Abstract: The issue of artificial islands in the South China Sea has little been detailed discussed in the context of territorial and maritime disputes. Even in international law, the term “artificial islands” remains controversial and there is no universally accepted definition of it, though several provisions of the 1982 United Nations Convention on the Law of the Sea mention “artificial islands”.

With the development of science and technology and the increasing endeavors of nations States to creep over to occupy more space from the oceans, the issue of artificial islands becomes more salient. This paper attempts to discuss this issue in an international law perspective with special reference to the Spratly Islands and to provoke more discussions about it in future.

Introduction

It is difficult to find a clear answer to the question on how and to what extent artificial islands will have impacts on the disputes over the Spratly Islands. There might also be some doubts as to whether there are artificial islands really existing in the South China Sea. If yes, what are these artificial islands? This paper attempts to discuss the issue of artificial islands in an international law perspective. Although the term artificial islands also includes artificial
installations and structures such as oil platforms or fishing breeding constructions (for example, abandoned or obsolete oil platforms sometimes can be used as artificial reefs for fishery habitat construction), [1] this paper mainly focuses on artificial islands *per se*.

There is little literature in international law addressing artificial islands. It seems that the issue concerning artificial islands has become a neglected one after the adoption of the 1982 United Nations Convention on the Law of the Sea (LOS Convention). As we recall, during the 1970s and 80s there were articles and books in this respect, [2] and even during the Third United Nations Conference on the Law of the Sea (UNCLOS III), a number of States submitted proposals regarding artificial islands. [3] In recent years, it seems the issue of artificial islands turns again to be a hot issue, in particular in the context of East Asian region. With the human advancement and development of science and technology, the pressure from the ever-increasing human population, and more and more highly intensified human activities at sea, all these factors make the issue more ostensibly important. The building of artificial islands concerns national sovereignty, maritime jurisdiction, maritime boundary delimitation, development and utilization of marine natural resources, and it, if not being properly dealt with, could become a new flashpoint in international disputes and conflicts.

**Artificial Islands In International Law**

While it is clear that artificial islands are man-made, in the history of international law, the term as well as its legal status has never been clearly defined. Sometimes it was treated as natural islands, and sometimes as ships. For example, According to Gidel, an artificial island could be treated as a natural island as long as they conform to the following conditions: a formulation surrounded by water; permanently above the surface at high tide; the natural conditions on the formulation can allow human being to inhabit. Besides, artificial islands must be those transformed from natural formulation such as alluvin with the help of human beings. [4] The viewpoint treating artificial islands as ships can be traced back to a report published by the Council of the League of Nations in 1927, which stated that islands created by human beings and anchoring at the seabed without fixed connection to the seabed, but used as a stable base
for an enterprise to promote aviation... this kind of fictional islands must be considered as ships sailing on the high seas.

It is admitted that artificial islands possess some characteristics of ships and also some characteristics of natural islands, but it is not proper to categorize artificial islands as ships or natural islands. If we look at the definitions of ships or natural islands, we can easily see the differences between them and artificial islands.

As we know, the LOS Convention does not provide a definition for “ship”. As we recall, in the 1950s the Special Rapporteur Mr. Francois drafted a definition on “ship” as “a device capable of traversing the sea but not the air space, with the equipment and crew appropriate to the purpose for which it is used” at the International Law Commission during the time of negotiating the Geneva Conventions on the law of the sea. However, this draft definition was finally deleted in 1955 by the International Law Commission. The LOS Convention follows this tradition and only defines the term “warship”. Nevertheless, some other international treaties do contain the definition of “ship”. For example, the 1973 International Convention on the Prevention of Pollution from Ships defines “ship” as “a vessel of any type whatsoever operating in the marine environment and includes hydrofoil boats, air-cushion vehicles, submersibles, floating craft and fixed or floating platforms".

As we can see, this definition includes fixed or floating platforms which can be also categorised as artificial islands.

The other definition which is related to artificial islands is that of “island”. According to the LOS Convention, an “island” “is a naturally formed area of land, surrounded by water, which is above water at high tide”. This definition contains a number of essential factors: a piece of land; naturally formed; surrounded by water; and above the sea surface at high tide. But the
Convention does not explain to what extent a piece of land surrounded by water and above water at high tide can be regarded as an island. In State practice, some countries use the term “island” in a very broad sense. Like Japan, it names “Okinotori” as “shi ma” (island in Japanese) and China uses the term “qundao” (archipelagoes or group of islands in Chinese) to name all the features, even including some permanently under water, such as Macclesfield Bank in the South China Sea in four archipelagos. The Spratly Islands in Chinese is called Nansha Archipelago. Although the definition on “island” in the LOS Convention leaves room for further debate and discussion, it is acknowledged that the definition has been generally accepted by the international community.

Having observed the definitional aspects of “ship” and “island”, we turn to see the legal nature of artificial islands. While there is no definition under the LOS Convention, there are attempts in the international law academia to define “artificial islands”. The Encyclopedia of Public International Law defines artificial island as a temporary or permanent fixed platform made by man surrounded by water and above water at high tide.

According to Soons, artificial islands refer to those structures created by placing natural substances such as gravels, sand and rocks; while artificial installations are those concrete structures fixed to the sea bed by pipes and poles.

These two scholarly definitions have some legal meaning, but could not cover all types of artificial islands and installations. As calculated by Papadakis, there are many kinds of artificial islands such as (1) sea-city (fixed or floated); (2) artificial islands for economic development, such as those for the exploration and exploitation of natural resources, industrial artificial islands, fishing artificial islands, installations to develop non-natural resources such as salvage or archaeology, power station; (3) artificial installations for communications and transport, such as floating docks, warehouse, floating airport; (4) installations for scientific research and weather broadcasting; (5) entertainment installations; and (6) military installations.

If we look at them one by one, we could easily find that their legal statuses are different. This would be one of the reasons why there is no definition on artificial islands in the LOS Convention, and the Convention simply avoids the complexities arising from the definitional problem. But on the other hand, the lacuna left in the LOS Convention complicates the issue concerning the legal status of artificial islands.
Even though the LOS Convention does not provide a definition on artificial islands, it does contain several provisions which are applicable to them. Firstly, the LOS Convention grants States, especially coastal States the right to build artificial islands and the jurisdiction over these islands. It is obvious that coastal States have the right to build artificial islands and installations within their territorial seas. In the exclusive economic zone (EEZ), the coastal State has “the exclusive right to construct and to authorize and regulate the construction, operation and use of: (a) artificial islands; (b) installations and structures for the purposes provided for in article 56 and other economic purposes; (c) installations and structures which may interfere with the exercise of the rights of the coastal State in the zone.” [13] While the coastal State enjoys exclusive jurisdiction over such artificial islands, installations and structures, including jurisdiction with regard to customs, fiscal, health, safety and immigration laws and regulations, [14] it should give due notice of the construction of such artificial islands and maintain permanent means for giving warning of their presence. Furthermore, “the coastal State may, where necessary, establish reasonable safety zones around such artificial islands, installations and structures in which it may take appropriate measures to ensure the safety both of navigation and of the artificial islands, installations and structures.” [15]

The coastal State has the right to establish a safety zone around the artificial islands and determines the breadth of such a zone, taking into account applicable international standards. [16] These provisions also apply to artificial islands built on the continental shelf. [17]

In addition, nation States enjoy the right to construct artificial islands on the high seas as one of the high seas freedoms (Article 87 of the LOS Convention).

Secondly, the LOS Convention to some extent defines the legal status of artificial islands. Its definition on islands clearly excludes any artificial island. Article 60 provides that “Artificial islands, installations and structures do not possess the status of islands. They have no territorial sea of their own, and their presence does not affect the delimitation of the territorial sea, the exclusive economic zone or the continental shelf.” [18] While artificial islands do not generate any maritime zones, coastal States are allowed to establish safety zones around them. But such safety zone around an artificial island should not exceed a distance of 500 metres, “measured from each point of their outer edge, except as authorized by generally accepted international
standards or as recommended by the competent international organization”.

Thirdly, the construction on artificial islands has some implications for maritime boundary delimitation. As for the delimitation of the territorial sea, “the outermost permanent harbour works which form an integral part of the harbour system are regarded as forming part of the coast”, but off-shore installations and artificial islands should not be considered as “permanent harbour works”. This provision is designed to restrict the effect of artificial islands in the delimitation of territorial seas. However, on the other hand, concerning the use of straight baselines, the LOS Convention provides that “Straight baselines shall not be drawn to and from low-tide elevations, unless lighthouses or similar installations which are permanently above sea level have been built on them or except in instances where the drawing of baselines to and from such elevations has received general international recognition”. This provision indicates that artificial islands and installations can play some role in the delimitation of the territorial seas. Of course, relating to the delimitation of the EEZ and continental shelf, artificial islands, except for some role in the determination of baselines from which maritime zones are measured as mentioned above, in principle do not play any role as they do not possess the entitlement to EEZ and/or continental shelf as stipulated in the LOS Convention.

In relevant domestic legislation, coastal States have embodied the relevant provisions of the LOS Convention to realize their treaty rights. Among all the claimants to the islands in the South China Sea, the Chinese Law on the EEZ and Continental Shelf promulgated in 1998 reiterates China’s rights and jurisdiction to its EEZ and continental shelf with regard to the establishment and use of artificial islands, installations and structures. The Philippine law has a similar provision that it exercises “exclusive rights and jurisdiction with respect to the establishment and utilization of artificial islands, off-shore terminals, installations and structures”.

In comparison, the relevant Malaysian law is more detailed and contains one part and several clauses. They include:
“(1) No person shall construct, operate or use any artificial island, installation or structure in the exclusive economic zone or on the continental shelf except with the authorization of the Government and subject to such conditions as it may impose.

(2) The Government shall have exclusive jurisdiction over artificial islands, installations and structures in the zone and on the continental shelf, including jurisdiction with regard to customs, fiscal, health, safety and immigration laws.

(3) The Government may, where necessary, establish reasonable safety zones around such artificial islands, installations and structures in which it may take appropriate measures to ensure the safety both of navigation and of the artificial islands, installations and structures.

(4) The breadth of the safety zones shall be determined by the Government, taking into account navigation and of the artificial islands, installations and structures applicable international standards, Due notice shall be given of the extent of the safety zones.

(5) All vessels must respect these safety zones and shall comply with any directions which the Government may give in accordance with generally accepted international standards regarding navigation in the vicinity of artificial islands, installations, structures and safety zones”.

From these domestic legislations, we can see that States will exercise their respective rights and jurisdiction relating to the construction and management of artificial islands, installations and structures. It is also noted that these legislations are confined to the implementation of the relevant provisions of the LOS Convention in regard to EEZ and continental shelf. There is no mention, say in the 1992 Chinese Law on the Territorial Sea and Contiguous Zone, of the right to construct artificial islands in the territorial sea as perhaps States might think it is a self-evident right since they enjoy full sovereignty over their territorial seas (except for innocent passage).

The Spratly Islands
The term “islands” may be a misnomer when it refers to all the natural features in the South China Sea including the Spratly area. Geographically, there are hundreds of natural features in the South China Sea including islands/islets, atolls, reefs, banks. According to a Chinese source, the Spratly Islands consist of 14 islands/islets, 6 banks, 113 submerged reefs, 35 underwater banks, 21 underwater shoals. Another source from a Western scholar tells us that there are about 170 features in the South China Sea among which only about 36 tiny islands are above water at high tide. From these two figures, we can see that natural features submerged under water are more than those above water. This special geographical characteristic of the South China Sea decides the importance of artificial islands and installations in political, economic and strategic dimensions of the Spratly Islands as islands and reefs there have been claimed and/or occupied respectively by Brunei, China (PRC), Malaysia, the Philippines, Taiwan and Vietnam, making the Spratly Islands a most complicated territorial dispute in world history.

In the present circumstances, there are generally three kinds of artificial islands and/or installations in and around the Spratly Islands and its adjacent areas. The first kind includes floating temporary artificial installations, such as oil platforms. Once the operation is completed, these installations will be dismantled and removed. The second kind is the artificial installations and structures appended to natural islands, either temporary or permanent, such as an airstrip. The final category is very unique, i.e. artificial islands constructed on natural rocks and reefs with the nature of permanence. China (PRC) has occupied several reefs in the Spratlys since 1988 and for the purpose of military stationing or for other purposes, it built artificial structures on these reefs (Johnson South/Chigua Reef, Subi/Zhubi Reef, Gaven/Nanxun Reef, Cuarteron/Hua yang Reef, Hughes/Dongmen Reef, and Mischief/Meiji Reef). Some of them have been later expanded to become more like artificial islands, such as the one established on Fiery Cross/Yongshu Reef. The Swallow Reef (Terumbu Layang Layang in Malay) occupied by Malaysia has been massively reclaimed and has a fishing port, 15-room diving resort and a 1.5 km airstrip. In this sense, it is acknowledged that due to artificial installations, for many of the islands, “it has become difficult to distinguish what is the natural feature and what is man-made”.

When it is safe to say that the relevant provisions of the LOS Convention are applicable to the
first two types, the legal status of the third category is special and difficult to define under the LOS Convention, and even under the applicable international law as a whole. If it is defined as a natural feature, it is mixed with artificial installations and structures; if it is defined as an artificial island, it is not artificially fixed to the sea bed, rather is supported by a natural base such as a reef whether above water at high tide or not. Apparently, there is no regulation in international law governing such kind of natural and artificial combinations. The relevant 1958 Convention on the Continental Shelf contains provisions only concerning the construction of artificial islands on the continental shelf as it provides that the coastal State is entitled to construct and maintain or operate on the continental shelf installations and other devices necessary for its exploration and exploitation of its natural resources, but such artificial installations and devices do not possess the status of islands.

[28]

Since we could not find any reference in existing international law concerning artificial and natural combinations, we may further discuss this issue by turning to look at some existing State practice.

**A Group of Islands *Sui Generis*?**

The following question is naturally arising: can artificial islands based on natural base be treated as a group of islands *sui generis*? Artificial islands can be built on the deep seabed, continental shelf, or rocks/reefs. Can they be treated as the same in the legal sense? It seems that the question is not easy to answer.

In State practice, there are a couple of examples to build artificial islands/structures by using natural rocks and reefs. In the early 1970s, Tonga leveled up two uninhabited low-water elevations by cement, thus expanding the sea areas under its jurisdiction. [29] The more recent example is Okinotorishima (Douglas Reef) of Japan. As an insular feature, it is located at 20°25′ N and 136°05′ E, being the southernmost territory of Japan. Due to the erosion of sea water, the surface of the reef above water at high tide has been gradually reduced and lowered. The two rocks of the reef --- the Northern Islet (
Kitakojima is visible only 16 centimetres and the Eastern Islet (Higashikojima) only six centimeters above water at high tide.

The reef would be swallowed completely by sea water with the natural movements. Since 1987 Japan has began to invest a large amount of money (about $300 million) in consolidating and leveling up the reef, with the attempt to use the reef as a basis to claim more jurisdictional waters. Japan has now built a wall around it and enclosed it as a tomb, in order to preserve it from disappearing from natural forces.

As predicted, “it is quite possible that Japan could make a serious attempt to build Okinororishima into a large artificial island”.

As reported, if successful, Japan can claim an EEZ of about 400,000 sq km and continental shelf of about 740,000 sq km around the reef.

It can be seen that it is apparently an advantage to consolidate and heighten the naturally formed rocks or reefs in the Spratly Islands area for the interest and jurisdiction of the claimant who currently controls that rock or reef. It may cause some controversies in theory, but it seems that since there is no regulation in international law which prohibits such artificial construction, it should be deemed that such construction is not a violation of current international law including the LOS Convention.

On the other hand, with the development of science and technology, artificial islands might provide more favorable living conditions for human beings, thus would accordingly change the legal status of those islands in future. As we know, in the old literature an artificial island was regarded as a legal island, and the earliest definition of “islands” included artificial islands. This can be seen in the Final Act of the 1930 League of Nations Codification Conference that an island was defined as “an area of land, which is permanently above high water mark”. There was no mention whether an island was naturally formed or not. However, only in the later time, artificial islands have been
excluded from the definition of “islands” in which a key word --- “naturally-formed” was inserted.

After taking these historical factors into consideration, there may be a query as to whether it is possible to re-define the definition of “islands”, which could then accommodate artificial islands, in particular those which the artificial parts have been closely integrated into the natural parts.

It should be noted that as early as 2001 when the International Court of Justice (ICJ) dealt with the Case Concerning Maritime Delimitation and Territorial Questions between Qatar and Bahrain (Qatar v. Bahrain), Shigeru Oda, former Judge of Japanese nationality raised his concerns about the future development relating to artificial islands as he expressed that “modern technology might make it possible to develop small islets and low-tide elevations as bases for structures, such as recreational or industrial facilities. Although the 1982 United Nations Convention does contain some relevant provisions (e.g. Arts 60 and 80), I consider whether this type of construction would be permitted under international law and, if it were, what the legal status of such structures would be, are really matters to be reserved for future discussion”.

Today what Oda was concerned about a decade ago has become a real issue facing the international community.

Nevertheless, before the development of relevant international rules in future, we have to keep the following discussion within the framework of existing international law. There are several considerations in our mind for further discussion.

The first consideration is the application of the principle or criterion of reasonableness. Prominent American law of the sea scholars pointed out in the 1960s that the “chief criterion for appraising the reasonableness of a claim to delimit the territorial sea, or an area of internal
waters, from an artificially formed area of land surrounded by water, is whether it is constructed for practical use or rather only as a disguised attempt to extend the territorial sea or internal waters without other relation to local interest. They went on further expounding that “it is clearly undesirable --- to permit a state to extend the territorial sea or to create new internal waters, merely as it pleases by the perhaps simple expedient of placing rocks in the water to a sufficient height to ensure their continued emergence above the surface”.

The purpose to build artificial islands in the area of the Spratly Islands by claimant States is very obvious, i.e. to maintain and consolidate their territorial and maritime claims in the South China Sea. Some artificial installations have been built for economic (e.g., tourism) or scientific (weather observation) purposes alleged by relevant claimant States. Can these alleged purposes be regarded as a disguise for the real purpose above? Is this real purpose for or against the principle of reasonableness?

The second consideration of the construction of artificial islands lies in the application of the “due regard” principle. While States enjoy the right to build artificial islands, such act should not unreasonably affect the rights and interests of other States as well as the whole international community. This principle is clearly reflected in the relevant provisions of the LOS Convention as it provides that when a coastal State establish a safety zone around the artificial island, it should ensure that such a zone is reasonably related to the nature and function of the artificial island, and due notice should be given of the extent of the safety zone. Furthermore, “Artificial islands, installations and structures and the safety zones around them may not be established where interference may be caused to the use of recognized sea lanes essential to international navigation”. The due regard principle is also reflected in the provisions of the LOS Convention on the exercise of the freedom of high seas (Article 87).

A related consideration is whether there is a duty of notification and consultation for the construction of artificial islands and installations in the South China Sea. The duty of notification and consultation is reflected, for example, in the 1997 Convention on the Law of the Non-navigational Uses of International Watercourses. The Convention imposes an obligation on watercourse States of notification for any planned measures which might affect the environment of the international watercourse. If there is disagreement with the notified State, consultation and negotiation should be conducted.
Perhaps this duty should be applied to the construction of artificial islands in the South China Sea as it is advocated that it is necessary to consult the other parties concerned before the construction of artificial islands, even in the territorial sea.

Relevant claimants may rely on the 2002 Declaration of the Conduct of Parties in the South China Sea (DOC) to work out a mechanism of notification and consultation. As reported, ASEAN countries and China have recently agreed to resume their dialogues on the effective implementation of the DOC and to enhance cooperation toward the adoption of a Code of Conduct in the South China Sea (COC).

It is recommended that the duty of notification and consultation relating to the construction of artificial islands and installations in the South China Sea be included in the agenda of the dialogue.

Finally, the issue of artificial islands is related to the application of Article 121 (3) of the LOS Convention which provides that “Rocks which cannot sustain human habitation or economic life of their own shall have no exclusive economic zone or continental shelf”. The current situation of artificial construction in the South China Sea or elsewhere has in fact triggered by this provision since States, in order to extend their maritime spaces, make every effort in turning those “rocks” into “islands” which can fulfill the conditions to sustain human habitation or economic life of their own. The Okinotorishima is a typical example. The question is whether such artificial construction on the reef has changed the legal status of it. As expressed by China, the construction of artificial facilities on the reef “will not change its legal status”.

However, this is only China’s legal position regarding the Okinotorishima and it is contrary to the real intention of Japan. What Japan has done and will do is to make the reef fulfill the conditions prescribed in Article 121 (3) of the LOS Convention so as to enable Japan to claim not only territorial sea, but also EEZ and continental shelf from that reef. Thus the ultimate purpose of Japan is to change.

Nevertheless, such a change may lead two possible legal consequences: one is the change to Japan’s heart that the reef will eventually turn into a natural island fulfilling the relevant conditions set forth in the LOS Convention; and the other, which might be contrary to Japan’s wish, is the change that the natural reef will eventually be treated by the international
community as an artificial island, which under the existing international law can only have a safety zone of 500 metres. Thus it would not be allowed to claim EEZ and continental shelf, but also lose the entitlement to territorial sea due to the substantial construction of artificial installations and structures. This view is already expressed by a prominent law of the sea scholar Jon van Dyke, According to him, the extensive reinforcement work undertaken by Japan could be considered as having changed a reef into an artificial island, which would be unable to claim an EEZ or a continental shelf under Article 60 of the LOS Convention. He went on connecting the issue of artificial islands to the South China Sea and mentioned that Subi Reef and Johnson South Reef (occupied by PRC), Dallas Reef (by Malaysia) and Vanguard and Prince of Wales Banks (by Vietnam) should be treated as the same as artificial islands like the Okinotorishima.

His arguments are further enforced by an earlier opinion expressed by an ICJ judge who stated clearly in the Case concerning Maritime Delimitation and Territorial Questions between Qatar and Bahrain in 2001 that “the alleged attempts of both States to artificially change the upper part of its surface do not allow me to conclude that Qit’at Jaradah has the legal status of an island as provided for in the 1982 Convention on the Law of the Sea”.

It is well suggested that for those reefs which have been substantially transformed into artificial islands in the South China Sea they lose their legal status as natural reefs and be treated as artificial islands under the LOS Convention.

However, as to the question how to treat natural islands with artificial reinforcing works to prevent it from erosion, there should be different treatment for islands with different legal statuses. When an island which has possessed its own EEZ and continental shelf before any substantial artificial construction, but due to natural forces, there is a need to undertake necessary artificial construction work by the coastal State to prevent it from losing its former legal status, such kind of action should be justified in international law. This is particularly meaningful in the context of global warming and sea level rise. A number of island countries are facing threat to being submerged by water because of sea level rise. There is naturally no prohibition under international law for them to retain their statehood by using artificial installations and structures, no matter how substantial and costly. On the other hand, if a coastal State simply attempts to expand its maritime space with the support of artificial facilities, that is very questionable in international law. As another law of the sea scholar Clive Symmons opines, preserving an area of land that has island status, and creating an area of land to obtain legal island status are two completely different actions. The attempt to transform a reef into a natural island with extensive maritime zones is apparently not only against the principle of due regard, but may also constitute an encroachment on the interests and rights of other countries and the international community as a whole.
The maritime areas, if they are not excessively claimed and possessed by coastal States, are part of international seabed area and/or part of the high seas. In that sense, China expressed its concerns that the recognition of Japan’s claim to the continental shelf from Okinotorishima “will set a precedent which may lead to encroachment upon the high seas and the Area on a larger scale”. [52] China’s position is concurred by a number of other countries. What is not clear is whether such a claim is against the principle of common heritage of mankind as embodied in the LOS Convention since the principle has been fundamentally compromised through the adoption of the 1994 Agreement concerning the implementation of Part XI of the LOS Convention. [53]

Having said that, a further consideration is whether reefs with lighthouses built on there could fulfill the conditions under Article 121 (3) of the LOS Convention. In earlier doctrines in international law, it was generally recognized that rocks with lighthouse(s) should not have maritime zones, even territorial seas, as Oppenheim expressed that “a State would not have the right to claim sovereignty on the territorial sea surrounding a lighthouse”. [54] But it seems the doctrine in this respect has been changed and a prevailing view now is that a lighthouse on the reef is a demonstration of “economic life” as it is related to shipping industry. [55]

The question is: if a reef with a lighthouse can enjoy the entitlement to extensive maritime zones, is it fair that the reefs with substantial artificial works in the South China Sea are treated as “artificial islands”?

Another difference which must be made is between the construction of artificial islands without claiming maritime zones from them and their construction mainly for the purpose of claiming maritime zones, with the typical example of Okinotorishima. In this respect, China’s practice is notable. As we know, China has strongly opposed to Japan’s maritime claims from the Okinotorishima, but on the other hand, China also has built substantial artificial islands in the South China Sea. So far there is no express position from the Chinese side that China
would claim EEZ and/or continental shelf from its occupied artificial islands based on reefs. If so, China’s position against Japan would be against itself. Presumably, since China expressed very clearly its position on reefs under Article 121 (3) of the LOS Convention, it is unlikely that China would follow Japan in this respect. Despite this, some Southeast Asian States might still have concerns with China’s position that China would implement a double standard to claim EEZ and continental shelf from small reefs in the South China Sea and such concerns have been reflected in Indonesia’s \textit{Note verbale} dated 8 July 2010 concerning China’s U-shaped line in the South China Sea which is attached to China’s \textit{Note verbale} (7 May 2009) opposing to the outer continental shelf submissions by Vietnam and Malaysia. \cite{56}

China’s official position on the islands in the South China Sea is basically that “China has indisputable sovereignty over the islands in the South China Sea and adjacent waters, and enjoys sovereign rights and jurisdiction over the relevant waters as well as the seabed and subsoil thereof”. \cite{57}

However, from these wording, we can see that China would claim EEZ and continental shelf in the South China Sea, but remains unclear whether China would claim EEZ and continental shelf from the reefs it has occupied.

Clearly, there are numerous discussions on the application of Article 121 (3) of the LOS Convention as it is ambiguous and unclear. It is better if there is an authoritative interpretation to be given on it. Such an interpretation is also helpful to solve the actual problems arising from the construction of artificial islands. As we recall, China attempted to put a supplementary item on the interpretation of this article to the agenda of the 19\textsuperscript{th} Meeting of States Parties to the UN Convention on the Law of the Sea in 2009. As China states, the Meeting should “consider the issue of claiming extended continental shelf with a rock as base point and its legal implication under Article 121 of the Convention”. \cite{58}

Unfortunately, China’s attempt was not successful this time.

Who has the power and competence to give an authoritative interpretation on Article 121 (3) of the LOS Convention? Clearly, the Commission on the Continental Shelf is not a proper forum as it only considers and examines the submissions by coastal States on outer limits of
continental shelves. It has stated clearly that it has no such competence to explain the provision of the Convention. The ICJ clearly has the competence, but it seems reluctant to give an interpretation on it. It has given up the recent chance in the Case of Maritime Delimitation in the Black Sea (Romania v. Ukraine) in dealing with the issue of the Serpents’ Island. While the Court does not give any effect to the island regarding the maritime boundary delimitation between Romania and Ukraine, it avoids discussing whether the Serpents’ is a rock under Article 121 (3) of the LOS Convention.

The most active competent forum should be the International Tribunal for the Law of the Sea (ITLOS) which is anxiously waiting for more cases to handle. As recently expressed by its Presidents and judges, the ITLOS itself (not only the Seabed Disputes Chamber) does have the competence to give advisory opinions on legal issues submitted by appropriate parties. The legal basis of the advisory competence is Article 21 of the ITLOS Statute which vests the Tribunal with jurisdiction with respect to “all matters specifically provided for in any other agreement which confers jurisdiction on the Tribunal” and such agreement may vest competence to issue an advisory opinion in the Tribunal.

According to Judge Wolfrum --- former President of the ITLOS, these opinions “can be of great benefit in the solution of international disputes” and the “Tribunal’s advisory function may guide parties to a mutually satisfactory result”.

Currently, the Seabed Disputes Chamber of the ITLOS is dealing with a case submitted by the International Seabed Authority seeking advisory opinions on the interpretation of the LOS Convention on State responsibility.

It will be possible that if the Meeting of the States Parties to the UN Convention on the Law of the Sea or another appropriate institution decides to seek an advisory opinion from the ITLOS, the latter would be very pleased to take the job. Other opportunities to clarify Article 121 (3) of the LOS Convention are also proposed by a number of well known legal scholars.

**Final Remarks**

The issue of artificial islands is much broader than the discussion in the present paper. It is not only related to territorial and maritime disputes such as in the South China Sea, it concerns as well with maritime security as well as the survival of human beings due to climate change and environmental degradation. The on-going discussion on how to make carbon storage via artificial platforms in the legal circle is related to Articles 208-209 of the LOS Convention as well
as to the London Dumping Convention. The sea level rise could possibly accelerate the construction of artificial islands and other infrastructures to prevent island land from being submerged by water. Such construction may be one of the choices for those island countries currently threatened by global warming.

Besides the environmental dimensions, artificial islands have maritime security dimensions. Maritime terrorism or other maritime crimes might be committed by using artificial islands and/or platforms or attacking those places. For example, the 1988 SUA Protocol is designed to govern the suppression of unlawful acts against the safety of fixed platforms located on the continental shelf. According to the Protocol, the term “fixed platform” is defined as “an artificial island, installation, structure permanently attached to the sea bed for the purpose of exploration or exploitation of resources or for other economic purposes”. The security dimension should be considered in any future negotiation concerning the construction of artificial islands.

Artificial islands are also connected to the rights of land reclamation from the sea. As we know, some countries such as the Netherlands and Singapore have considerably reclaimed land from the sea. There will be some interesting aspects if we compare land reclamation with the construction of artificial islands, in particular in the consideration that it is legitimate to claim maritime spaces from the reclaimed land, though a unilateral act might cause an international dispute or other disruptive problems between neighboring countries just as showed by the Case concerning Land Reclamation by Singapore in and around the Straits of Johor (Malaysia v. Singapore) in 2003.

Finally, it is to be noted that with the increase of human population, artificial islands of large scale, or even sea-cities could be built in future. As early as 1970s, there was a proposal in the United Kingdom to build a sea-city which could accommodate a self-sufficient community of 30,000 residents. The artificial islands built in Dubai by the United Arab Emirates have
at least partially realized the proposal in the 1970s.

[69] There are proposals to build new airports at sea. In fact, some of the Asian airports are built off the coast.

[70] With the development of technology, an airport could be built in the middle of an ocean. These existing and proposed artificial infrastructures are related to the legal status of artificial islands. The question is: with their capability to sustain human habitation or economic life of their own, would these artificial islands enjoy the entitlement to maritime zones?

Artificial islands certainly have other legal implications with the development of international law and relevant State practice, which need further discussions and debates. It is, therefore, well perceived that the issue of artificial islands will draw much more attention from the world community in the near future.

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[3] For example, Belgium, Malta and the United States submitted their proposals to the Conference. For details, see A.M.J. Heijmans, “Artificial Islands and the Law of Nations”, *Netherlands International Law Review*, Vol.21, 1974, 155-160; also see Francesca Galea,
Artificial Islands in the Law of the Sea


[9] See Article 121 of the LOS Convention.


[14] Ibid.

[15] Ibid.

[16] Ibid.


[18] Article 60 of the LOS Convention.

[19] Ibid.


See Papadakis, supra note 2, at 93.


[32] Smith, supra note 27, at 222.

[33] Song, supra note 30, at 150.

[34] See Qin et al, supra note 31. But one source indicates that the EEZ of Okinotorishima (400,000 sq km) is even larger than the land territory of Japan. See Song, supra note 30, at 156.


[37] As is defined in the 1958 Geneva Convention on the Territorial Sea and Contiguous Zone, an island is ‘a naturally-formed area of land, surrounded by water, which is above water at high tide’. See Article 10 of the Geneva Convention. The LOS Convention simply copied this definition for islands.


[40] McDougal and Burke, ibid, at 388.

[41] See Article 60 of the LOS Convention.


[46] Article 121(3) of the LOS Convention.


See ibid.


For discussions on this topic, see Erik Franckx, “The International Seabed Authority and the Common Heritage of Mankind: The Need for States to Establish the Outer Limits of Their Continental Shelf”, International Journal of Marine and Coastal Law, Vol.25 (4), 2010, 543-567.


For example, as is observed by two Dutch scholars, an increasing number of scholars subscribe to the view that a lighthouse or other aid to navigation built on an island gives the island ‘an economic life of its own’ due to its value to shipping. Barbara Kwiatkowska and Alfred H. A. Soons, ‘Entitlement to Maritime Areas of Rocks Which Cannot Sustain Human Habitation
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[58] See “Proposal for the inclusion of a supplementary item in the agenda of the nineteenth Meeting of States Parties: Note verbale dated 21 May 2009 from the Permanent Mission of China to the United Nations addressed to the Secretary-General, supra note 52.

[59] For example, see UN Doc. CLCS/64, 1 October 2009, in which the Commission reiterated “that it had no role on matters relating to the legal interpretation of article 121 of the Convention”. Available at http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N09/536/21/PDF/N0953621.pdf?OpenElement (accessed 1 November 2010).


[61] See “Statement by Rüdiger Wolfrum, President of the ITLOS on the Report of the Tribunal at the 18th Meeting of States Parties to the Convention on the Law of the Sea”,
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[63] On 14 May 2010, the ITLOS Seabed Disputes Chamber received its first request to render an advisory opinion. For details, see ‘Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the International Seabed Area (Request for Advisory Opinion submitted to the Seabed Disputes Chamber)’, available at http://www.itlos.org/start2_en.html (accessed 1 November 2010).

[64] For example, according to Oude Elferink, other options include a diplomatic conference, alternative procedures, or a meeting of experts. See Alex G. Oude Elferink, ‘Is it Either Necessary or Possible to Clarify the Provision on Rocks of Article 121 (3) of the Law of the Sea Convention ?’ in M.A. Pratt and J.A. Brown (eds.), Borderlands Under Stress (London: Kluwer Law International, 2000), 398-399.


In this case, Malaysia accused Singapore of encroaching upon its rights to fishing and marine environment. For details, see http://www.itlos.org/start2_en.html (accessed 1 November 2010).

See Papadakis, 1975, at 33

They are called ‘PalmIslands’ where commercial and residential infrastructures are constructed. The project began in 2001.