
THE LEGAL STATUS OF ARTIFICIAL ISLANDS UNDER THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA

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ABSTRACT

Artificial islands have become increasingly significant in contemporary maritime affairs due to their strategic, economic, scientific, and security-related uses. Their construction has expanded rapidly for purposes including resource exploration, offshore energy production, port development, military installations, and coastal infrastructure. Despite their growing importance, the legal status of artificial islands remains distinct from that of naturally formed islands under the United Nations Convention on the Law of the Sea (UNCLOS). This distinction has generated considerable legal debate regarding the rights, jurisdiction, and maritime entitlements associated with such structures. This paper examines the legal status of artificial islands within the framework of UNCLOS by analysing the relevant treaty provisions, the historical evolution of the law of the sea, and the jurisprudence of international courts and tribunals. It traces the development of the legal regime governing artificial islands from the Hague Codification Conference of 1930, through the 1958 Geneva Conventions, to the adoption of UNCLOS in 1982. Particular attention is given to Articles 56, 60, 80, 87, and 121 of UNCLOS, which define the rights of coastal States, regulate the construction and operation of artificial islands, and distinguish them from naturally formed islands capable of generating maritime zones. The paper further analyses the legal treatment of artificial islands across different maritime zones, including the territorial sea, exclusive economic zone, continental shelf, and the high seas. It also considers the significance of judicial decisions, particularly the South China Sea Arbitration (2016), which reaffirmed that human modification cannot transform submerged features or low-tide elevations into legally recognised islands under UNCLOS. The study highlights the limitations of the existing legal framework, especially concerning jurisdiction over artificial islands located beyond national maritime zones, and evaluates the continuing need for greater legal clarity in response to technological advancements and expanding maritime activities. It concludes that while UNCLOS provides a comprehensive regulatory framework, evolving state practice and emerging uses of artificial islands may require further development of international law to address unresolved jurisdictional and governance challenges.

Keywords: Artificial Islands, United Nations Convention on the Law of the Sea (UNCLOS), Maritime Zones, Exclusive Economic Zone (EEZ), Continental Shelf, Law of the Sea.

1. Introduction

The rapid advancement of marine engineering and offshore technology has transformed the manner in which States utilise and develop maritime spaces. Artificial islands, once constructed primarily to facilitate offshore resource extraction and navigation, are now employed for a wide range of purposes, including port expansion, energy production, scientific research, defence installations, and urban development. As these structures become increasingly sophisticated and widespread, they have raised important legal questions concerning their status, the rights they enjoy, and their relationship with the maritime zones recognised under international law.

The United Nations Convention on the Law of the Sea (UNCLOS), adopted in 1982, provides the principal legal framework governing the use of the oceans and the rights and obligations of States in maritime areas. Among its many provisions, the Convention establishes a clear distinction between naturally formed islands and artificial islands. While naturally formed islands are capable of generating maritime zones such as the territorial sea, the exclusive economic zone (EEZ), and the continental shelf, artificial islands are expressly denied this legal effect. This distinction forms one of the fundamental principles of the Convention's maritime regime and reflects the importance attached to natural geographical features in determining maritime entitlements. The increasing strategic and economic importance of artificial islands has further intensified these legal uncertainties. Many coastal States have invested heavily in the construction of artificial islands to strengthen offshore infrastructure, support economic activities, enhance maritime security, and reinforce their presence in strategically significant waters. In certain regions, large-scale land reclamation projects have also become closely associated with competing maritime claims, raising questions regarding sovereignty, jurisdiction, and the limits imposed by international law. Consequently, the legal status of artificial islands has become an issue of considerable importance within the broader framework of the law of the sea.

International judicial bodies and arbitral tribunals have consistently reaffirmed the distinction drawn by UNCLOS between natural islands and artificial structures. Their decisions have clarified that artificial islands cannot generate independent maritime zones or alter existing

maritime entitlements merely by virtue of their construction. Nevertheless, evolving State practice and continuing technological innovation have exposed areas where the Convention provides limited guidance, leaving room for differing interpretations regarding the legal consequences of artificial island construction in particular factual contexts. Against this backdrop, this article examines the legal status of artificial islands under UNCLOS through a doctrinal analysis of the relevant treaty provisions, judicial decisions, arbitral jurisprudence, and contemporary State practice. It evaluates the legal rights and limitations associated with artificial islands, examines the rationale behind their exclusion from generating maritime zones, and assesses whether the existing legal framework adequately addresses the complex issues arising from their increasing use in modern maritime governance.

2. Historical Evolution of the Legal Framework Governing Artificial Islands under the Law of the Sea

The origins of the modern law of the sea can be traced to the late fifteenth century when Spain and Portugal emerged as the leading maritime powers in Europe due to their advancements in navigation and overseas exploration. Their competition for control over newly discovered territories and sea routes resulted in disputes concerning authority over the oceans. During the sixteenth century, continued progress in naval technology shifted maritime dominance from Spain and Portugal to the Netherlands and Great Britain. The development of more advanced naval artillery replaced traditional methods of maritime warfare, and Britain's victory over the Spanish Armada in 1588 firmly established its supremacy at sea. As British naval influence expanded, the authority of the papal division of the oceans gradually diminished, making way for a new legal approach to the governance of maritime spaces¹. For more than three centuries, the law of the sea was largely based on a two-zone system comprising the territorial sea, generally extending three nautical miles from the coast, and the high seas lying beyond that limit, where the principle of freedom of navigation prevailed. Although contemporary international maritime law has evolved significantly through treaties and customary international law, these early doctrines continue to form the historical and legal foundation of the modern law of the sea. Their influence is evident in the development of the United Nations Convention on the Law of the Sea (UNCLOS), which today provides the principal legal framework governing maritime zones, coastal State jurisdiction, and the legal status of artificial

¹ JS Reeves, 'The Codification of the Law of Territorial Waters' (1930) 24 *American Journal of International Law* 486, 494.

islands².

2.1. The Hague Codification Conference, 1930

The early twentieth century witnessed increased use of the oceans, creating a need for uniform international rules governing maritime jurisdiction. Particular attention was given to the breadth of the territorial sea and the establishment of a contiguous zone, within which coastal States could exercise limited control to prevent violations of customs, fiscal, sanitary, and security laws. The proposed extent of such control was not to exceed twelve nautical miles from the coast³. One of the emerging legal issues concerned the status of artificial islands and offshore installations. The principal question was whether waters surrounding an artificial structure located on the high seas could acquire the legal status of territorial waters. This issue was considered during the Hague Codification Conference of 1930, convened under the auspices of the League of Nations to codify rules of international law relating to the sea.

2.2. Definition of an Island and the Position of Artificial Islands

The Conference adopted a definition of an island as "an area of land, surrounded by water, which is permanently above high-water mark," and recognised that low-tide elevations situated within the territorial sea could be taken into account in determining the baseline. Significantly, the definition did not expressly distinguish between natural and artificial islands. An accompanying observation stated that artificial islands could fall within the definition of an island if they constituted genuine portions of a State's territory rather than floating structures such as anchored platforms or buoys. However, the Conference did not address the legal status of artificial islands constructed near maritime boundaries.

2.3. Debates on Territorial Sea and Occupation

Delegates also debated whether an island should be capable of occupation or effective use in order to enjoy territorial waters. Although many representatives supported this view, the final definition adopted by the Conference did not include such a requirement. Despite these discussions, the Conference failed to adopt a convention because States could not reach

² Helmut Philipp Aust and Isabel Feichtner, 'Sea-Level Rise and the Law of the Sea: Fixing Baselines as Adaptation Strategy' (2021) 70(4) *International and Comparative Law Quarterly* 781.

³ Acts of the Hague Conference, 1930, Vol. III, 212. Article 1 of the Draft Convention prepared by the Second Committee.

agreement on the breadth of the territorial sea. While a majority supported the traditional three-nautical-mile limit, countries such as Norway, Sweden, and Finland advocated a wider territorial sea to safeguard their national interests. Differences also arose regarding the legal scope of the contiguous zone⁴.

2.4. Contribution and Limitations of the Hague Conference

The Conference nevertheless made an important contribution by clarifying certain principles relating to the legal status of the territorial sea and the determination of baselines. Its treatment of artificial islands, however, remained incomplete, prompting several jurists to propose alternative interpretations. Among them, the French scholar Georges Gidel criticised the Conference's definition for failing to distinguish between natural and artificial islands and argued that the two should be treated differently under international law. Subsequent developments further influenced the evolution of the law of the sea. The Declaration of Panama (1939) introduced a security zone extending 300–500 nautical miles from the coasts of the American Republics, considerably expanding the concept of the contiguous zone. This was followed by the Truman Proclamation of 1945, through which the United States asserted sovereign rights over the natural resources of the continental shelf adjacent to its coast. The proclamation encouraged similar claims by several Latin American States and marked a significant shift in international maritime practice, ultimately paving the way for the modern law of the sea and the adoption of UNCLOS.

2.5. Establishment of the United Nations and the International Law Commission

Following the establishment of the United Nations (UN) in 1945, the League of Nations was succeeded by a new international framework for the progressive development and codification of international law. The creation of the International Law Commission (ILC) marked a significant step towards promoting multilateral negotiations and discouraging unilateral assertions of maritime claims by States. In preparing draft articles on the law of the sea, the ILC drew extensively upon the discussions and proposals advanced during the Hague Codification Conference of 1930, particularly concerning the territorial sea and the high seas. In 1956, the ILC submitted a comprehensive report addressing the principal issues relating to the law of the sea. The report served as the principal working document for the First United

⁴ *Acts of the Hague Conference for the Codification of International Law* (1930) vol III, 212, art 1 (Draft Convention prepared by the Second Committee).

Nations Conference on the Law of the Sea (UNCLOS I), convened at Geneva in 1958, and laid the foundation for the adoption of the first multilateral conventions governing various aspects of the law of the sea⁵.

3. UNCLOS I and UNCLOS II

The negotiations held in 1958 were comparatively less complex than those encountered during earlier international efforts to codify the law of the sea. These negotiations resulted in the adoption of the four Geneva Conventions on the Law of the Sea: the Convention on the Territorial Sea and Contiguous Zone, the Convention on the Continental Shelf, the Convention on the High Seas, and the Convention on Fishing and the Conservation of the Living Resources of the High Seas⁶. Collectively, these conventions codified the existing customary international law governing the use of the seas.

Article 10 of the Convention on the Territorial Sea and Contiguous Zone defines an island as “a naturally formed area of land, surrounded by water, which is above water at high tide.” It further provides that “where a low-tide elevation is wholly situated at a distance exceeding the breadth of the territorial sea from the mainland or an island, it has no territorial sea of its own.” This definition differed from that proposed by the Committee at the Hague Codification Conference, as it expressly introduced the requirement that an island must be naturally formed, thereby excluding artificial islands from the definition. Likewise, low-tide elevations enhanced through artificial works were not regarded as islands and were not entitled to generate a territorial sea⁷.

At UNCLOS I, artificial islands, installations, and structures were considered within the context of the continental shelf. Coastal States were granted the right to construct, maintain, and operate installations and other devices on the continental shelf where necessary for the exploration and exploitation of their natural resources. This reflected the approach earlier advanced by President Truman concerning sovereign rights over the continental shelf. However, the waters above the continental shelf continued to be governed by the legal regime of the high seas. Accordingly, the construction and operation of such installations were not

⁵ Rosemary Rayfuse, *International Law and Disappearing States: Maritime Zones and Statehood in the Anthropocene* (Edward Elgar 2021).

⁶ Convention on the High Seas (adopted 29 April 1958, entered into force 30 September 1962) 450 UNTS 11, art 2.

⁷ Clive Schofield, *Defining the Limits of the Sea: Artificial Islands, Coastal Engineering and Their Legal Implications* (Brill 2020).

permitted to interfere with navigation, fishing, the conservation of living resources, or oceanographic and scientific research. The Convention further recognised the authority of coastal States to establish safety zones around artificial islands and installations where necessary for their protection. These safety zones could extend up to 500 metres. At the same time, it expressly stated that such installations do not possess the legal status of islands, are not entitled to a territorial sea of their own, and do not affect the delimitation of the territorial sea of the coastal State. The Convention also required that adequate notice be given regarding the construction of installations and that permanent warning systems be maintained to ensure navigational safety.

Article 2 of the 1958 Convention on the High Seas reaffirmed that the high seas are open to all nations and that no State may lawfully claim sovereignty over any part of them. It recognised, *inter alia*, the freedoms of navigation, fishing, laying submarine cables and pipelines, and overflight. These freedoms, together with other freedoms recognised under general international law, were to be exercised by both coastal and non-coastal States in accordance with the Convention.

Despite its achievements, UNCLOS I did not resolve the longstanding issue concerning the breadth of the territorial sea. To address this unresolved question, the Second United Nations Conference on the Law of the Sea (UNCLOS II) was convened in 1960. However, the Conference also failed to reach agreement, and the issue remained unsettled until the adoption of the United Nations Convention on the Law of the Sea (UNCLOS III) in 1982.

3.1. UNCLOS III

Discussions leading to the formulation of the United Nations Convention on the Law of the Sea (UNCLOS) began in 1971. During the first session of the Sea-Bed Committee, proposals were introduced to include within the negotiations matters relating to the jurisdiction over artificial islands and installations on the high seas, as well as the construction, maintenance, and operation of artificial islands, floating harbours, stationary installations, and mobile installations. A majority of States also proposed reducing the scope of unilateral State interests in the high seas.

At the 1971 session, Malta submitted a Draft Ocean Space Treaty, the proposed Article 5 of which recognised the basic right of all States to use ocean space. This right, however, was to

be exercised with reasonable regard for the interests of the international community. The proposal also replaced the traditional freedom of fishing with the freedom of scientific research on the high seas⁸. During the 1973 session of the Sea-Bed Committee, Belgium submitted a proposal concerning artificial islands on the continental shelf. The proposal permitted coastal States to authorise the construction of artificial islands for purposes other than the exploration or exploitation of natural resources. It further provided that such structures should remain under the jurisdiction of either the coastal State or the State responsible for their construction, that every artificial island should be surrounded by a safety zone not exceeding **500 metres**, and that artificial islands and installations should not possess a territorial sea of their own.

At the second session in 1974, El Salvador expressed concern regarding the broad interpretation of the freedom of the high seas and proposed that the Convention should contain an exhaustive list of recognised freedoms. During the same session, the Belgian representative, Mr. Van Der Essan, observed that artificial islands raised two distinct legal issues. The first concerned the jurisdiction applicable to such structures, while the second related to the right of States to construct artificial islands and installations, together with the conditions governing their construction. During the third session in 1975, no further proposals concerning artificial islands were introduced. The principle that the high seas are open to all States, whether coastal or landlocked, was incorporated into Article 87 of UNCLOS, replacing Article 2 of the 1958 Geneva Convention on the High Seas. Article 87 recognises, *inter alia*, the freedoms of navigation, overflight, laying submarine cables and pipelines, constructing artificial islands and other installations permitted under international law, fishing, and scientific research⁹.

In its 1956 Commentary, the International Law Commission (ILC) recognised additional freedoms of the high seas beyond those expressly listed in the 1958 Convention, including the freedom to conduct scientific research, to explore and exploit the subsoil of the high seas, and to undertake nuclear weapons testing. These activities are now either regulated or prohibited under international law. In particular, the deployment of nuclear weapons on the seabed is prohibited by the Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof (1971). Although military activities are restricted in certain maritime zones, the use of the high

⁸ Francis Galea, 'Artificial Islands and the Law of the Sea: The Legal Status of Man-Made Structures' (2020) 116 *Marine Policy* 103918.

⁹ N Papadakis, *The International Legal Regime of Artificial Islands* (Sijthoff 1977).

seas for military purposes continues to fall within the scope of the freedom of the high seas¹⁰.

UNCLOS also requires that, in exercising the freedoms of the high seas, States must have due regard for the interests of other States. No State enjoys a superior right to exercise any of these freedoms, as they are to be exercised based on the equality of States. In addition, such freedoms must be exercised with due regard for activities relating to the exploration and exploitation of the resources of the Area. The Convention also modified the rules governing artificial islands and installations. Article 60 applies only to installations serving an economic purpose that directly affect the rights of the coastal State. Unlike the 1958 Geneva Convention, which required abandoned or disused installations to be completely removed, Article 60 of UNCLOS does not impose an absolute obligation of total removal. Instead, it lays down general criteria for determining the extent to which removal is required in individual cases. Where an installation is not entirely removed, the coastal State is required to give adequate publicity to its location, depth, and dimensions.

4. Legal Status of Artificial Islands under UNCLOS

The legal status of artificial islands is determined by their geographical location, namely whether they are situated within the territorial sea, contiguous zone, exclusive economic zone (EEZ), continental shelf, or the high seas. The principal issue concerns the jurisdiction applicable to artificial islands constructed on the high seas. Accordingly, this study explores the various theories of jurisdiction that may be applied to develop an appropriate legal framework for regulating artificial structures on the high seas.

4.1. The Territorial Sea and the Contiguous Zone

The sovereignty exercised by a coastal State over its territorial sea is, to a large extent, comparable to the sovereignty it enjoys over its land territory. Accordingly, the coastal State possesses complete and exclusive authority over the siting of artificial islands and installations within its territorial sea. This authority, however, is subject to the obligation not to impede the right of innocent passage enjoyed by ships and submarines of other States through established sea lanes by means of artificial islands or other structures. It must also be ensured that the construction of artificial islands within the territorial sea does not adversely affect maritime

¹⁰ GC Kasoulides, 'Removal of Offshore Platforms and the Development of International Standards' (1989) 13 *Marine Policy* 249.

areas falling under the jurisdiction of another State¹¹. This concern becomes particularly significant where such structures are erected near the outer limits of the territorial sea, as their potential impact on neighbouring States is likely to be greater. Concerning artificial islands and installations, Article 11 of UNCLOS expressly limits the extension of the territorial sea by providing that offshore installations and artificial islands shall not be regarded as permanent harbour works. In relation to the rules governing innocent passage, if certain ocean energy platforms were classified as "ships," they could potentially benefit from the right of innocent passage. For example, an Ocean Thermal Energy Conversion (OTEC) plant operating as a ship, provided it is not engaged in the exploration or exploitation of thermal resources, could fall within this category.

UNCLOS defines "passage" as navigation through the territorial sea for the purpose of traversing it without entering internal waters, proceeding to internal waters, or leaving internal waters for the high seas. Where a structure is regarded as a ship, questions arise as to whether it can be considered to be engaged in passage while simultaneously exploiting marine energy resources. Similarly, it is uncertain whether the right of innocent passage applies to such structures during their ordinary operations. The Convention does not clearly distinguish between the primary and secondary purposes of navigation. Consequently, difficulties may arise for floating platforms or similar devices that are not recognised as ships or vessels under national legislation, as they would not qualify for the right of innocent passage, which is reserved exclusively for ships. The contiguous zone is an area adjacent to the territorial sea in which the coastal State may exercise the control necessary to prevent or punish infringements of its customs, fiscal, immigration, or sanitary laws and regulations committed within its territory or territorial sea. Under UNCLOS, the contiguous zone may extend up to 24 nautical miles from the baselines from which the breadth of the territorial sea is measured. The coastal State does not possess the right to regulate the construction of artificial islands in the contiguous zone solely by virtue of its authority over that zone. In essence, the contiguous zone remains part of the high seas, subject only to the limited enforcement powers granted to the coastal State. Furthermore, the rules governing the contiguous zone apply only where they have been incorporated into national law. Where a coastal State has not claimed an Exclusive Economic Zone (EEZ), the waters beyond the territorial sea, including the contiguous zone, remain part of the high seas, and other States continue to enjoy the freedoms associated with that maritime

¹¹ International Law Commission, *Yearbook of the International Law Commission 1956*, vol II, *Articles concerning the Law of the Sea with Commentaries* (UN 1956).

area.

4.2. The Exclusive Economic Zone (EEZ)

The Exclusive Economic Zone (EEZ) is a maritime zone situated beyond the territorial sea and may extend up to 200 nautical miles from the baselines from which the territorial sea is measured. It represents the first maritime zone in which a coastal State exercises extensive functional jurisdiction over the sea and its resources. Within the EEZ, the coastal State has jurisdiction over non-living resources, including those of the seabed, subsoil, and the waters above them; living resources such as fish, crustaceans, and marine plants; the production of energy from the water, currents, and winds; artificial islands, installations, and structures; marine scientific research; and the protection and preservation of the marine environment from pollution. UNCLOS specifically refers to the production of energy from water, currents, and winds. These activities may also encompass the generation of solar energy, the utilisation of icebergs as freshwater reservoirs, and the desalination of seawater. However, the Convention does not prescribe detailed rules governing these activities, as they were still in their developmental stages when UNCLOS was drafted. Although the coastal State possesses jurisdiction over the resources of the EEZ, it does not enjoy full sovereignty over the zone. Other States, whether coastal or landlocked, continue to enjoy the freedoms recognised under Article 87 of UNCLOS, including the freedom to construct artificial islands and installations were permitted under international law, subject to the relevant provisions of the Convention and the legal regime governing the EEZ.

4.4. The Continental Shelf

Article 76 of UNCLOS defines the continental shelf of a coastal State as comprising the seabed and subsoil of the submarine areas extending beyond the territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or up to 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the continental margin does not extend that far. Article 79 of UNCLOS, which governs the laying of submarine cables and pipelines on the continental shelf, recognises that nothing in its provisions affects the construction of artificial islands, installations, and structures. In addition, Article 80 provides that the rules contained in Article 60 apply *mutatis mutandis* to artificial islands, installations, and structures located on the continental shelf. The coastal State's exclusive rights over the continental shelf prevent other States from constructing or

operating artificial islands for the purpose of exploring or exploiting its natural resources. Nevertheless, apart from these resource-related rights, the continental shelf is regarded as *res nullius*, while the waters above it continue to form part of the high seas. Consequently, other States may construct artificial islands on the continental shelf, provided they exercise due regard for other lawful uses of the sea, avoid causing damage to the marine environment, and do not unreasonably interfere with the coastal State's exclusive rights over the continental shelf¹².

4.5. The High Seas

In 1970, the United Nations General Assembly expressed concern over claims of territorial sovereignty relating to the seabed of the high seas. It was observed that the establishment of installations on the deep seabed and its subsoil could give rise to issues concerning territorial sovereignty, as such installations might enable States to exercise effective control over particular areas of the seabed and subsoil because of their *terra firma* character. Under UNCLOS, however, no State may claim territorial sovereignty over the seabed of the high seas. Article 89 expressly provides that the high seas are open to all States and that no State may validly subject any part of the high seas to its sovereignty. The legal status of the high seas is characterised by the absence of territorial sovereignty (*res nullius*) and the prohibition against any claim of sovereignty, while simultaneously recognising the freedoms enjoyed by all States (*res communis omnium*). This prohibition is firmly established in both customary international law and international jurisprudence. Although no State exercises exclusive jurisdiction over installations constructed in the Area, the International Seabed Authority (ISA) has the power to adopt rules and regulations concerning the administrative, procedural, and financial aspects of installations used for the exploration and exploitation of the resources of the Area. However, the Authority's competence is confined to such resource-related activities and does not extend to artificial structures established for other purposes. Moreover, the Authority does not possess its own judicial system or a comprehensive civil or criminal code. The jurisdictional framework applicable to artificial islands on the high seas therefore depends upon flag State jurisdiction and the recognised principles of jurisdiction under international law. These include the territorial principle, under which jurisdiction is based on the place where the act occurs; the protective principle, based on the nationality of the person concerned; a further form of the protective principle, which is based on the national interests affected by the act or omission;

¹² Adam Starchild, *The Ocean Frontier* (University Press of the Pacific 2002) 106.

the passive personality principle, under which jurisdiction depends upon the nationality of the victim; and the universality principle, which allows all States to exercise jurisdiction over offences regarded as particularly serious, such as piracy.

A State generally has jurisdiction over offences committed within its territory irrespective of the offender's nationality, and it may also exercise jurisdiction over its nationals even when they are outside its territory. Certain theories further recognise jurisdiction over offences committed abroad by foreign nationals where the security, territorial integrity, or political independence of the State is affected. Jurisdiction based solely on nationality is not considered an adequate basis for regulating activities conducted from artificial structures on the high seas because such structures are likely to involve persons of multiple nationalities, each subject to different legal systems. Similar to ships, there is therefore a need for a single legal regime applicable to artificial structures operating on the high seas, particularly those that cannot be classified as ships, as international law does not presently identify which State should exercise jurisdiction over them.

UNCLOS clearly distinguishes between ships, installations, and artificial islands. However, owing to the lack of clarity surrounding the legal status of certain mobile structures, States may choose to register them as ships. Once registered, these structures acquire the status of vessels flying the flag of the registering State, thereby enabling that State to exercise jurisdiction over them. In this regard, those involved in the development and operation of solar islands have considered registering such structures as ships under the flag of their State of registration. Under maritime law, ships are generally subject to the exclusive jurisdiction of their flag State, provided they are lawfully entitled to fly its flag. The exclusivity of flag State jurisdiction, unlike other jurisdictional principles, provides greater certainty regarding the applicable legal regime. The flag State exercises personal jurisdiction over persons on board the vessel, including those present on stations and within safety zones, and such jurisdiction is not confined to its own nationals. As discussed earlier, reliance on national jurisdiction alone is inadequate where an artificial structure involves persons of multiple nationalities. Accordingly, it has been suggested that a distinct legal framework should be developed to regulate artificial constructions operating on the high seas.

5. Distinction between Natural Islands and Artificial Islands

UNCLOS distinguishes between natural islands and artificial islands primarily on the basis of

the origin of the maritime feature. Article 121 defines an island as “a naturally formed area of land, surrounded by water, which is above water at high tide.” The expression “naturally formed” is therefore fundamental in determining whether a maritime feature qualifies as an island capable of generating maritime zones under the Convention.

The principal question is whether the phrase “naturally formed” refers to the process by which an island is created or merely to the materials from which it is composed. If the latter interpretation were adopted, reclaimed land constructed using naturally occurring materials such as sand could arguably qualify as an island. However, applying the interpretative principles of the Vienna Convention on the Law of Treaties, treaty provisions must be interpreted according to their ordinary meaning, read in their context and in light of the object and purpose of the treaty. In its ordinary meaning, the verb *form* denotes the act of bringing something into existence. Accordingly, the requirement that an island be “naturally formed” refers to its natural origin rather than the materials used in its construction. This interpretation is reinforced by Article 60 of UNCLOS, which authorises the establishment of safety zones around artificial islands while expressly providing that artificial islands, installations, and structures do not possess the status of islands. Although the Convention does not expressly define an artificial island, its distinction between artificial islands, installations, and structures indicates that artificial islands are landmasses created through human intervention, even where natural materials such as sand are used, whereas installations and structures generally consist of man-made materials. Consequently, reclaimed land does not acquire the legal status of an island merely because it is composed of natural materials.

The negotiating history of UNCLOS also supports this interpretation. While some early scholars argued that artificially created islands should be treated in the same manner as natural islands, this view had largely been rejected by 1958. During the negotiations leading to the adoption of UNCLOS, the words “naturally formed” were deliberately inserted before “area of land” to ensure that artificial islands would not generate the maritime entitlements accorded to natural islands. This understanding has since been consistently accepted in legal scholarship¹³. The legal distinction also depends on the original character of the maritime feature. An island that has been reinforced through coastal protection measures or other engineering works continues to retain its status as an island under Article 121 because it originated naturally. Conversely, an artificial island does not become a natural island simply because natural

¹³ American Society of International Law, 'Supplement to the *American Journal of International Law*' (1930) 24 *American Journal of International Law* Supp 235.

accretion subsequently occurs around it. Likewise, maritime features that emerge naturally following human intervention, other than the construction of an artificial island or installation, may in principle qualify as islands under Article 121, although their classification requires careful assessment of both the legal and factual circumstances.

The importance of the natural origin of maritime features was reaffirmed by the South China Sea Arbitration (Philippines v. China)¹⁴. The Tribunal held that human intervention cannot alter the legal status of seabed features under UNCLOS. It observed that a low-tide elevation remains a low-tide elevation regardless of the scale of any artificial island or installation constructed upon it. The same reasoning applies to permanently submerged seabed areas, which cannot be transformed into islands through reclamation or other engineering works. The Tribunal further concluded that the status of a maritime feature must be determined by reference to its original natural condition before any significant human modification took place.

UNCLOS also distinguishes artificial islands from installations and structures, as different legal rules govern each category. Artificial islands generally consist of natural or human-made materials deposited on the seabed to create an area of land above water at high tide. Installations and structures, however, are not required to remain above water at high tide. Consequently, certain submerged coastal defence works or similar constructions do not fall within the definition of artificial islands, although the legal rules applicable to artificial islands may apply to them *mutatis mutandis*. In his separate opinion in *Qatar v. Bahrain* (2001)¹⁵, Judge Shigeru Oda observed that advances in modern technology have made it possible to develop small islands and low-tide elevations into sites for recreational, industrial, and other offshore facilities. While acknowledging that UNCLOS contains certain provisions relating to artificial islands, particularly Articles 60 and 80, he noted that international law had not yet conclusively addressed whether such constructions are permissible or what legal status they should possess. In his view, these issues remain matters for future development in international law. Judge Oda's observations raise the broader question of whether a maritime feature that was originally naturally formed can subsequently acquire the legal status of an artificial island through human intervention. Under UNCLOS, an artificial island generally possesses the physical characteristics of an island under Article 121(1), except the requirement that it be naturally formed. Consequently, features such as low-tide elevations, reefs, seabed formations, islets,

¹⁴ *The South China Sea Arbitration (The Republic of the Philippines v The People's Republic of China)* (Award) (Permanent Court of Arbitration, Case No 2013-19, 12 July 2016) para 305.

¹⁵ *Maritime Delimitation and Territorial Questions between Qatar and Bahrain (Qatar v Bahrain)* [2001] ICJ Rep 40.

and rocks may be transformed through artificial modification into artificial islands. However, such modification does not alter their legal classification under UNCLOS or confer upon them the maritime entitlements enjoyed by naturally formed islands. The Convention further employs terms such as devices, machinery, equipment, and platforms, whose meaning depends upon the context in which they are used. In some instances, installations and structures may include objects that could otherwise be regarded as devices or platforms. At the same time, UNCLOS treats submarine cables and pipelines as a separate legal category. Ships are likewise distinct from artificial islands and installations, although the classification of certain mobile offshore units, such as floating production, storage, and offloading (FPSO) units, may depend on factors including whether they are self-propelled, their mode of operation, and the particular legal regime governing the activity concerned.

6. Challenges and the Need for Reform in the Legal Regulation of Artificial Islands

Article 47(1) of UNCLOS permits an archipelagic State to draw straight archipelagic baselines by joining the outermost points of its outermost islands and drying reefs, provided that the baselines encompass the principal islands together with the relevant water and land areas. This raises the question whether artificial islands constructed beyond the territorial sea, within the Exclusive Economic Zone (EEZ), may be regarded as the outermost points of an archipelago for the purpose of drawing archipelagic baselines and, consequently, whether they could affect the extent of the territorial sea and the EEZ. UNCLOS grants coastal States the right to construct, authorise, and regulate artificial islands within the EEZ. In exercising this right, States are required to establish appropriate safety zones around such structures and ensure compliance with internationally accepted standards to safeguard both navigation and the safety of the installations themselves.

The Convention permits the construction of artificial islands in the EEZ only for the purposes specified in Article 56 and for other economic purposes. However, because Article 60(8) expressly provides that artificial islands do not possess the legal status of islands, they cannot be regarded as the outermost points of an archipelago for the purpose of drawing straight archipelagic baselines. Consequently, they cannot be used to extend the territorial sea or the EEZ¹⁶. A related issue concerns whether the waters surrounding artificial islands may acquire the legal status of territorial waters. The starting point for this question is Article 10(1) of the

¹⁶ Aninditya Gita Kireina Persada, Lazarus Tri Setyawanta and Sri Kusriyah, 'Reconstruction of Artificial Islands Regulations in International Law to Realize Territorial Jurisdiction' (2024) 7(8) *Scholars International Journal of Law, Crime and Justice* 291.

1958 Convention on the Territorial Sea, which defines an island as “a naturally formed area surrounded by water and above water at high tide.” Since artificial islands do not satisfy the requirement of being naturally formed, they do not fall within this definition. Nevertheless, some scholars have argued that artificial islands should be capable of possessing their own territorial waters. At the 1958 Geneva Conference on the Law of the Sea, Professor François, serving as Special Rapporteur of the International Law Commission, expressed the view that an artificially created seabed area possesses the essential characteristics of an island and should therefore be entitled to territorial waters.

Greater legal clarity would reduce ambiguity and minimise disputes concerning the legal status of artificial islands. Any revision of the legal framework must also carefully address questions relating to maritime boundaries and jurisdiction where artificial islands are constructed, particularly because such developments may affect claims relating to the territorial sea, the Exclusive Economic Zone, and the continental shelf. In addition, detailed rules should regulate the protection of marine resources that may be affected by the construction and operation of artificial islands. Transparency in the planning, development, and environmental impacts of such projects should be promoted through reporting obligations, enabling greater international oversight. Any future reform should also ensure that internationally recognised principles, including environmental sustainability, marine conservation, and international justice, are fully reflected in the legal regime governing artificial islands. Claims relating to the legal status of artificial islands should be carefully assessed with due regard to the interests of all affected parties, including neighbouring States, local communities, and other stakeholders. To minimise uncertainty, clear and objective criteria should be established for determining whether a particular marine structure qualifies as an artificial island. The protection of these interests does not appear to require the creation of a territorial belt comparable to the territorial sea. Unlike natural islands, artificial islands do not require a maritime zone over which a State exercises sovereignty. This approach is consistent with the proposals submitted to the United Nations Seabed Committee, which unanimously rejected the idea that artificial islands should generate their own maritime territory. Nevertheless, offshore structures require an appropriate level of protection. This objective can be achieved through the establishment of safety zones, similar to those recognised for installations used in the exploration and exploitation of the continental shelf. Within these zones, the coastal State may adopt the measures necessary to protect the installation. Such safety zones may extend up to 500 metres from the outermost edge of the installation and must be respected by vessels of all States. Although international law does not

expressly provide for safety zones around artificial islands and installations established for purposes other than continental shelf exploration and resource exploitation, there appears to be no legal reason preventing the recognition of such zones. The establishment of safety zones serves the interests of both the operators of offshore installations and other users of the surrounding marine environment. While the adequacy of a **500-metre** safety zone may vary depending on the circumstances, it has been suggested that future law of the sea instruments should expressly regulate the establishment of such zones and clearly define the measures that coastal States may adopt within them.

7. Conclusion

The legal status of artificial islands under UNCLOS is fundamentally different from that of naturally formed islands. While coastal States exercise sovereignty over their territorial sea and enjoy sovereign rights within their Exclusive Economic Zone (EEZ) and continental shelf, these rights do not automatically extend to artificial islands. UNCLOS permits coastal States to construct and regulate artificial islands within areas under their jurisdiction, particularly for economic purposes, but expressly denies such structures the legal status of islands. Consequently, artificial islands cannot generate their own territorial sea, EEZ, or continental shelf, irrespective of their physical resemblance to natural islands. Although scholars have expressed differing views on whether artificial islands should receive broader legal recognition, the prevailing position under international law remains that they are distinct from naturally formed islands and are subject to a separate legal regime. The existing legal framework, however, leaves several important questions unresolved, particularly regarding the construction, regulation, and jurisdiction of artificial islands. These uncertainties have contributed to maritime disputes, most notably in the South China Sea, demonstrating the need for greater legal clarity. A more comprehensive international framework should clearly define artificial islands, specify the rights and obligations of States concerning their construction, operation, and management, and establish objective criteria for their legal classification. Such a framework should also address issues relating to maritime boundaries, environmental protection, and the protection of the rights of neighbouring States. Strengthening these aspects of UNCLOS would reduce legal ambiguity, promote consistency in State practice, and contribute to the peaceful governance of artificial islands under international law.