



Regulating Marine Scientific Research: A Correlation Between the Law of the Sea, Science and National Sovereignty

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ABSTRACT This chapter argues that laws regulating marine scientific research have to be developed in Malaysia. The main argument in this Chapter is that it requires two sets of entities, namely the national scientists and the related competent scientific organizations on the one hand together with a sound institutional administrative mechanism on the other for the comprehensive development of the laws and procedure on marine scientific research for a state. The corpus juris of these regulations are derived from the provisions of the 1982 Law of the Sea Convention, the content of national legislation of states and the best practices as advocated by the United Nations as adopted by the Intergovernmental Oceanographic Commission. The existing Malaysian regulations on the subject should also be strengthened into a comprehensive national legislation.

ABSTRAK Hujah utama dalam Bab ini adalah, dalam mengadakan perundangan sedemikian, peranan penting yang dimainkan oleh dua buah entiti tidak boleh diketepikan, iaitu, peranan para saintis kebangsaan dan badan-badan saintifik yang lain yang kompeten disertai dengan peranan badan pentadbiran yang sah dan berkesan bagi tujuan membangunkan perundangan dan prosedur berkenaan kajian saintifik marin di sebuah negara. Corpus juris perundangan tersebut didapati daripada peruntukan-peruntukan 1982 Law of the Sea Convention, kandungan perundangan pelbagai negara dan amalan-amalan terbaik sepertimana yang dimajukan oleh Pertubuhan Bangsa-Bangsa Bersatu yang telah diterima pakai oleh badan Intergovernmental Oceanographic Commission. Peruntukan-peruntukan Malaysia yang sedia ada, juga dikehendaki diperkuatkan sebagai perundangan kebangsaan yang komprehensif.

(marine scientific research, United Nations, comparative laws, development of national regulations, national sovereignty)

1. INTRODUCTION

The 1982 Law of the Sea Convention (1982 LOSC) [2] was signed on 10 December 1982 and it entered into force on 16 November 1994 [2]. A Working Group of the Intergovernmental Oceanographic Commission [3] (the IOC) met to discuss the implications of the 1982 LOSC upon the IOC. Consequently in 1997, the IOC Advisory Body of Experts of the Law of the Sea (IOC/ABE-LOS) (IOC Resolution XIX-19) was established with the mandate of advising the IOC on the implementation of the 1982 LOSC. The IOC/ABE-LOS is also an intergovernmental body with national representatives who are experts in the LOSC and in the sciences. Amongst others, this

body of experts has studied the topics relating to the Procedure for Application of Article 247 of the 1982 LOSC and the legal responses to the collection of oceanographic data. The IOC considers that knowledge about the oceans is still limited and unless and until coastal states have improved knowledge about their processes and resources based on a precautionary approach, it could negatively affect their development that has to be pursued on a sustainable economic basis. Hence, reports from marine scientific research (MSR) scientists are vital for policy-makers in national development.

Scientists play a critical role in the research, exploration and exploitation of the resources of



the seas and oceans and assist the international community in all aspects of ocean science is unquestionable. Being generally acknowledged as a constitution for the oceans, the 1982 LOSC may also be considered a legal bridge between science and the protection of ocean resources of coastal states, amongst others. This chapter focuses on the law of MSR. The term “research” has to be distinguished from other activities, as otherwise Annex III on Basic Conditions of Prospecting, Exploration and Exploitation of the 1982 LOSC comes in. As Malaysia has to legislate comprehensively on provisions relating to MSR in all its maritime zones, being a derived obligation from ratification of the 1982 LOSC and given that the state has a clean slate to begin this endeavor as the 1982 LOSC came into force only fourteen years ago, the main argument in this Chapter is that it requires two sets of entities, namely the national scientists and the related competent scientific organizations on the one hand together with a sound institutional administrative mechanism on the other for the development of the laws and procedures on MSR such that research and national sovereignty in the content and process of MSR are defended in all maritime zones. By national sovereignty is meant the total internal and external jurisdiction of a state as understood at international law. National sovereignty is all encompassing and includes national security within its scope. The main difference between MSR under the 1982 LOSC and the CITES would be that CITES regulates international trade in endangered species whereas the 1982 LOSC though wide in scope is focused on research within national maritime zones and the Area also referred to as the common heritage of mankind. Franckx explains that the relationship between CITES listing criteria to commercially exploited marine/ aquatic species and the 1982 LOSC is governed by the 1982 LOSC and it takes precedence over CITES [4].

At the outset, it is also assumed in this chapter that the definition of a “scientist” in the discussion, *infra*, will answer and satisfy the best international standards and practices.

1.1 Legal framework for MSR

The need for a legal framework for the conduct of marine scientific research (MSR) of the oceans

has been a mixed one. Until the middle of the 20th century, there was no mention of MSR. The debate has centred around whether this activity (MSR) should be subject to governmental regulation or not. In the 1958 Geneva Convention on the High Seas [5], Article 2 refers to, amongst others, certain high seas freedoms such as navigation, fishing, laying submarine cables and pipelines and of overflight, without specifically mentioning the freedom of MSR. Article 17 of the 1958 Geneva Convention on the Territorial Sea and Contiguous Zone [6] suggests that MSR is permissible with coastal state consent. The first reference to the conduct of fundamental MSR is found in Article 5(1) and (8) of the 1958 Geneva Convention on the Continental Shelf [7] and competence to claim fisheries research is also found in the 1958 Geneva Convention on Fishing and Conservation of the Living Resources of the High Seas [8].

At the Third United Nations Conference on the Law of the Sea, developing states argued for a system of transparency in MSR from their 200nms exclusive economic zone (EEZ) while the developed states argued for freedom of MSR. There are various provisions on the conduct of MSR in various provisions of the 1982 LOSC such as Articles 19, 40, 54, 87, 143(1), and 143(3). The 1982 LOSC seems to promote a fairly liberal MSR regime in Part XIII, Articles 238- 265 and lays down some guiding principles on its conduct. Article 241 also lays down that it (MSR) is not a legal basis for any claim to any part of the marine environment or its resources. Article 246(5) seems to refer to applied research whilst Article 246(3) refers to “pure research”.

Article 238 of the 1982 LOSC in clear terms provides that “All States, irrespective of their geographical location, and competent international organizations have the right to conduct MSR subject to the rights and duties of other States as provided for in this Convention.” The regulations of MSR have to be balanced against other considerations that impinge upon the basic features of the 1982 LOSC such as the right of innocent and transit passage, protection and preservation of the marine environment and the fundamental rights of artisanal or small-scale coastal fishermen to eke their living from the national maritime zones of the states.

Terms such as “peaceful” need to be given a national content in meaning for it forms the fulcrum of the purpose of conducting MSR. The coastal state should also state the appropriate scientific methods and means that can be used in MSR. This would require a comprehensive database of all the various types of MSR that is possible and in tandem with that, the state has to lay down the appropriate course of action in the conduct of the MSR. Respect for the sovereignty and jurisdiction of the coastal States and the meaning of “mutual benefit” have to be given content to in domestic law. Coastal states have a duty to disseminate the knowledge gained from MSR research in its waters to developing states and to train their technical and scientific personnel under Article 244, 1982 LOSC.

The research vessels and the scientific installations and equipment that can be used in MSR in its maritime zones must be stipulated by the coastal state clearly in the laws and regulations governing MSR.

Laws and regulations concerning safety of navigation, suppression of maritime terrorism, and control of marine pollution also apply to research vessels in national waters. Their access to harbours and to assistance have to be specified. The nature of the flag of the research vessel and nationality of the research have to be determined. It is important for the coastal state to reinstate the basic principles of MSR of the 1982 LOSC in its territorial sea, straits used for international navigation, contiguous zone, the EEZ and over its continental shelf. The correlation between MSR and national sovereignty of a state lies in the consent – based rights regime of MSR. The meaning of the term “Consent” of the coastal State plays a very important role in the national legislation and it would be imperative to state what is consent and when consent will be withheld. Other terms worth exploring would be the meaning of “manifestly evident facts”, “supplementary facts” as required under Article 252 for provisions on implied consent and when “suspension or cessation” of MSR would be required by the coastal State.

Given this caveat on the legitimate uses of the sea, the basic features of MSR revolve around six pillars of Part XIII, 1982 LOSC namely, the General Provisions, National MSR – Conduct and

Promotion of national MSR in national maritime zones, International Co-operation – Conduct and Promotion of international MSR and joint national/ international MSR in national maritime zones and in the Area, MSR by national scientists in other coastal states, Scientific Research Installations or Equipment in the Marine Environment, Responsibility and Liability and Settlement of Disputes and Interim measures. These six pillars require a corpus juris of rules, regulations and procedures and they are discussed under the major thematic headings set out below. That the rules et al have to be “reasonable” for use beyond the territorial sea have been mentioned in Article 255. The term “reasonableness” must also be read in the light of sustainable development and inter-generational equity.

National rules and regulations on MSR should take these broad criteria into account when drafting legislation on MSR for all the maritime zones.

1.2 The United Nations

The United Nations General Assembly (the UNGA) at its 60th session on Oceans and the Law of the Session discussed and approved on 29 November 2005 the matter of Procedure for the Application of MSR under Article 247 of the 1982 LOSC as submitted by the Intergovernmental Oceanographic Commission, A/ RES/ 60/30. The United Nations Draft Standard Form A on MSR “Application for Consent to Conduct Marine Scientific research in Areas Under National Jurisdiction of a State” requires information on matters such as the name of the cruise, the sponsoring institutions, names of scientists in charge of the project and of scientists from the coastal state involved in planning of the project, the description of the project including its nature and objectives, methods and means to be used such as particulars of the vessel including the flag state and a welter of detail such as the number of scientists on board, aircraft and other craft to be used on the project, particulars of methods and scientific instruments to be used, harmful substances or explosives to be used if any, whether drilling will be carried out, nature of installations and equipment, the geographical areas of the intended work with the aid of charts, dates and port calls to be made and nature of services to be required at the ports, extent of coastal state participation and detailed



rules on access to data, samples and research results by the coastal states. This set of details are a manifestation of national sovereignty which states ought to know when MSR is carried out in all their maritime zones.

2. Comparative law:

The comparative laws on MSR discussed here are selected based on the fact that they have been duly published by the concerned states and so available for a comparison.

2.1 Mauritius

The Laws of Mauritius in Maritime Zone Act 2005, Act No 2 of 2005 [9] set out the provisions on Marine Scientific Research in part VIII over two sections namely, Section 22 and 23. Section 22 provides that MSR may be conducted within the maritime zones of Mauritius which are interpreted in section 2 of the Act as the archipelagic waters, contiguous zone, continental shelf, EEZ, historic waters, internal waters, maritime cultural zone, and territorial sea. Section 22(1) then goes on to provide that Mauritius, based on international law and in particular Articles 245 and 246 of the 1982 LOSC, “has the exclusive right to regulate, authorize and conduct marine scientific research in its territorial sea” and in exercise of its jurisdiction “the right to regulate, authorize and conduct marine scientific research in its EEZ and on its continental shelf” respectively. Section 23 then goes on to provide that the regulation of marine scientific research on the maritime zones shall only be conducted “with the express consent of the Prime Minister and in accordance with such regulations as may be made by the Prime Minister.”

2.2 Papua New Guinea

In Papua New Guinea, the Official Administrative Guidelines and Requirements for MSR Programs in Territorial waters under Papua New Guinea’s Jurisdiction and Governance were approved by the National Executive Council of the Papua New Guinea Government at their Special Meeting No 37/2004, Decision No 206/2004 on 8 November 2004. The decision also approved (i) the establishment of the MSR Committee and its structure, and (ii) the Secretariat of the MSR Committee be located in the Department of Mining. The Foreword to the Guidelines states:

“The MSR Committee comprises representatives from a wide range of Papua New Guinean institutions whose collective role concerns the future development of the nation. The MSR Committee is responsible for making recommendations to Papua New Guinea’s Department of Foreign Affairs regarding the approval or rejection of MSR program proposals.

These guidelines have been prepared to assist marine scientific researchers, and teams of researchers in the preparation of their research proposals and programs. The Committee’s aim is to encourage appropriate MSR which will benefit Papua New Guinea, as well as contributing to international academic record.

MSR organizations are encouraged to liaise with the MSR Secretariat so that research proposals are presented in terms of best international practice.”

In Papua New Guinea (PNG), the MSR Committee comprises representative of the following agencies, namely the “Department of Foreign Affairs; Department of Justice and Attorney General; Department of Mining (the Geological Survey of PNG and the Mining Division); UPNG School of Natural and Physical Sciences; National Research Institute; Department of Environment and Conservation; National Fisheries Authority; Department of Transport and Civil Aviation (Maritime Division and PNG National Weather service); National Surveillance Authority; and PNG BioNET (includes academic representation – biology and chemistry)” [10].

This Committee then makes recommendations on the MSR proposals to the Department of Foreign Affairs. The Guidelines were prepared to assist the MSR organisations and researchers to prepare their proposals for MSR work in waters under their jurisdiction and governance. One of the main features of the Guidelines is that time is of the essence for receiving, evaluating, deciding and sending proposals. Knowledge of PNG laws and regulations is also expected of the scientists and their staff. The major mode of communication for all researchers and organizations wishing to carry out MSR in PNG waters is through the official diplomatic channel of the organization in PNG. Additional measures may be implemented



to expedite the process such as serving copies of the research proposal on various decision-making bodies simultaneously. It is also made clear that the formal approval is always made through the diplomatic channel of the researcher or organization. There are very detailed rules on "Affiliation with Commercial Operators" including protection of data and intellectual property rights for PhD and post-doctoral scholars. It is emphasized that ignorance of PNG law and policy is no legal defence. There are very detailed provisions on "Affiliation and Collaboration with PNG Research Institutions", "Patent Rights and Exclusivity of Use of Materials and Products," "Removal of Material and Reporting," "Responsibilities of the MSR Committee and Affiliated PNG Institutions", "Prior Agreements and Discussions", and consequences of "Failure to Comply with These Guidelines and Procedures." These consequences are the "refusal of permission for the planned current and/or future research; the arrest of the vessel in PNG waters; impoundment of samples at the MSR organisation's expense; or refusal of permission for individual staff of the non-compliant MSR organisation to take part in other programs in PNG waters or on land in PNG." [11]

The MSR guidelines have been summarized as follows:

- The Department of Foreign Affairs (DOFA) is the final authority for the approval of MSR applications;
- The official communication granting permission to conduct MSR in PNG waters is granted by the DOFA;
- The DOFA receives recommendations on the scientific merit of the MSR proposals from the MSR Committee within four to six weeks after receipt of a proposal;
- Scientists who and organizations that intend to submit proposals to carry out MSR are required to submit them through their respective diplomatic channels in PNG;
- The deadline of the MSR Committee for receiving proposals is fixed at a time not later than six months in advance of the planned sailing date, or of any planning program and logistics management program of the MSR Committee;
- The MSR Committee meets twice or thrice a month to consider and correspond on

applications.

- All exports of biological and rock/mineral samples from PNG require permits.
- Vessels in PNG waters, customs formalities and the discharge of wastes are subject to PNG laws.
- The MSR Committee is able to provide the proper contacts to assist MSR organizations to meet all legal obligations.
- The relevant government department and agencies entrusted with the responsibility of managing all required formalities is provided in an Appendix...
- The MSR Committee is advised to take cognizance of delays in communications and to factor this into the time frame it sets for the scientists and organisations.
- All applications must follow procedural requirements set out in an Appendix;
- The MSR organisation together with a PNG government research institution have to ensure technology transfer for the conduct of MSR.

While the reasons for the provisions are not given, both these two pieces of national regulations discussed here fail to endorse the role (if any) to be played by their scientists in a sound administrative institutional framework. In the case of the PNG Guidelines, the scientists may well be included in the MSR Committee, however this is far from being made clear. However, national sovereignty of the coastal states are safeguarded in both legislations.

2.3 Australia

The Foreign Research Vessel Guidelines 1996 of Australia (hereinafter 'guidelines') are part of the body of law forming Australia's efforts at implementing the 1982 LOSC under its national laws. It deals with "requests by foreign research vessels to conduct MSR including seismic and other sub-sea floor profiles" and the access and use of genetic resources in Australian maritime zones such as the Australian territorial sea, the EEZ and fishing zone and on the continental Shelf. Foreign Research Vessels entering Australian ports require "public vessel" status which is determined and granted by the Department of Foreign Affairs and Trade. Military vessels are also similarly regulated. It seems that MSR vessels require a "public vessel" status in Australia.

The “public vessel” status is granted when two requirements are met, namely, that the vessel is government-owned or chartered and second that it is not engaged in any commercial activity. Such a status “exempts vessels from the Customs requirement to report and clear and pay duties on stores consumed on board the vessel” [12]. Nevertheless, all vessels are still subject to Federal and State laws including the payment of fees, charges and levies where required. Part 1 of the Guidelines requires “Information in Support of a Request by A Foreign Research Vessel to Conduct MSR within the Australian territorial sea, EEZ, Fishing Zone and on the Continental Shelf (including a port visit)” and Part 1 (A) requires “Additional Information in support of a request by a Foreign Research Vessel to Conduct MSR and have access to Australian ports” which has to be submitted at least six months in advance of the request for consent. Part 2 of the Guidelines require “Information in Support of A Request by a Foreign Research Vessel for Access to Australian Ports, where the Foreign Research Vessel is not undertaking Research in Australia’s Maritime Zones.” Part 3 deals with “Additional Information to be given to Foreign Governments” concerning participation by Australian scientists, agencies or institutions in the MSR and their access to the data. One of the requirements under this Part is that all research vessels in Australian ports and territorial sea are to comply with Australian quarantine and health, immigration, environmental, conservation and customs laws and regulations [13]. Such vessels are also required to comply with additional information regarding documentation and identity documents for both crew and the scientists. Besides, the ships are required to comply with other rules relating to the safety of navigation in Australian waters. Permits for MSR in marine parks, and marine natural reserves or other parks are generally prohibited but may be allowed under special permits. However, in some cases for instance in fisheries, cetacean research, passage and research within the Great Barrier Reef Marine Park, petroleum and mineral exploration, permits under the respective laws are required.

2.4 USA

The US Department (the USD) of State’s Regulations on Authorisation to Conduct MSR in US EEZ also

works through a system of consent from the USD for MSR if and only if:

- Any portion of the research is conducted within the US territorial sea;
- Any portion of the research within the US EEZ involves the study of marine mammals or endangered species;
- Any portion of the research within the US EEZ requires taking commercial quantities or marine resources; or
- Any portion of the research within the US EEZ involves contact with the US continental shelf [14].

The procedure to be followed is as stipulated in the UN Draft Standard Form A discussed above. In this manner, depending upon the nature of the research in marine mammals or endangered species and for continental shelf research, permits or the Incidental Take Permit from the National Oceanic and Atmospheric Administration (the NOAA) Office of Protected Resources and Minerals Management Service and for Research involving the taking of commercial quantities of fish, a letter of acknowledgement from NOAA Fisheries Service Regional Science Center are required. The USD also works through the respective Embassy point of contact for the respective parties. Like Australia, it seems that there is no centralized agency for approval of MSR permits but several US agencies are required to review and approve the application for MSR. The regulations also refer to the express right of the US to request for copies of data for research conducted within the US EEZ. It also seems that both the Australian and US regulations have a consent based regime for the conduct of and for data acquired from MSR.

2.5 Malaysia

2.5.1 The IOC MSR Questionnaire and Malaysia’s response

In the IOC Questionnaire No 3 On The Practice of States In the field of Marine Scientific Research (MSR) and Transfer of Marine Technology (TMT) [15], Malaysia responded that the country had legislation in force to implement the UNCLOS (1982 LOSC) provisions related to MSR as well as other international instruments relevant to MSR. The answer also responded that “the relevant documents

may be obtained officially from the National Security Division, Prime Minister's Department, Federal Government Administrative Centre, 62502 Putrajaya" [16]. On consent, the questionnaire asked whether there were official channels to handle requests for MSR projects in waters under the country's sovereignty or jurisdiction in accordance with Article 250 of UNLCLOS (1982 LOSC) to which Malaysia replied that there were and provided the address of the Secretary-General of the Ministry of Foreign Affairs, Territorial and Maritime Affairs Division, No 1 Jalan Wisma Putra, Precinct 2, 62502 Putrajaya. On the total number of requests for authorization that the country received from 1998-2002, Malaysia responded that there was on an average of five per year, approximately 25 requests in the period under survey. The questionnaire then proceeded to ask how many of these requests were approved, to which Malaysia responded that "almost all of the requests get approved under normal circumstances" and that we had created an application form for requesting consent under Article 255 of the 1982 LOSC, but it was not a specific model of an application form like those prepared by international organisations such as the model for the International Council for the Exploration of Sea or model of the UN/OLA/DOALOS standard. However, Malaysia explained that "an interim set of guidelines based on Malaysia's EEZ Act 1984 and application form were currently in use. On the issue of whether Malaysia had created any other specialised application form for requesting consent, Malaysia replied that she had and that the relevant document was available from the Division of National Security, Prime Minister's Department, Federal Government Administrative Complex, 62502 Putrajaya.

The next section of the Questionnaire then proceeded on to "Application Requirements for Foreign Countries Intending to Conduct MSR Projects in the waters under Sovereignty or Jurisdiction of Your Country". Malaysia replied that she did not undertake MSR in areas that were not under her sovereignty or jurisdiction and that the state had not benefitted from the procedure of implied consent as stated in Article 252 of the 1982 LOSC to conduct research in the waters of another coastal State. Even though a coastal State, Malaysia had never utilized implied consent to allow research to be conducted in waters under our jurisdiction by another State. This was because

there was no such necessity as all applications were processed within the time limit of three months. On the last part of the MSR questionnaire entitled "Procedures After Consent for MSR Project is granted by the Coastal State", Malaysia replied that the expected starting date of the MSR project in the State was the specified starting date of the research plan or the date the research vessels departed or the date the actual research operation began in waters under our national jurisdiction. On the status of observers, Malaysia replied that we have already sent scientists have been sent as observers on-board foreign research vessels in the framework of a MSR project conducted in the waters under our national jurisdiction. These observers represented the Government of Malaysia on board these foreign research vessels. However, research vessels of Malaysia had not hosted foreign observers. The functions of those assigned as observers on board foreign vessels were four fold: first, to report on research activities carried out; second, to ensure that the type of research undertaken and the area where the research was conducted conformed to the official notification document; third, to act as an official channel for possible communications between the vessel and the Government of Malaysia; and fourth to take the opportunity to be trained in the field of work defined in the MSR project.

Malaysia answered affirmatively that if the state decided to undertake a MSR project in waters under the national jurisdiction of another coastal State, the state would generally plan to provide equipment (on-board the research vessel) for use by a potential observer(s) from that coastal State. It was also Malaysia's stand that researchers were required to provide the relevant authorities with copies of data and samples under Article 249 (1) (c) of the 1982 LOSC and that researchers would provide and assist the relevant authorities with an assessment of research results under Article 249 (1) (d). Malaysia would also publish and disseminate at the national, subregional/ regional and international levels the research results and conclusions of the research performed by the State under Article 249 (1) (e). In the last five years, several foreign vessels had undertaken MSR in the waters under our national jurisdiction for research in fishery, pollution, geology, oceanography, hydrology, and five other types where details were not mentioned. Malaysia had not

required suspension or cessation of a MSR project conducted in waters under national jurisdiction for non-compliance with Article 248 and 249 of the 1982 LOSC. All foreign vessels whilst in Malaysian ports were subject to the prescribed legal or regulatory requirements relevant to Malaysia.

2.5.2 General Circular No 3 Year 1999 on Regulations for the Conduct of Research in Malaysia

The concept of 'national security', a manifestation of national sovereignty, is highlighted in General Circular No 3 Year 1999, Malaysian Regulations for the Conduct of Research in Malaysia which is generic in approach as its scope covers all research in a broad administrative sense. Appendix A of the Explanatory Notes offers some explanation as to what constitutes sensitive issues in the context of national security.

Of the twelve provisions on the issue of 'national security' in the General Circular No 3 Year 1999, Malaysian Regulations for the Conduct of Research in Malaysia, four are highlighted below.

1. In the context of national security, sensitive issues mean any issue that can cause prejudice, hatred, enmity or contempt between or towards any ethnic or religious group and can affect public safety, national security and/ or the integrity of the Government and is generally connected with the following acts or behavior:
 - 1.1 Questioning the implementation of certain government policies pertaining to economic development, education and social matters;
 - 1.2 Questioning the implementation of particular provisions in the Federal and State Constitutions pertaining to Federal laws, the freedom of religion, the special position of the indigenous (Bumiputera), citizenship and rights of the other communities.
 - 1.3 Regarding a racial or religious group as neglected or given preference in the implementation of a particular policy without providing the background or reasons that necessitate it.
 - 1.4 Promoting the success of one racial or religious group on the basis of the

preference and facilities provided by the government to individuals or the ethnic group concerned.

Most probably, these regulations do apply to the laws and procedures required for the implementation of the Convention on International Trade in Endangered Species in Wild Fauna and Flora [17] (CITES) through the International Trade in Endangered Species Act 2008 [18] of Malaysia. Appendix B 3 of the above Malaysian regulations refer to Guidelines for the Collection and Distribution of Herbarium, Museum and Living Specimens [19].

The objectives of Circular No 3 are as follows: "... The regulations cover all foreign researchers and Malaysian nationals domiciled overseas. The objective of this regulation is to expedite and co-ordinate research conducted in Malaysia by foreign researchers and Malaysian nationals from institutions and/ or organizations overseas" based on a Code of Conduct For Foreign researchers in Malaysia as set out in Appendix B2 of the regulations. Section 5 further amplifies the objectives which are to ensure that all research is registered with a central registry; to ensure that outcomes of the research are beneficial to the states; ensure that no specimens are taken beyond the borders of Malaysia without an approval of the concerned government department; and "monitor research that is sensitive in nature in order to protect the nation's image and safeguard national interest".

Under these Regulations, there are four government agencies responsible for the implementation and co-ordination of foreigners and overseas Malaysians conducting research in Malaysia. These are the Economic Planning Unit, the Immigration Department, the Malaysian Embassies/ Malaysian High Commissions/ Ministry of Foreign Affairs and Ministries/ Departments/ Government Agencies/ State Governments/ Institutions of Higher Learning/ Local Research Institutes.

The Economic Planning Unit is the co-ordinating agency and is responsible for the implementation of all regulations pertaining to the coordination of research and has the power to issue the Research Pass and revoke the approval at any time without prior notice. This will allow the researcher to get

assistance and co-operation from the relevant government agencies subject to the provisions of the Official Secrets Act 1972 and related laws.

One of the main responsibilities of the Immigration Department is to undertake security clearance on the foreign researcher and inform the Economic Planning Unit of the status of the security clearance before the research pass is issued by the Economic Planning Unit. The Immigration Department issues the Professional Visit Pass for the duration of the research and ensures that the candidate departs the country only with the letter of approval issued by the Economic Planning Unit. Researchers are to abide by the Laws of Malaysia as are in force when conducting the research in Malaysia.

Of the three-fold role of the Malaysian diplomatic missions and the Ministry of Foreign Affairs overseas, the most important one is to enhance the awareness and understanding of the regulations pertaining to the conduct of research in Malaysia and to supply researchers with the application forms.

All agencies and institutions of higher learning have five duties: firstly, to ensure that all researchers have the necessary prior approval from the Economic Planning Unit before the commencement of the research. The second duty is to provide comments on the research proposal, the objective of the research, methodology, scope, location of research, and benefit to the nation amongst others. The third duty consists of in providing comments on the research proposal to the Economic Planning Unit within two weeks and upon failure to do so, this agency may decide on the application. The fourth duty is to “ensure that no specimens are taken out of the country without the prior approval of the authorities concerned.” The last duty refers to the submission of a report to this agency where applicable, setting out complaints on behavior of the researcher and improper conduct thereof whilst undertaking research. The Malaysian counterpart agency of the researcher is also required to monitor the activities of the foreign researcher. Of the nine duties stipulated under regulation Appendix C 9.1.5, one of them emphasizes that the researcher is under no circumstance “to discuss or pass on information about the research to the media.”

Of these four agencies, the Economic Planning Unit coordinates and decides on all applications received after due consideration of the comments given by the other agencies described above.

Appendix B1 of the above regulations, therefore, provides that all applicants, based on their area of study, have to submit their applications forms to (1) the respective ministry or department; (2) any two of the following universities – “The University of Malaya, Universiti Kebangsaan Malaysia, Universiti Sains Malaysia, Universiti Utara Malaysia, Universiti Putra Malaysia, and Universiti Teknologi Malaysia, Universiti Malaysia Sabah for research in Sabah and Universiti Malaysia Sarawak for research in Sarawak. The universities must offer courses related to the areas of research”; and (3) to the respective state government. Table A to Appendix B1 provides the fields of study and the related Institutions and Agencies in a succinct form.

For the purposes of these Regulations, Section 3.1 provides that a “researcher” is defined as a “foreign national(s) or Malaysian(s) from foreign institutions and/ or organizations who scientifically and objectively research a particular area or problem. The research to be conducted should enhance knowledge and understanding of the area researched”. Research may be carried out individually or in groups. The broad framework regulations provide that a foreign researcher who has been approved to carry out research must do so in collaboration with a Malaysian counterpart. The above regulations may be interpreted to apply to all CITES marine species and to non-CITES marine species.

2.5.3 Other Malaysian legislation

Currently, there is no law that proffers a definition of MSR and there is no comprehensive legislation on Research that includes clear provisions on MSR in Malaysia governing national/regional scientists, international scientists or international scientific organizations within Malaysia in all of her maritime zones. Through some laws, Malaysia has claimed prescriptive and enforcement competence such as Section 6(j) of the Continental Shelf Act 1966 [20], Sections 4-5, 16-20 of the Exclusive Economic Zone Act 1984 [21], Sections 5 and 14 of the Malaysia-Thailand Joint Authority

Act 1990 [22], and Sections 7(2)(i), 7(5), 7(6) (a) (j) and Section 8 of the Malaysian Maritime Enforcement Agency Act 2004 [23]. Definitions of terms such as “consent”, “scientist”, “competent international organization”, “peaceful”, “mutual benefit” and “MSR” need to be provided in national legislation that applies to all national maritime zones.

2.5.3.1 *Continental Shelf Act 1966*

Section 2 of the Continental Shelf Act defines the “Continental shelf” as the “sea-bed and sub-soil of submarine areas adjacent to the coast of Malaysia but beyond the limits of the territorial waters of the States, the surface of which lies at a depth no greater than two hundred metres below the surface of the sea, or, where the depth of the superadjacent waters admits of the exploitation of the natural resources of the said areas, at any greater depth.” Section 6 (j) provides that the Yang di-Pertuan Agong or King may make regulations for “prohibiting or restricting any exploration of the continental shelf or any specified part thereof or any exploitation of its natural resources which in the opinion of the Yang di-Pertuan Agong could result in any unjustifiable interference with navigation, fishing, or the conservation of the living resources of the sea, or could interfere with national defence or with oceanographic or other scientific research or with submarine cables or pipelines.”

2.5.3.2 *Exclusive Economic Zone Act 1984*

Section 4 (b) of the EEZ Act recognises Malaysia’s jurisdiction with regard to MSR in the EEZ or on the continental shelf as defined under section 2 of the Continental Shelf Act 1966. Section 5 prohibits the conduct of MSR in the EEZ or on the continental shelf unless authorized by the Act or any other applicable written law. Section 16 provides that no MSR may be conducted without government consent which may be subject to conditions provided that it is for peaceful purposes and to increase scientific knowledge of the marine environment. Section 17 allows the government to withhold consent for MSR where the government has reason to believe that the project is of direct significance, involves drilling into the continental shelf, uses explosives or introduces pollutants, requires the involvement of artificial islands, installations or structures, contains inaccurate information on

the MSR project or has prior obligations from a previous MSR project or interferes with Malaysia’s sovereign rights and jurisdiction under the laws of Malaysia or under international law. Section 18 refers to a six month period wherein the State or competent international organization has a duty to provide information on the MSR with details of the nature and objectives of the project, the method and means to be used, the nature of the vessel, scientific equipment, the precise geographical areas for the MSR to be carried out, the expected dates of first appearance and final departure and deployment and removal of equipment, the names of legal and juridical persons of the sponsoring institution, and the extent of Malaysia’s participation or representation in the project. Section 19 provides that there is a duty on the part of the State or competent international organization undertaking MSR in the EEZ to comply with the conditions stipulated by the Government of Malaysia such as, amongst others, the right of the Government to participate or be represented in the project without payment of any remuneration to the scientists of Malaysia and without obligation to contribute to costs, to have the preliminary and final reports on the project, to provide access and assessment of all data and samples as may be required, to ensure international dissemination of the research results based on the agreement of the government, to inform the government of any change in the project and to remove the installations and equipment once the research is completed. Section 20 provides for the orders of suspension and cessation of MSR project by the Government where the researching State or international organisation has been in violation of sections 18 or 19 and particularly where the rectifications are not carried out within a reasonable period of time as determined by the Government.

2.5.3.3 *Malaysia-Thailand Joint Authority Act 1990*

Section 5 of the Malaysia-Thailand Joint Authority Act may refer to a generic provision that may be interpreted to include MSR and reads: “The Joint Authority hereby is vested with and assumes the exclusive rights, powers, liberties and privileges of exploring and exploiting the natural resources, in particular, petroleum in the Joint Development Area”. Section 14 (1) and (2) on the other hand seems to refer to a more specific prohibition on



exploration or exploitation of natural resources without a contract for commercial purposes as opposed to MSR. Perhaps there is some indication of a MSR in section 14 (3) (g) which refers to the “payment of a research cess by the contractor to the Joint Authority in the amount of one half of one per centum of the aggregate of the portion of gross production...” It is interesting that Section 25 of this Act provides that this Act prevails over all other Acts where the provisions of this Act are in conflict or are inconsistent with any other provision of any other law.

2.5.3.4 Malaysian Maritime Enforcement Agency Act 2004

The Malaysian Maritime Enforcement Agency Act applies to various maritime zones in Malaysia. Section 7 of the Malaysian Maritime Enforcement Agency empowers the Agency to “expel any vessel which it has reason to believe to be detrimental to the interest of or to endanger the order and safety in the Malaysian Maritime Zone.” Section 7(5) provides that the passage of a vessel is deemed to be an innocent passage so long as it is not prejudicial to the peace, good order or security of Malaysia and a violation of section 7(6)(j), whereby a vessel in pursuit of innocent passage engages in carrying out unauthorized research or survey activities, disqualifies the vessel from the innocent passage mode. Section 8 states that a prosecution of an infringement of the Act is to be carried out by the Public Prosecutor only.

3. Basic features of a comprehensive national MSR law

Whilst the preambular provisions of MSR regulations could refer to the nobility and laudable aims of MSR and the multitude of treaty obligations that states have to honour and comply with, it is imperative that the Preamble underscores the obligation of all scientists and competent national and international organisations to respect national sovereignty: in particular the preamble could state that national scientists who undertake MSR could assist in defending national sovereignty claims within national maritime zones. It could also refer to the legal and administrative protection of fisheries rights, resources of the seas and for protection of climate change. In the same vein, the role and place of science in the international law and evidence

as practiced and required before the International Tribunal for the Law of the Sea (the ITLOS) or the International Court of Justice (the ICJ) also need to be underscored. That science plays a role in diplomatic negotiations and builds and strengthens national issues have to be acknowledged. The obligations, moral and legal, cast upon scientists and the rights, privileges and immunities of scientists need to be spelt out carefully under the putative law. The content of the contribution of the coastal and the researching state towards MSR in the coastal state’s marine environment have to be expressed. This will in turn entail the responsibility and liability of the party and in turn have an effect on dispute settlement in MSR. The preamble also has to address the values of international cooperation in MSR so long as the necessary conditions and consent of the coastal State have been obtained. The precautionary principle has to be followed in the conduct of MSR.

The areas of MSR law discussed below ought to be applied in the case of internal waters, territorial seas and strait used for international navigation in particular, and to the EEZ.

3.1 Persons and nationalities:

The ambit of the conduct of MSR involves national scientists, foreign scientists, national organizations, foreign competent international organizations, coastal states and researching states. The purpose of research and the general principles of MSR need to be clearly stated for the 1982 LOSC in Article 240 requires that MSR be conducted exclusively for peaceful purposes, with appropriate scientific methods and means, and care has to be taken that it does not interfere with other legitimate uses of the sea and is in compliance with all relevant regulations adopted under the Convention paying special attention to the protection and preservation of the marine environment.

The rights and duties, privileges and immunities of competent international organizations have also to be determined. The state has a duty to compile a list of accredited competent international organizations that can undertake MSR in national maritime zones.

The 1982 LOSC in Article 254 provides that the neighbouring land-locked and geographically



disadvantaged states also have a right to participate in the MSR project of foreign scientists, this is a statement of law that has to have a place in municipal law content. This may relate to protection of fisheries or to protection of marine mammals.

3.2 Zones of national sovereignty

The 1982 LOSC recognizes the right of coastal states to regulate MSR in their territorial seas. Article 245 endorses this right and subjects MSR in this zone to the consent and other conditions stipulated by the coastal state. However, even though there are no provisions on MSR in the regime of straits used for international navigation in Article 245, resort must be made to the general principles of public international law including international customary law. It is noteworthy that Article 40 provides that "During transit passage, foreign ships, including MSR and hydrographic survey ships, may not carry out any research or survey activities without the prior authorization of the States bordering straits." Under customary international law, every state has sovereignty over its territorial sea and can exercise the necessary sovereignty for the regulations of MSR so long as it does not interfere with the right of transit passage of international shipping.

Subsequent to this exercise of state sovereignty, the legislature has a duty to classify areas within the straits where MSR can be conducted. If there are restricted zones, then these must be communicated to the scientists. The duty must be observed by lead agencies comprising amongst others, national scientists. The duty to report on research undertaken so far and the dissemination of results of that research need to be legislated. It is submitted that fears of inability to conduct bona fide or legitimate MSR should be assuaged through the enactment of sound national laws.

The creation of a national register of MSR conducted so far and for the future needs to be legislatively stipulated. The process of MSR from start to finish in the territorial sea or in the straits need to be spelt out under the law. The conduct of MSR in the EEZ and on the continental shelf are open to other states as well (this is reflected in the Malaysian legislation set out earlier on). What is poignant here is that, even though coastal states do have the jurisdictional right to regulate

MSR and are required to give consent, they are also compelled to not withhold consent in all normal circumstances which also includes situations where there is an absence of diplomatic relations between the coastal state and the researching state. This is an onerous requirement as it compels states such as Malaysia which do not have diplomatic relations with states such as Israel, to nevertheless allow an Israeli scientist to conduct MSR in the EEZ or on the continental shelf.

3.3 Consent of coastal State

The coastal state has a duty to stipulate the meaning of favourable conditions and to state the content of these favourable conditions. The 1982 LOSC in Article 243 [24] requires a state to conclude bilateral and multilateral treaties for this purpose. These treaties form the basis of the agreement between States in MSR and separate Annexes to the treaties need to spell out the scope or terms of reference for the scientists and for the MSR that they plan to engage in.

The 1982 LOSC in Article 246 (5) recognizes certain situations where a coastal state may withhold its consent in the conduct of MSR in the EEZ or on the continental shelf within 200 nms. Beyond that distance, where a coastal state's claims so extend, the coastal state has no discretionary power to withhold consent. It is again submitted that if Malaysia claims an EEZ greater than 200nms, then the provisions of Article 246(6) would apply whereby we would have to inform researching entities of the MSR to be conducted without the necessity of giving the details of such activity.

The 1982 LOSC lays down two paramount duties on the researching state in Articles 248 and 249. Article 248 begins by saying that the researching state and competent international organization that intend to undertake MSR in the EEZ or continental shelf have because of the apriori nature of the duty to provide six months in advance of the expected starting date of the MSR project:

... "a full description of

- (a) the nature and objectives of the project;
- (b) the method and means to be used, including name, tonnage, type and class of vessels and a description of scientific equipment;

- (c) the precise geographical areas in which the project is to be conducted;
- (d) the expected date of first appearance and final departure of the research vessels, or deployment of the equipment and its removal, as appropriate;
- (e) the name of the sponsoring institution, its director, and the person in charge of the project; and
- (f) the extent to which it is considered that the coastal State should be able to participate or to be represented in the project.”

The provisions of Article 249 refer to vested rights, not accrued rights, of the coastal state to participate in the MSR of foreign states and competent international organizations in the former’s EEZ or continental shelf. The 1982 LOSC in this manner even protects to some extent the external sovereignty of a coastal state. Many of these duties are found in the Malaysian EEZ Act.

3.4 Communications

Communications of the nature of the cruise and the name of the sponsoring institution must be made to the coastal state as stipulated in UN Draft Standard Form A as discussed above. Communications concerning MSR projects to foreign researchers are to be made through appropriate official channels, under Article 250, which usually is the diplomatic mission in one’s state.

The 1982 LOSC strives to inject balance into the MSR scheme by requiring in Article 251 that “All states shall seek to promote through competent international organizations the establishment of general criteria and guidelines to assist states in ascertaining the nature and implications of MSR”. It is submitted that while the content of any type of guideline may be challengeable in a court of law being made under ministerial guidance, the better option may be, in so far as it may be practicable, to lay down the requirement as a rule of law to be observed. There is a difference in legal content between a rule, a principle and a guideline. The danger in taking time beyond six months, that is delay beyond six months, to respond to queries for the conduct of MSR, is that the Convention recognizes the implied consent proviso by which States under Article 252 are deemed to have given their consent to the conduct of the

MSR in their maritime zones. A coastal state must respond within a four month period if it objects to the MSR for reasons given in Article 252.

The deployment and use of scientific research installations or equipment in the marine environment is subject to the same regulations as the conduct of MSR. Their legal status is not equivalent to islands and therefore they do not possess a territorial sea of their own and neither does their presence affect the delimitation of their territorial sea, the EEZ or the continental shelf. Such scientific installations are required to maintain a safety of zone of 500 metres around them and vessels are required to respect these zones. Paramount care must be taken to observe that these installations do not interfere with the international shipping routes. All such scientific equipment or installation must carry on them identification markings indicative of the State of registry or the international organization to which they belong. These structures are also required to have internationally agreed warning signals to ensure safety of maritime and air navigation in accordance with established international rules and standards. These provisions are found in Articles 258 – 262.

In Article 263 it is stated that states and international organizations have the responsibility to ensure that the MSR is conducted in accordance with the 1982 LOSC. If they are found to be in breach, then they are liable to pay compensation for such damage to the coastal state. They are also liable for causing marine pollution damage, and Article 263 cross-references to Article 235, and are required to compensate the coastal state for the ensuing damage.

The settlement of MSR disputes and interim measures in the wake of such disputes are regulated by Articles 264 and 265 and are to be settled in accordance with the provisions of Part XV, sections 2 and 3. The interim measures stipulate that MSR activities are to be stopped or discontinued except with the express authorization of the coastal state concerned.

4. Consequences

The usual consequences that follow for a breach of diverse foreign state laws by marine scientists and their research vessels, in the absence of

express legislation on MSR or absence of express bilateral or multilateral treaties in this regard, lies either in breach of those laws or where applicable in a tortious action under the recognized heads of tort or again where applicable under the criminal laws within the state whose laws have been infringed where the states are not a party to the 1982 LOSC. The damages to be paid may either be limited by statute or may be unlimited. Where the states are parties to the 1982 LOSC, at the international level, the regime of liability and compensation that will follow are stipulated under Article 263 of the 1982 LOSC (even though they have not specifically legislated upon this in municipal law). However, this line of argument is not easy to defend as the 1982 LOSC is not a self-executing treaty and requires municipal legislation to give effect to its provisions. Dispute settlement in relation to MSR is provided under Article 297(2) of the 1982 LOSC as follows:

Article 297(2) provides:

Disputes concerning the interpretation or application of the provisions of this Convention with regard to marine scientific research shall be settled in accordance with section 2, except that the coastal State shall not be obliged to accept the submission to such settlement of any dispute arising out of:

- (i) the exercise by the coastal State of a right or discretion in accordance with Article 246; or
- (ii) a decision by the coastal State to order suspension or cessation of a research project in accordance with article 253.

5. Conclusion

Based on the foregoing discussion, it may be said that the role played by national scientists in MSR law and policy has to be strengthened as MSR requires scientists to continuously be involved in the assessment of the projects which ought to be in line with a master plan of research that needs to be carried out and results analysed to see if the research has been carried out correctly. Moreover, if there is a scientific content dispute, it may easily be settled at the national level, too.

Subject to the international law on MSR described above, on the whole, the current status of MSR in Malaysian maritime zones needs to be comprehensively developed. It is therefore important

and behoves coastal states and researching states such as Malaysia to legislate upon this area of the law for if there is no law, then the international adjudicatory bodies will look for state practice on the subject. In this regard, the IOC and the International Maritime Organisation (the IMO) may be a reference point. It is also not suggested here that the national laws of any of the states on MSR discussed above should be adopted in Malaysia. The clear reference to defence of national sovereignty in both the legislations of Mauritius and PNG cannot be denied. While we do have references to what constitutes a threat to national security, the Australian Guidelines and the USD regulations on MSR are instructional in so far as the detailed regulations on “public vessel” status, ports of call and passage and research in the Great Barrier Reef Marine Park Area and on the US EEZ are concerned. In both the latter states, there seems to be no centralized agency for the purpose of coordination of the MSR but the authorities refer to a variety of agencies for permits, consent, and approval. The USD also relied on the UN form for this purpose.

In addition to the existing guidelines on the conduct of research in Malaysia which are generic in nature, MSR laws should be treated separately and comprehensively. We may extrapolate generally where relevant from the legislative experiences of foreign states in MSR. In this regard, the protection of national sovereignty may also be considered a first step in the right direction.

Based on the above discussion, it could be argued that in an alternate view the institutional and administrative set-up should also be enhanced. To that end, there may be a need to set up a Malaysian Law of the Sea Implementation Committee for the implementation of the rights and obligations flowing from the 1982 LOSC and one of the Sub-committees could be responsible for the MSR Consent regime. The members of this Sub-Committee should comprise the scientists amongst other government agencies such as the Ministry of Foreign Affairs, the AG’s Chambers, and others from sectors such as Mining, Environment, Fisheries, Transport, Civil Aviation, Maritime Division, Climate and Weather, Surveillance, Security, Navy, the National Oceanography Directorate (NOD) and the Universities (law,



biology, chemistry and biotechnology) and National Research Institutes. This again is based on a whole of the government approach. The number of institutions could be trimmed down where so determined. The NOD has positioned itself as a data management organization working alongside and supporting scientists. The Sub-Committee would be required to meet several times a month to evaluate MSR proposals. One of the mandates of this Sub-Committee should be the drafting of legal and administrative/ institutional framework for MSR in Malaysia and for national scientists and organizations who desire to conduct MSR overseas. The legal obligations of all scientists and relevant competent organizations to defend national sovereignty in the resources, processes for the conduct of and data acquired from MSR need to be spelt out. This requires, amongst others, listing and classifying all scientists and organisations. This Committee including scientists has to vet and approve proposals for MSR in waters under Malaysian sovereignty, jurisdiction and control or governance.

Some other matters that need attention are related to vesting authority, diplomatic channels, internal procedures, exceptions, criteria, approval, permits, regulations contact points and affiliation.

The vesting authority for final approval for MSR could vest in an agency such as the Ministry of Foreign Affairs (FOA), or the current administrative structure of the Economic Planning Unit retained so long as there are scientists on board, who ought to assess the scientific merits of all proposals. It is important that scientists are involved in every step of the way where there is a scientific content or decision to be made.

With regard to the role of diplomatic channels, where foreign scientists desire to work in waters under Malaysian sovereignty, jurisdiction or control or governance, then all such proposals are required to be submitted to the relevant diplomatic channel in Malaysia, Kuala Lumpur. Currently, Malaysia has some provisions in this regard, however, the state needs to make it MSR specific and comprehensive. It is to be noted that there is an international obligation for MSR scientists and organizations to send their proposals through the diplomatic channels to the host nation. The foreign researcher's national Embassy or Consulate

or the High Commission in Malaysia will forward the proposal to the Sub-Committee on MSR/ FOA in Malaysia for their recommendation. The Sub-Committee/ FOA would then return the proposal to the researcher's diplomatic mission in Malaysia which would then communicate with the foreign MSR organization and the researcher. It ought to be made clear that the Sub-Committee/ FOA bears no responsibility whatsoever for late applications which may be considered for the next cycle. Perhaps, the Secretary-General of the Sub-Committee could play a role here.

A detailed internal procedure ought to be worked out as a general rule for submitting MSR proposals in advance of the planned sailing date. Recognised exceptions to the general rule, whereby a late proposal on MSR will be accepted need to be stated as well. The various criteria by which a MSR proposal will be accepted or rejected ought to be legislated upon as well as this could be challenged before a court of law.

The approval of MSR ought to be communicated to the parties and this may be done either through the diplomatic channels or by serving them a copy of the decision. It ought to be made clear to all MSR personnel that necessary applications are to be made for the removal of samples and an application to conduct MSR shall include a full disclosure of all work to be carried out on samples collected, the objectives of the work, and any intention, need or potential requirement to patent or otherwise formally or generally establish exclusivity of usage of any material, discovery or by-products derived therefrom. Copies of memoranda of understanding with Malaysian MSR organisations in respect of such activities shall be included as part of the application.

Permits are required for the export and import of CITES and non-CITES biological and rock/mineral samples from the state and for foreign MSR vessels to operate in Malaysian waters as explained above. Foreign MSR vessels are to be reminded that they have to take into account the time required to get permission and clearing for the paper work involved in these processes. Amongst others, scientists would be required to draw up a list of protected and endangered living species and all seismic and sea-bed floor profiling that needs to be done.



Foreign MSR vessels and their crew ought to comply with national laws and regulations regulating the safety of navigation, suppression of maritime terrorism and prevention of marine pollution and comply with customs formalities and the discharge of wastes. These laws need to be publicized to them. Both foreign and national scientists and their researchers and the relevant competent organizations are to be fully aware of local laws governing their activities and the activities of their staff in their expeditions to areas under Malaysian jurisdiction as explained above.

It is the duty of the coastal state to provide a list of contact points for foreign MSR vessels and crew to contact to determine the status of the MSR application in Malaysian waters as explained above. The various foreign MSR institutions are required to affiliate themselves with the Sub-Committee on MSR in Malaysia to enable the transfer of technology if so necessary. The national authorities have to legislate on the role of delay posed by postal and other communication that may jeopardize the foreign MSR application.

As the current laws on MSR in Malaysia may be strengthened considerably from geographical, material, personal and temporal perspectives, the state, it is submitted that the state has an option to start anew in the development of comprehensive laws, procedures and institutional and administrative framework for MSR, where there is a great opportunity to work with the scientists. The pith and substance of the basic rule of MSR is that it requires consultation with the national scientists and all scientific organizations, institutions and lead agencies. Similarly, customs, quarantine and immigration checks, and export and import of species or part of species can only be carried out with the presence of scientists on board these institutions as scientific knowledge has to be factored into administrative decisions in approving or denying the conduct of MSR. The main thrust of this paper has been, therefore, to emphasise the role to be played by national scientists and scientific organisations in the development of a comprehensive law on MSR that would satisfy the requirements of research and defend national sovereignty of the coastal state. Through that process one can arrive at a comprehensive piece of legislation for MSR based on the precautionary principle.

REFERENCES

1. (1982) 21 ILM 1261.
2. Many refer to this convention as UNCLOS 1982, however, UNCLOS is traditionally used for the United Nations Conference on the Law of the Sea such as UNCLOS I, II and III.
3. As at 25 April 2007, 136 states were members of the IOC.
4. Franckx E., "The Protection of Biodiversity and Fisheries Management: Issues raised by the Relationship between CITES and LOSC" in *The Law of the Sea: Progress and Prospects*, Freestone D. et al (Eds) (Oxford University Press: Oxford: 2006) at 216, 231. For fuller arguments on the conflict of supremacy of treaties such as 1982 LSOC and the 1993 FAO Compliance Agreement, (1994) 33 ILM 968 and the 1995 United Nations Straddling Fish Stocks Agreement, (1995) 34 ILM 1542, see *Ibid* at 223 to 227.
5. 450 UNTS 82.
6. 516 UNTS 205.
7. 499 UNTS 311.
8. 559 UNTS 285.
9. Transmitted through note verbale dated 26 July 2006 from the Permanent Mission of Mauritius to the United Nations addressed to the Secretary-General of the United Nations. See *Law of the Sea, Bulletin No 62*, (United Nations: New York: 2007) at pp 57-58.
10. <http://ioc-unesco.org>, site accessed on 10 October 2008.
11. *Ibid*.
12. <http://ioc-unesco.org>, site accessed on 10 October 2008.
13. See <http://ioc-unesco.org>, site accessed on 10 October 2008.
14. See <http://ioc-unesco.org>, site accessed on 10 October 2008.
15. This questionnaire responds to IOC Resolution EC – XXXV.7 adopted by the 35th session of the IOC Executive Council, Paris, 4 -14 June 2002 and of Resolution A/RES/56/12 of the UN General Assembly. The purpose of the survey and compilation on MSR and TMT is, amongst others, "to assess the problems encountered in the implementation of MSR regime as established by Part XIII of the UNCLOS (1982 LOSC)".
16. *Ibid*.
17. (1973) 12 ILM 1085.



18. Act 686.
19. For instance, Section 1.2.5 on Herbarium Specimens provides that it is mandatory that a set of specimens listed below be distributed to the following herbaria: Algae – Herbarium, University of Malaya, Lichen – Herbarium, Universiti Kebangsaan Malaysia, Bryophyte – Herbarium, University of Malaya, Pteridophyte – Herbarium, Universiti Kebangsaan Malaysia, Byrophytes – Universiti Malaysia Sabah.
20. Act 83.
21. Act 311.
22. Act 440.
23. Act 633.
24. Article 243