

International Relations

<http://ire.sagepub.com>

Artificial Islands and Installations : a Call for International Legislative Action

Alexis Phylactopoulos
International Relations 1972; 4; 427
DOI: 10.1177/004711787200400501

The online version of this article can be found at:
<http://ire.sagepub.com>

Published by:



<http://www.sagepublications.com>

On behalf of:

David Davies Memorial Institute for International Studies

Additional services and information for *International Relations* can be found at:

Email Alerts: <http://ire.sagepub.com/cgi/alerts>

Subscriptions: <http://ire.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.co.uk/journalsPermissions.nav>

ARTIFICIAL ISLANDS AND INSTALLATIONS :
A CALL FOR INTERNATIONAL
LEGISLATIVE ACTION
ALEXIS PHYLACTOPOULOS

The legal questions arising from the employment of installations in the exploration and exploitation of the seabed's natural resources were settled in the 1958 Geneva Convention on the Continental Shelf. Subsequent developments, such as the proliferation of oil platforms, and the granting of drilling licences on the continental slope, have not constituted a change of circumstances necessitating any thorough revision of what was agreed in 1958. The Convention's sole environmental provision, article 5(7), may need to be amended so as to extend its protection to the sea's living organisms and stipulate specific measures of pollution prevention and control, but, otherwise, the Convention has dealt adequately for over a decade with the safe and efficient operation of installations.

A series of governmental and entrepreneurial initiatives, however, has recently raised important jurisdictional and environmental questions which cannot be accommodated by marginal changes in the Continental Shelf Convention. The problem arises from certain artificial constructions, either existing or envisaged for the near future, which fall, by virtue of their function, completely outside the scope of the Continental Shelf Convention; the legal status of the waters around them is obscure, jurisdiction over them is undefined, and their environmental obligations are non-existent.

In April 1971, the Representative of Belgium in the United Nations Sea-Bed Committee addressed a letter to the Secretary General requesting the inclusion of the item: "jurisdiction over artificial islands, or artificial installations on the high seas," in the list of subjects for discussion at the Third United Nations Conference on the Law of the Sea. As the Belgian Representative explained, his Government had been sounded by a private source on the construction of a hundred and seventy-hectare artificial port for the loading of heavy tankers in an area lying farther than twenty-seven kilometres from the Belgian coast. He pointed out that under the terms of the Continental Shelf Convention such an installation does not come under the jurisdiction of the coastal State; moreover, it does not qualify as a vessel to be placed under flag-State jurisdiction.¹

A further development involving off-shore terminals came from the United States when President Nixon, in his energy policy statement of April 18, 1973, asked Congress to authorize the

¹ United Nations Document A/AC. 138/35 cited in A/8421, *Report of the Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor Beyond the Limits of National Jurisdiction*, pp. 65-6.

Interior Department to licence the construction of deep-water ports beyond the three-mile territorial sea limit. In Europe, plans are being made in Belgium, for an off-shore terminal on Thornton Bank, and in Germany for a similar structure near the island of Helgoland. They are all indicative of a trend to accommodate large tankers by constructing artificial harbours in areas which allow the approach of deep-draught vessels, sometimes outside the territorial sea.

In June 1972, the Dutch-based dredging and civil engineering company, Bos Kalis Westminster Dredging Group N.V., launched a far-reaching proposal for the construction of artificial islands assigned to industrial uses on the Dutch part of the North Sea continental shelf. The scheme concerned the creation of any of three types of artificial islands, built out of sand surrounded by a sea defence wall, at a depth of twenty metres and at a distance of twenty-five to fifty kilometres off the Dutch coast. The southern part of the North Sea continental shelf was selected because of its shallow waters, the availability of transport links with northern Europe, and its proximity to shipping routes and energy sources in the North Sea. A fifty-hectare reclaimed island would be used for the centralized treatment of northern Europe's waste, as it were, and would also include oil and gas refineries, and a power plant. Two more islands, of three hundred hectares and a thousand hectares respectively, would be used for oil terminals, power plants, fresh water plants, and other specialized industries.

Finally, in March 1973, the Society for Underwater Technology at Manchester University was told that a feasibility study had in fact been commissioned by a consortium of nine companies for a similar artificial island in the North Sea.² The rationale behind these projects appears to be environmental, based on the moot premise that regulation of pollution-creating industries can be more effectively enforced through concentration in isolated locations at sea. But it is obvious that by shifting the undesirable side-effects of industrial operations from land to sea one is merely sweeping a public nuisance under the mat rather than finding ways to cure it. What is also clear is that developments in marine technology are beginning to overtake the international legislative process. Apart from posing problems of legal status and jurisdiction, all these projects constitute a threat to the marine environment which can only be met by prompt inter-governmental action. Prerequisite to such conventional regulation is the classification and clear assessment of the international law status of the various kinds of artificial islands and installations.

Before modern drilling and mining installations were widely employed in the exploration and exploitation of the seabed, the term "artificial islands" was usually reserved for man-made

² *The Guardian*, March 8, 1973.

alluvions formed by depositing soil or rocks and used for a variety of purposes such as fortifications, artesian wells, mines, or simple accretion of land. The proliferation of the drilling platforms added a complexity to a previously simple situation. Clearly, neither the alluvion nor the installation are natural islands, but is it possible to classify both under the same category of artificial islands? If the answer is positive, what kind of treatment does international law accord to artificial islands as opposed to natural ones? If on the other hand artificial islands and installations are cases apart, what kind of international law treatment does each one receive?

One obvious similarity between alluvions and installations is that they are both products of human ingenuity. They are also both, in a relative sense, recent phenomena. They did not always exist the way natural islands always existed. Of course, even natural islands tend to emerge or to disappear, but their emergence and disappearance is the result of natural geophysical processes and not of human will. Man-made alluvions and installations, therefore, share the common characteristic that they may appear at man's discretion in places where nothing was there before but an expanse of sea. For this to happen, artificial constructions must possess the license or the tolerance of third parties which may have a valid claim in that particular area of the sea. Once permission for their creation has been granted, or if no one actively opposes their creation, some authority must undertake legal responsibility over them. It must place them under its jurisdiction and protection and under some body of law which will regulate their existence.

From the point of view of entrepreneurial interests, both the alluvion and the installation are in need of this kind of protection. Financially, it would be very risky to the private investment undertaken if no State assumed responsibility over the artificial construction. The matter arose in 1918 in the Gulf of Mexico at a time when the Truman Proclamation of 1945 had not yet established United States jurisdiction and control over "the natural resources of the subsoil and seabed of the continental shelf beneath the high seas but contiguous to the coasts of the United States." A large oil pool was discovered on a reef lying forty miles off the coast of the United States and Mr. Frank R. Newton inquired from the Department of State whether an artificial island erected for the exploration of the oil "... could be brought under the jurisdiction of the United States and whether (the United States) could protect (his) rights by giving... a lease to the property..."² The Department of State denied that it had the right to issue property rights on the seabed of the Gulf of Mexico, but informed him that,

unless the erection of an artificial island interfered with the rights of the United States or of its citizens, or formed the subject of a complaint made upon apparently good grounds, by

² Green Haywood Hackworth, *Digest of International Law*, Vol. II, Washington, D.C., 1941, pp. 679 - 80.

a foreign government it would seem possible that, if an island were constructed 40 miles from the coast of the United States by the efforts of American citizens and inhabited and controlled by them in the name of the United States, this Government would assume some sort of control over the island.⁴

It is precisely this kind of coastal State commitment that any entrepreneur should obtain before attempting to erect either an alluvion or an installation.

From the point of view of world interests, it would be equally detrimental to the freedom of navigation, conservation, pollution control, oceanographic research and other future uses of the ocean if no legally accountable international actor assumed responsibility over the artificial construction. Private individuals are usually not bound by international conventions, but States are, and it is only through the extension of State jurisdiction over artificial islands/ installations that the world community can secure some measure of control over activities associated with the exploration and exploitation of seabed resources.

One final reason why any alluvion or installation should be subject to some State's jurisdiction is the protection of the interest of the State off the coasts of which the artificial construction is erected. A coastal State's economic interests (fisheries, pollution control, research) can be as seriously affected by irresponsible seabed activities and haphazard erection of artificial islands and installations as its interests in the rule of law can be jeopardized by a vacuum of penal jurisdiction over these artificial constructions. Recent evidence related to the activities of "pirate" broadcasting stations established on installations and vessels outside the territorial waters of Denmark, Sweden, the Netherlands, and the United Kingdom emphasizes one particular form of abuse of coastal rights that can occur by the lack of penal jurisdiction over artificial constructions.⁵

The above discussion points to the need of some legal responsibility over off-shore artificial islands and installations for the sake of private, coastal and world interests. It is not to be assumed, however, that only State jurisdiction can guarantee the necessary degree of protection and control. Another international actor who may be in a position to do the same could be the envisaged international machinery for the exploration and exploitation of seabed resources in the area beyond national jurisdiction.⁶ Should the 1974 International Conference on the Law of the Sea create a strong

⁴ *Ibid.*

⁵ For more on this see D. W. Bowett, *The Law of the Sea*, Manchester 1967, pp. 52 - 5; N. March Hunnings, "Pirate Broadcasting in European Waters," *International and Comparative Law Quarterly*, Vol. 14, London, 1965, pp. 410 - 36.

⁶ United Nations General Assembly Resolution 2749, 25th Session, 17 December, 1970.

machinery with authority to explore and exploit directly the seabed of the "area", it will probably also vest the machinery with the appropriate jurisdiction over its own artificial constructions. The protection and control, however, which both man-made alluvions and installations require in order that they may be erected and fulfil their purpose, are about all that these two formations have in common.

It is unfortunate that the term "artificial islands" is sometimes randomly used to describe artificial constructions in the sea regardless of whether these are of the alluvion type, defined previously, or installations made out of metal and/or concrete and resting on the seabed or floating above it. That there is a distinction between these two types was first suggested by certain jurists⁷ and was later confirmed by the 1958 Geneva Convention on the Continental Shelf⁸ and by the *travaux préparatoires* of the 1958 Geneva Convention on the Territorial Sea and Contiguous Zone.⁹ The substantive difference is that where as the man-made alluvion, regardless of its purpose, partakes of the nature of territory and is therefore entitled to territorial sea, the installation is denied territorial sea, but is accorded instead a safety zone of a certain limited radius.

Gidel¹⁰ supported this view and so did Jessup¹¹ and H. Lauterpacht. The latter wrote in 1950:

Whatever may be the existing or future law on the subject, it is clear that works and installations erected on the surface of the sea in connexion with the exploitation of the seabed and subsoil are not entitled — and properly ought not to be entitled — to territorial waters (and *a fortiori*, to submarine areas) of their own. They are on the high seas as licensees, as it were, by dint of liberal interpretation of a hitherto rigid principle. *They are normally in any case in a category different from that of artificial islands created in shallow waters by means of walls surrounding the projected elevation.*¹²

Artificial installations on the high seas for the purpose of exploiting the resources of the bed of the sea are not artificial islands partaking of the nature of territory.¹³

⁷ Gilbert Gidel, *Le Droit International Public de la Mer*, Vol. III, Paris, 1934, p. 684; L. Oppenheim, *International Law*, Vol. I: *Peace*, ed. by H. Lauterpacht, 7th ed., 2 vols., New York, 1955, p. 516; H. Lauterpacht, "Sovereignty Over Submarine Areas," *The British Yearbook of International Law*, Vol. 27, London, 1951, pp. 411-2; Philip C. Jessup, *The Law of Territorial Waters and Maritime Jurisdiction*, New York, 1927, pp. 69-70.

⁸ Convention on the Continental Shelf, art. 5.

⁹ Summary Record of François' third report at the International Law Commission's Fourth Session. A/CN.4/SR.260, 1 *Yearbook of the International Law Commission* 1954, p. 91.

¹⁰ Gidel, *op.cit.* Vol. III, p. 684.

¹¹ Jessup, *op.cit.* pp. 69-70.

¹² H. Lauterpacht, *op.cit.* p. 411. Emphasis supplied.

¹³ *Ibid.*, p. 412. Emphasis supplied.

The argument has been put forth that coastal States should not be permitted to create additional areas of territorial waters by expressly erecting artificial islands and that the presence of some other specific interest should be required in order to justify a territorial belt around the artificial mount.¹⁴ However wise this view may be, it can only stand as a normative statement. Oppenheim offers the best *de lege lata* refutation of this argument when he points out that international law recognizes the right of a coastal State to erect on its coasts other kinds of artificial formations "as far into the sea beyond the low-water mark as it likes, and thereby gain considerably in land and also in territory since the maritime belt . . . is now to be measured from the extended shore".¹⁵

That artificial islands of the alluvion type are to have territorial waters was stressed by François in his third report at the International Law Commission's Fourth Session in 1954 and was met with no disagreement from the other members of the Commission.¹⁶ Subsequently, at the 1958 Geneva Conference, article 5 of the Convention on the Continental Shelf was drafted awarding safety zones of 500 metres, but no territorial sea, to "installations and other devices" necessary for the exploration and exploitation of the seabed's natural resources. The problem that arises is how to devise a rule that will help us differentiate the artificial island from the installation. The only recommendation that can be made is that the close reading of article 10 of the Convention on the Territorial Sea and Contiguous Zone offers a double criterion of visibility and of permanence which may be helpful for our purpose.

In defining a natural island, article 10 states that it is a "naturally formed area of land surrounded by water, which is above water at high tide." "Surrounded by water" and "above water at high tide" suggest a visibility requirement. On the other hand, the words "area of land" suggest a requirement of permanence or even, as Professor D. H. N. Johnson put it, that the island must be "of the nature of territory."¹⁷ Clearly, alluvions conform to both of these requirements, without of course being naturally-formed, which is what makes them artificial islands. On the contrary, installations are not areas of land neither are they permanent and thus fail to meet the second requirement.

Matters would be fairly easy if we could draw the line here and consider all contraptions that do not conform to the second requirement as installations that are entitled to a safety zone and to the treatment of article 5 of the Continental Shelf Convention. An examination, however, of recent developments in seabed

¹⁴ Myres S. McDougal and William T. Burke, *The Public Order of the Oceans*, New Haven, 1962, p. 388.

¹⁵ Oppenheim, *op. cit.*, Vol. 1 (7th ed.), p. 516.

¹⁶ A/CN.4/SR.260, 1 *Yearbook of the International Law Commission* 1954, p. 91.

¹⁷ D. H. N. Johnson, "Artificial Islands," *The International Law Quarterly*, Vol. 4, London, 1951, p. 214.

technology and of envisaged artificial constructions for future ocean uses suggests that the problem is more complicated than it seems. A plethora of different artificial constructions covering a wide range of functions is already in use or still on the drawing board. Furthermore, these installations appear to present different forms of attachment to the seabed; some are embedded in it, others are just resting on it, some are floating above it and are kept in position by means of computerized propellers, and finally others are merely anchored on the seabed while floating on the surface of the sea. Many of them are employed in activities which have nothing to do with the exploration and exploitation of the seabed. Obviously, not all these installations can be considered as falling under article 5. Some appear to share common characteristics with vessels, or to be vessels for all intents and purposes and would therefore be more amenable to the legal treatment offered by maritime law. Others could not be properly classified as vessels, but neither as installations employed in seabed activities. A new legal regime will have to be devised for these constructions that do not fit either under maritime law or under the Continental Shelf Convention.

One reasonable way of differentiating these three categories of installations from each other and of assigning particular cases under one category or another lies in the use of a double criterion based first on function, which should be related to seabed exploration and exploitation, and secondly on immobility. Both criteria stem directly from article 5 of the Continental Shelf Convention. The functional requirement is stated explicitly in article 5. The immobility requirement is derived not from the letter but from the spirit of article 5, since a construction which is in constant movement, whatever its degree of attachment to the seabed, presents safety needs and navigational problems that are not remedied by a 500 metre safety zone.

To sum up, therefore, all stationary constructions employed in seabed exploration and exploitation, regardless of whether they are built on piles sunk in the seabed, or whether they remain stationary by means of highly advanced techniques, or whether they float while securely anchored to the seabed, should be regarded as installations requiring no territorial sea, but a safety zone and should possess the rights and duties extended to them by article 5 of the Continental Shelf Convention.

Constructions which do not meet the immobility requirement because they move, albeit slowly, but which are employed in seabed exploration and exploitation appear to the writer to qualify as ships before anything else. Consequently, they would have no territorial belt and no safety zone, but their existence would be regulated by maritime law and the law of the sea concerning vessels. As an illustration, one could classify a dredger under this category. A slightly more complicated case is that of the drilling platform or

the hydrocarbon tank which floats while towed into place and is later sunk to rest on the seabed. Such a storage complex consisting of a breakwater surrounding nine tanks of a million-barrel capacity is currently employed by Phillips Petroleum in oil storage at the Ekofisk oilfield in the North Sea.¹⁸ It is designed to rest on the seabed at a depth of 75 metres and a good portion of it is projecting above sea level. Two more such tanks are already in use off Dubai in the Persian Gulf. The best that could be said about such constructions is that they should be governed by maritime law only while towed into place and treated as installations, according to article 5, for the rest of their life.

The final category is that of constructions which are stationary and thus meet the second requirement, but which are not employed in seabed exploration and exploitation. It is doubtful whether such constructions as floating cities, floating aerodromes, floating Ocean Data Acquisition Stations, radar units and meteorological stations which float or which are built on piles driven into the seabed, non-alluvion off-shore ports, and dwellings on piles can be properly classified as installations and accorded the treatment of article 5. The needs and navigational hazards that they present vary according to their function. Dwellings on piles may easily be thought to require territorial waters for security purposes. The International Law Commission's Special Rapporteur had already pointed out in 1954 the need of territorial waters around villages on piles as can be found in South East Asia.¹⁹ The need of a territorial belt will be even more necessary around floating cities; the Japanese are already constructing Aquapolis, a floating city within Okinawa's territorial waters, which will be part of the 1975 International Ocean Exposition and which is expected to remain in place after the fair.²⁰ Likewise, floating deep water ports may require a combination of territorial and internal waters.

It seems, therefore, that a legal vacuum exists as regards to the third category of artificial constructions and the unforeseeable future uses of the sea make the task of drafting a comprehensive regime for these constructions very difficult indeed. What may be advisable, however, is that constructions of this kind that have already appeared should become the object of study and of conventional regulation before uncontrolled State practice prejudices the legal regime that should govern them.

Filling the juridical vacuum surrounding artificial construction of this category, however, becomes necessary not only in order to protect them, but also in order to control their activities; especially those which may be detrimental to the marine environment. Three things need to be determined towards this end: first, whether such

¹⁸ *The Guardian*, October 11, 1972.

¹⁹ A/CN.4/SR.260, 1 *Yearbook of the International Law Commission* 1954, p. 91.

²⁰ *The Guardian*, March 13, 1973.

constructions belong under the jurisdiction of the coastal State, or under that of the licensee's State (in cases where the licensee is of different nationality), or even, under the jurisdiction of both States; secondly, the precise obligations and the extent of liability of the licensee; and thirdly, the standards of pollution prevention and control that the world community expects from these operations.

The question of adequacy of existing environmental standards was once again raised after the wreck of the *Torrey Canyon* and the oil spillage from a Santa Barbara oil platform a few years ago. These two disasters demonstrated most dramatically the extent of damage which may result from negligent action and natural catastrophes at sea and gave further impetus to international anti-pollution regulation. Unfortunately, all the subsequent treaty-making has been exclusively concerned with ships, which are admittedly the chief source of marine-based pollution. The 1969 International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties is essentially a corrective instrument, rather than a preventive one, and is strictly limited to vessels. The 1954 Convention for the Prevention of Pollution of the Seas by Oil was amended for a third time in 1971 to cover tank arrangements and limitation of tank size of ships. The 1969 Convention on Civil Liability for Oil Pollution Damage, and the 1971 Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage will relate, when they come into force, only to sea incidents involving tankers. Similarly, the 1973 IMCO Marine Pollution Convention will concentrate on ship-generated pollution.

The protection of coastal and world interests from marine pollution caused by the activities of artificial installations assigned to the exploration and exploitation of the seabed still rests on article 5(7) of the 1958 Convention on the Continental Shelf and on article 24 of the 1958 Convention on the High Seas. Article 5(7) obliges the coastal State to undertake in the safety zone around an installation "all appropriate measures for the protection of the living resources of the sea from harmful agents." Apart from the fact that it fails to provide protection of the marine environment as a whole, article 5(7) does not stipulate any requirement for internal implementation of these measures. Article 24 of the Convention on the High Seas does require States to draw up regulations to prevent pollution of the seas by the discharge of oil resulting *inter alia* from the exploration and exploitation of the seabed and subsoil, but this article suffers from the same weakness as article 5(7) of the Continental Shelf Convention. It provides neither an obligation for specific internal legislation nor any mechanism of international supervision of enactment of agreed standards. Nevertheless, in spite of their deficiencies, the two articles do offer a framework for further and more precise conventional agreement.

Contrary to the requirements established for vessels and installations, artificial islands and constructions not employed in seabed exploration and exploitation appear, so far, free of any marine conservation responsibilities. In this context, some recent developments, outlined previously, provide cause for alarm since they constitute pollution hazards of great magnitude. The increasing size of tankers makes off-shore terminals a necessity for countries with no deep water ports. Finally, the unfortunate tendency to move into the sea industrial operations which are objectionable on land will soon allow the appearance of artificial islands for centralized waste treatment, oil processing, and other industrial uses on the contiguous zone and even farther. Whether the 1969 International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties can cover any of these constructions is an open question. In any event, this Convention is not preventive and it certainly does not cover constructions that rest on the seabed.

Faced with these contingencies, the world community appears to possess little more than a consensus on some basic marine conservation norms. Two of the Principles of the 1970 General Assembly Declaration Governing the Sea-Bed and the Ocean Floor and Subsoil Thereof Beyond the Limits of National Jurisdiction,²¹ and three of the Principles of the 1972 Declaration on the Human Environment²² are highly pertinent to the challenge posed by an endangered marine eco-system. Furthermore, the list of subjects for discussion, drawn up by the United Nations Sea-Bed Committee for the forthcoming Third United Nations Conference on the Law of the Sea,²³ assures that marine pollution matters will be given serious consideration. Item 12, with five sub-headings, relates to the preservation of the marine environment; item 18 concerns artificial islands and installations; and item 20 covers responsibility and liability for damage resulting from the use of the marine environment.

Good will is there; it remains to be seen whether political factors and overload of work will allow the Conference to proceed with a satisfactory conventional regulation of these issues. What is needed is not only a series of detailed provisions for seabed installations and other artificial constructions but also a comprehensive regime of marine ecology, which will pull together the network of relevant provisions of the various treaties and give substance to the environmental Principles of the two United Nations Declarations.

²¹ Principles 11 and 13(b). United Nations General Assembly Resolution 2749 (XXV), December 17, 1970.

²² Principles 7, 21, and 22. United Nations Document A/CONF. 48/14 and Corr. 1, *Report of the United Nations Conference on the Human Environment*, held in Stockholm June 5 - 16, 1972.

²³ United Nations Document A/8721, *Report of the Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor Beyond the Limits of National Jurisdiction*, pp. 5 - 8.