legislation on this is required, their approach differed depending on a variety of factors, most importantly power relationship and, the size of their reserve dictates the attractiveness or lack of it for investment. The oil industry will always be guided by profit margins.

Public international law regulates policy on removal and disposal of oil and gas installations at sea. Nonetheless states do enjoy a certain amount of discretion in designing and implementing national legislation on offshore installations. This freedom is closely tied to their international obligations. This should be taken to imply that the current international law concerning abandonment, removal and disposal of offshore installations has not been cast in stone. It is very likely that in future attitudes may change with regard platform decommissioning. The development of new technology will have an impact on attitudes and usually the law will adjust accordingly to reflect the change in attitude.

United Kingdom and United States were two dominant maritime powers in the 1950s pushing for an international treaty on platform abandonment under the pretext of freedom of navigation. The real motive is of course maritime security. In the years leading to the 1958 Convention on the Continental Shelf, it was the United Kingdom, with firm support from the United States that initiated the debate on this issue; first at the International Law Commission and later in the corridors of the United Nations.

In the 1950s the United Kingdom has not yet become an oil producing state. But the UK retained direct interest in the Royal Dutch/Shell and British Petroleum. Except for the Royal Dutch/Shell’s interest in offshore Brunei
and in the Netherlands. Most of the productive oil fields owned and operated by the two British companies in the 1950s were in Middle East. But with success in Brunei waters and in the Gulf of Mexico, naval planners in the UK and USA saw the need for some preventive measures to enhance their freedom of navigation doctrine. Article 5.5 of the 1958 United Nations Convention on the Continental Shelf was intended to protect the maritime security interests of both nations. By insisting that all abandoned platforms be completely removed, the US and Great Britain could enjoy the freedom of navigation.

The offshore installations installed in the 1950s were relatively small and could be easily removed. None was actually in deep or treacherous water. Similarly the onshore installations in Texas, for example, were small pumping units and they were easily decommissioned after they had become redundant. The small Texas installations were used as benchmarks for the 1958 Convention on the Continental Shelf. Few then thought the new generation of offshore installations would be huge infrastructure, complete with landing pads for helicopters, hospitals, accommodation facilities, firewalls, etc. Anchored to the seabed these structures are not easily removed. Removing them could financially be a nightmare. Retaining them in situ could result in residual or third liability as well as a source of marine pollution.

The debate on offshore installations must also be seen in the context of the 1945 Truman Declaration on the Continental Shelf. Intended to demonstrate that the continental shelf was an extension of the landmass the declaration gave the US the right to exploit all natural resources on its continental shelf. Oil was one of the resources, which the United States wanted to have exclusive jurisdiction, and at the same time to deny other powers from exploiting it.

The 1958 Geneva Convention

The 1958 UN Convention on the Continental Shelf incorporated the Truman Declaration and other elements, including the following:

- The continental shelf is part of the land mass up to a depth of 200 meters, or beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas;

- The rights are exclusive to the extent that if the coastal states does not explore the continental shelf or exploit its resources no one may undertake these activities without the express consent of the coastal state;

- The exploration of the continental shelf should not interfere with navigation, fishing or the conservation of living resources;

- Methods for delimiting the continental shelf boundaries;
• Provision of a 500 meter safety zone around the installations;

• Any installation which is abandoned or disused must be entirely removed.

The 1958 Geneva Convention on the Continental Shelf sets the tone in public international law on the removal of offshore installations. This Convention spells out clearly the obligations of states with regard their responsibilities and duties on continental shelf. While states are permitted to extract oil and gas on the continental shelf, the Convention provides that such exploration and exploitation must not result in unjustifiable interference with the rights of other states (Article 5(1)). The construction as well as the operation of the installations is governed by this general rule (Article 5 (2)). A safety zone of 500 meters around the installation is provided for in Articles 5(2) and 5 (3). The critical provision, however, is Article 5(5), which reads:

"Any installations which are abandoned or disused must be entirely removed."

This article makes it mandatory for state parties (57 of them, including Malaysia) to remove all the offshore installations. This is how the concept of total removal of offshore installations first gained currency in public international law.

Missing from the Convention are issues pertaining to disposal requirements. The treaty is also silent on how to deal with pipelines. It would appear that the pipelines are to be treated differently from the installations.

1982 UN Law of the Sea Convention (UNCLOS)

UNCLOS is a very comprehensive international treaty on ocean governance. It covers most legal aspects of the ocean space and its uses. They include navigation, over flight rights, resource exploitation and exploration, conservation of marine resources, shipping, marine environment, shipping and many other aspects of ocean governance. The provisions dealing with the disposal and removal of offshore installations must be appreciated in this context. The major concerns for ocean governance have lately revolved around the need to develop a sustainable marine environment regime and to facilitate navigational safety. These two factors, cost and the availability of new technology for platform removal, have triggered the need to develop a more flexible legal framework on platform decommissioning acceptable to the oil industry and the coastal states.

UNCLOS has entered into force on 16 November 1994. On paper there seems to be a conflict of obligations between article 5.5 of the 1958 Geneva
Convention on the Continental Shelf and article 60.3 of 1982 UNCLOS. But in reality, if the Government so wishes, it can renounce its obligations under the former treaty as most of the provisions have been incorporated into UNCLOS. Until the Government does so, the obligations remain.

Article 60.3 of UNCLOS reads:

(3) *Due notice must be given of the construction of such artificial islands, installations or structures, and permanent means for giving warning of their presence must be maintained. Any installations or structures which are abandoned or disused shall be removed to ensure safety of navigation, taking into account any generally accepted international standards established in this regard by the competent international organization. Such removal shall also have due regard to fishing, the protection of the marine environment and the rights and duties of other States. Appropriate publicity shall be given to the depth, position and dimensions of any installations or structures not entirely removed.*

Article 60(3) is not a stand-alone provision. It must be read along with other provisions in UNCLOS in particular Articles 80, 208 and 210. Article 80 applies to artificial islands, installations and structures on the continental shelf. Article 208 of UNCLOS requires coastal states to adopt laws and regulations to prevent, reduce and control pollution of the marine environment arising from or in connection with seabed activities subject to their jurisdiction and from artificial islands, installations and structures under their jurisdiction, pursuant to articles 60 and 80. Such regulations and standards must not be less effective than international rules, standards, recommended practices and procedures. Article 210 deals with pollution from dumping. Coastal states are permitted to legislate on what can be dumped at sea. It is imperative that the national legislation is not less effective than established international rules and standards.

Since the oceans are treated as one sea, certain control mechanisms have been established towards a more integrated ocean management. States are encouraged to establish global standards to prevent, reduce and control such pollution. In general sea dumping is discouraged; in Europe it is banned following the *Brent Spar* episode. The policy of sea banning in Europe may soon gain global acceptance. The 1996 Protocols to the 1972 London Convention are slowly moving into that direction.

Of course in terms of scope, Article 60 applies mutatis mutandis to artificial islands, installations and structures on the continental shelf, according to Article 80. It has been argued that Article 60 is very ambiguous. While it envisages removal of abandoned and unused platforms, it subjects itself to lesser international standards. Under the 1958 Convention, the language is very clear: nothing less than total removal i.e., to be removed entirely. Under UNCLOS, it is only removal and the word “entirely” is omitted. The back tracking can be attributed to a few factors. First, the installations are getting very big, very cumbersome to remove in entirety. Second, the reluctance
on the part of the oil industry to fully participate in this exercise of total removal, mainly for reasons of cost. Third, a change of heart in the position of Great Britain, the major champion of both resolutions. Part of the UK's about turn decision has to do with the discovery of oil/gas in the deeper part of the North Sea and the pressure from the oil industry to treat installations in the deep water differently from those in shallow water.

The International Maritime Organization (IMO) was very quick to assert its competence in this respect even though the UK and the major maritime powers had not ratified the document. There are several reasons why the IMO did this. First, it wants to make sure that abandoned installations do not impede international navigation, particularly those in strategic straits and that the unused installations do not pollute the sea. Navigational safety and clean sea matters are within IMO's jurisdiction. Second, the explanation can be found in the nature of power politics at the IMO, an organization under the control of the major maritime powers, which make freedom of navigation their war cry. Third, to ensure coastal states comply with these obligations through another multilateral institution under their control as the industrial world has some reservations with UNCLOS.

Under UNCLOS coastal states have more flexibility as long as they comply with the international standards established for this purpose. The snag is IMO resolutions are not binding on state parties. However, the industrial world has argued that in this case the IMO resolutions are specific and since this is tied to UNCLOS, the resolution is binding when the UNCLOS Convention enters into force. This is to force compliance through the back door. Clearly, on this matter the industrial world had relied on power politics.

In other respects the UNCLOS provisions on platform decommissioning are quite similar with the 1958 Geneva Convention. There is no provision for site rehabilitation under UNCLOS. Oil and gas pipelines are also omitted. Surely the industry was familiar with the situation. It is possible that the matter is kept silent simply because the industry does not want to be responsible for what looks to be a very delicate post-removal matter or feels that the state should be responsible for that. Anyhow, site rehabilitation is now considered an important dimension of decommissioning. Periodical site monitoring could be a costly affair.

The IMO Guidelines

The IMO adopted a Resolution in 1989 on Guidelines and Standards for The Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone. By virtue of these guidelines, state parties are obliged to remove all abandoned and disused offshore installations on any continental shelf or in any exclusive economic zone except where non-removal or partial removal is consistent with the guidelines. By the same token, states are permitted to impose more stringent regulations than provided for in the Guidelines. In a sense, the Guidelines have set only the minimum standards.
There are two sections to the IMO Guidelines: Guidelines and Standards. The "Guidelines" provide for a case-by-case decision on whether to remove the abandoned installation or not with emphasis on the following:

- Any potential deterioration of the material and its impact on navigation and marine environment and other uses of the sea
- The costs, technical feasibility and risks of injury to personnel associated with removal of the installation or structure
- New uses for the platforms or other reasonable justification for allowing the platform or parts of it to remain on the seabed.

Where it pertains to the safety of navigation, the emphasis is on the proximity of the abandoned installations to sea-lanes or whether they are located in an approach to or in straits used for international navigation or in archipelagic waters. In other words there exists a general requirement to remove disused or abandoned platforms in straits, access to ports or in navigational routes. The determination of any potential effect on the marine environment should be based on scientific evidence.

Under the sub-heading "Standards", complete removal is required of all installations standing in less than 75 meters of water and weighing less than 4,000 tons in air (excluding deck and superstructure), and all installations placed on the seabed after 1998 standing less than 100 metres of water and weighing less than 4000 tons. The exceptions are those installations that have been assigned for new uses if permitted to remain partially or wholly in place or where the entire removal is not technically feasible or would involve an extreme cost or an extreme risk to the personnel and environment. The Standards further require that no installations should be placed on the continental shelf or in the EEZ after 1 January 1998 unless the design and construction is such that it makes it feasible to remove the installation in its entirety.

Existing installations in water depths of greater than 75 metres or weighing less 4000 tons can be wholly or partially left in place, provided they do not cause unjustifiable interference with other users of the sea. Installations, which are in straits used for international navigation or located in approaches to ports or in customary deep draught lanes and IMO adopted routing systems, must be removed. Any installation in the Straits of Malacca, for example, would be subject to this rule.

Where installations or structures remain above water they should be adequately maintained to prevent structural failure. In the case of partial removal, the coastal states must ensure an unobstructed water depth of no less than 55 meters above the structure to facilitate navigation. Coastal states are also required to ensure that any residue from the left over installations do not cause or result in a hazard to navigation. At the same time coastal states have obligation under the IMO Resolution to ensure that navigational aids are in place and maintained on those installations.
that have been abandoned and that those installations not removed in entirety be marked on charts. States are also required to ensure that the legal title to the installations, which have not been fully removed to remain unambiguous and that the liability for future damages are clearly established.

The IMO Guidelines and Standards also make specific mention on converting abandoned platforms for use as artificial reefs. But states are required to make sure that the reefs are away from the customary traffic lanes and be consistent with the IMO Guidelines and other established standards for the maintenance of navigational safety standards.

There is also an environmental provision in the IMO Guidelines for compliance. Paragraph 3.3 states that the means of removing the installations should not cause a significant adverse effect on living resources. Some authorities exclude the use of explosives. What constitutes adverse environmental effects is not spelt out but left to the discretion of the coastal state.

The over riding concerns of IMO Guidelines are navigational safety and marine pollution. Nonetheless there is a notable absence of any environmental impact assessment as a standard procedure to be adopted. Presumably this is left to the discretion of coastal states. The purpose of the IMO Guidelines is to provide a set of minimum standards and leave the coastal states with wide discretionary powers on how to move forward.

It should be noted that the OSPAR regime applicable in North Sea is more stringent than the standards imposed in IMO Guidelines. For example, OSPAR does not permit deep sea dumping.

**International Law Concerning the Disposal of Offshore Installations**

Decommissioning is a complex process involving removal and disposal. But the law seems silent on the latter. Neither the 1958 Geneva Convention or UNCLOS have any reference to platform disposal. However, it is possible to establish some trends based on recent practices in platform decommissioning in Europe and also to examine some of treaty provisions. One treaty that deals with some aspects of platform disposal is the London Convention, 1972. It is also known as the London Dumping Convention. According to this Convention, abandonment *in situ* and toppling of offshore platforms are considered as dumping and thus subject to regulation by this Convention. In case a topped platform was converted to an artificial reef, it was decided that it would still fall within the competence of the Convention. But in this case, a coastal state can exercise its discretion: to allow rig-to-reef conversion or not, so long as the reef would be consistent with the aims of the Convention. The USA welcomes rig-to-reef policy but Germany believes such policy prescription leaves too much discretion to coastal states.
But the Dumping Convention is silent on pipelines that have been abandoned. Is there necessity to remove pipelines or can they just be buried/trenched considering that the process of natural sedimentation would anyhow bury the pipelines? If they are to be removed, what criteria should apply considering the engineering and economic practicality of the project and other concerns including sustainable environmental management?

The Dumping Convention operates by means of a licensing system, which distinguishes materials according to three classifications. There are those that may not be dumped at all (Annex 1), those that may be dumped if a license is granted by the state after consultation with other members of the Convention (Annex 11) and those that require special permit from the national authority (Annex 111). Applicants for a permit have to submit environmental impact assessments in advance.

This regime has been supplemented by a protocol to the Convention, which once ratified will supersede it. This is the London Convention Protocol of 1996. The protocol made sweeping changes to the concept of sea dumping. The main changes to the original convention are in the areas of definitions, dumping provisions and modern environmental principles. Among the definitional changes introduced in the LC Protocols are those concerning the “sea” and “platform”. The term “sea” includes seabed and subsoil as well as the water column. By this definition disused platforms left on the seabed are included in this scope. Toppled structures and platforms left in situ will constitute dumping. The Convention does not define pollution but the LC Protocol defines it as anything that is introduced into the sea as a result of human activity that leads to or is likely to lead to deleterious impact on living resources and marine eco-systems.

The system of licensing is also modified. It has done away with the three categories of items that cannot be dumped and replaced them with one list of all waste and other materials that may be dumped. These are mainly inert or naturally occurring substances. Although the Protocol does not specify that abandoned platforms cannot be dumped at sea, it imposes an obligation on the operator of the platform not to dispose any item that may result in harm to the environment. Dumping anything in the sea for which there is insufficient data to predict likely outcomes is also not permitted. The LC Protocol puts emphasis on precautionary principle and “polluter pays” concept. The LC Protocol gives plenty of room to coastal states with regard sea dumping only to exhort states to be very responsible and to allow dumping only those that the states really believe that they will not harm the sea. And, when data is insufficient to determine its harmful impact, to refrain from it. In other words if states have doubt that by leaving an abandoned structure in situ could lead to some form of marine pollution then it should not be allowed.

In Europe, for example, there are very stringent rules on sea dumping following the Brent Spar episode in 1995. As a matter of principle; sea dumping of abandoned platforms is not permitted unless it is consistent
with general practice. The Oslo Convention and the Paris Convention govern sea-dumping activities in the EC countries. Both Conventions were replaced by the Convention for the Protection of the Marine Environment of the North East Atlantic (OSPAR). Annex 111 of OSPAR is concerned with the prevention and elimination of pollution from offshore sources. Articles 5.6.7 and 8 are directly applicable to the abandonment of offshore installations. Article 5 reiterates on the need for a permit before dumping. But it states that no permit is to be issued if the disused offshore installations including disused offshore pipelines contain substances which may result in hazards to human health, harm to living resources and marine eco-systems, damage to amenities or interference with other legitimate uses of the sea. States are required to consult other contracting parties before any permit is given.

In short the practice in Europe is moving towards banning deep-sea dumping of offshore platforms. Although some states in the EC have their own preferences and differences in opinions, they have been kept muted. This is because, according to one document, the disposal of decommissioned offshore installations in EC areas is a matter where the EC can exercise competence.

Such regional mechanisms/regimes do not exist in South East Asia although this region has a large share of offshore installations. As the old fields begin to mature, many installations installed for the primary purpose of oil production are no longer productive and slated for decommissioning. Presently there are some one thousand offshore installations in South East Asian waters that one-day will have to be decommissioned.

1958 Convention and UNCLOS

What is the relationship between the removal requirements in the 1958 Convention, UNCLOS and the IMO Guidelines? It is evident that there is a discrepancy between the provisions. In the 1958 Convention, the emphasis is on total removal. But in UNCLOS, the requirements are more flexible although as a general rule it still insists on removal. Both treaties are prima facie binding on the contracting parties. I have maintained elsewhere that despite claims by some that the treaty provisions have not become customary international law, the position is not very clear. One can make a case, however, that the provisions have provided strong evidence of state practice but they have not attained the status of customary international law. Moreover, the 1989 IMO Guidelines and Standards document is legally not binding.

The Way Forward

There is need to re-examine the practicality of the current legal regime on offshore platform decommissioning especially as they affect Third World countries. In the absence of a well-defined international legal regime, the Third World countries could adopt an easy way out by leaving the abandoned
platforms or toppling them *in situ*. In the long run this policy could pose danger to marine pollution and international navigation. This problem is less acute in Europe and America where national legislation is well placed. Moreover, in the developed countries the states are in a better position to deal with the oil industry. This is not so in the Third World that depends on foreign oil companies. The dependence limits their flexibility.

There is need to clearly define decommissioning in international law. Currently, the term is not defined though it is interchangeably with abandonment. Most treaties talk of abandonment when in reality it is meant to refer to the process of decommissioning.

Even the installations are not defined and as such not governed by any international norm. For example, the extensive pipelines at the bottom of the sea are not covered in the IMO Guidelines and OSPAR, the two legal regimes on platform decommissioning. Should not the pipelines' removal also be subject to some international legal regime? If so, who should initiate the process? Is the IMO the competent organization? What criteria should be used for pipelines?

OSPAR is a regional treaty and applicable only in Europe. The 1989 IMO Guidelines are binding on state parties. This makes compliance difficult. Besides not all oil producing countries are party to UNCLOS and IMO.

The cost to remove the installations is very high especially for those who have not made any financial arrangement to cover platform-decommissioning expenses. It is more acute for the developing oil producing countries with declining revenue to manage the mature oilfields. What need to be done? Can they leave the installations in the sea, as they have no financial means to remove them? In the absence of customary international law, how would states handle the concerns of residual liability? Would leaving the installations at sea compromise the other legitimate users of the sea? In the long run, could abandoned platforms be a source of marine pollution and pose a danger to international navigation?

One quick way out of the legal dilemma is for oil producing countries to enact a comprehensive national legislation on platform decommissioning covering every aspect of the decommissioning process discussed above. The 1989 IMO Guidelines could be used as the minimum standards for determining weight of jacket and water depth in removal options; it does not address all other relevant issues.

Third World countries, especially the oil producing states, should also take a more assertive approach on offshore decommissioning. Enacting a national legislation on offshore installations decommissioning would be a way forward.
NOTES

1 This is an abridged paper in honour of Professor Kazoumi Ouchi of Chuo University, Japan. The original paper was first presented at The Global Conference on Oceans & Coasts at Rio +10, 3-7 December 2001, UNESCO, and Paris, France.


4 Platform Abandonment Master Study, PETRONAS, 1997 (not published)

5 Malaysia ratified UNCLOS on 14 October 1996. This means Malaysia has given its commitment to the treaty parties that it will honour all its obligations including the provisions on installations and structures in the EEZ and on its Continental Shelf.