Airports at Sea: International Legal Implications

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ABSTRACT

The article considers the legal implications of a proposal by the Netherlands Government to build a new airport on an artificial island in the sea. The article concludes that the construction and use of an artificial island remains in principle within a coastal state's authority, with due regard to the rights and duties of other states and the LOS Convention and other rules of international law. Account must be taken of conflicting uses of the sea, for example, navigation, fishing, offshore activities, submarine cables and pipelines, and overflight. Freedom of overflight will be dealt with by the ICAO. With regard to other aspects of air law, such as liability and aviation security, there are no clear indicators of the appropriate course to take. The uniqueness of an airport at sea requires the Netherlands to tread new ground, requiring it to devise new ways for removing possible obstacles.

Introduction

Whether or not the Netherlands should construct a new airport at sea as a solution to the current capacity problems of Schiphol (Amsterdam Airport) has been given ongoing attention in the national media since the second half of 1998. The plans for a new "Schiphol at Sea" involve the construction of an artificial island off the North Sea coast of the Netherlands, most likely by the deposition of sand and gravel in bulk. Presumably, tunnels will provide a connection with the mainland to transport passengers and goods. The uniqueness of these plans lies in the fact that it is not merely a matter of land-reclamation along the coast.

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Rather, one of the locations under consideration would be beyond the 12 nautical miles Netherlands territorial sea.[1]

Not surprisingly, the brunt of the attention is on the cost-effectiveness of such an endeavour; weighing all sorts of advantages and disadvantages. Incidental media coverage was also devoted to legal aspects of "Schiphol at Sea".[2] While these accounts were primarily intended to familiarise a wider public with the relevant legal issues, this article will provide a more detailed legal analysis. The subject will be approached mainly from the perspective of international law, more specifically the law of the sea and air law.

Law of the Sea Aspects

Introduction

The starting point for any discussion on the legal aspects of the construction and use of artificial islands at sea is the law of the sea. This field of law comprises the body of rules which governs the relations between subjects of international law with regard to all uses of the sea and its natural resources, such as fishing, navigation and offshore mining. The law of the sea would not, or merely indirectly or to a minor extent, be applicable if the artificial island would be located in so-called internal waters (see below).

Undoubtedly one of the older parts of international law, the law of the sea evolved several centuries ago from Grotius' concept of *mare liberum*. This famous adagium held that the high seas where not susceptible to appropriation nor could they be subjected to any exclusive rights or jurisdiction by states. Some measure of control by states over a belt of water along their coasts (coastal states), which finally became known as the territorial sea, was nevertheless recognised even in that era. Shortly after World War II, the phenomenon of "creeping coastal state jurisdiction", namely, the gradual expansion of coastal state control over areas which previously belonged under the regime of the high seas, was set in motion and this is arguably still continuing today.

The wish to codify and also control the rapidly developing state practice ultimately led to the momentous Third United Nations Conference on the Law of the Sea (UNCLOS III) in 1973.[3] The negotiations at UNCLOS III are unequalled in the immense number of participating states (around 150) and the multitude and diversity of subjects that were intended to culminate in a

[1] The idea of constructing an airport at sea was considered in the 1970s by many states, including the Netherlands, the United Kingdom and the United States: see A.M.J. Heijmans, "Artificial Islands and the Law of Nations" (1974) 21 *Nederlands Tijdschrift voor Internationaal Recht* 139–169 at 141–142; and W.H. Lawrence, "Superports, Airports and Other Fixed Installations on the High Seas" (1975) 6 *Journal of Maritime Law and Commerce* 575–591 at 577–578.

[2] See the contributions by E.J. Molenaar, *Trouw*, 19 September 1998, p. 11; P. Mendes de Leon, *Trouw*, 2 October 1998, p. 3; and M. Langeveld, *Trouw*, 20 October 1998.

[3] UNCLOS I took place in 1958 and UNCLOS II in 1960.

"Constitution for the Oceans". The dogmatic conflicts in the age of the Cold War and the different visions on a just distribution of the resources of the sea, led (besides other conflicting interests) time and again to deadlocks.

Nine years and 11 sessions were needed before the United Nations Convention on the Law of the Sea (LOS Convention) was adopted on 10 December 1982.[4] Dissatisfaction with mainly the regime for deep sea-bed mining motivated four states (including the United States) to vote against the adoption of the final text, while a group of 17 states (including the Netherlands) abstained from voting.[5] While the LOS Convention entered into force on 16 November 1994—one year after the sixtieth instrument of ratification was deposited—the Netherlands became party to the LOS Convention on 28 June 1996.[6]

Sovereignty, Sovereign Rights and Jurisdiction

The LOS Convention recognises in Article 1(1) that "[t]he sovereignty of a coastal state extends, beyond its land territory and internal waters and in the case of an archipelagic state, its archipelagic waters, to an adjacent belt of sea, described as the territorial sea". Islands, islets, rocks and reefs are included in land territory.[7] Articles 1(2) and 49(2) add that this sovereignty also extends to the air space over the territorial sea and archipelagic waters as well as to their bed and subsoil. No need was apparently seen to confirm sovereignty over the airspace above land territory and internal waters.[8] Sovereignty is the most comprehensive form of state authority, whose exercise is nevertheless subject to international law, including the relevant provisions in the LOS Convention. In view of the absence of any reference to the construction and use of artificial islands in areas subject to state sovereignty, this must be presumed to be within the coastal state's authority.[9]

A key success of UNCLOS III was its consensus on the maximum breadth of the territorial sea, which Article 3 of the LOS Convention sets at 12 nautical miles from the baselines for the measurement of the territorial sea. These

4 Montego Bay, Jamaica, (1982) 21 ILM 1245.

5 In 1994 the regime for deep sea-bed mining laid down in Part XI of the LOS Convention was in fact set aside by the Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 (UN General Assembly Resolution 48/263, 28 July 1994, in force 28 July 1996, www.un.org/Depts/los). This ensured the support of the main states that had voted against or abstained from voting.

6 As at 1 May 1999, 129 states and the European Community were parties to the LOS Convention (www.un.org/Depts/los).

7 See the Award in the *Beagle Channel* Arbitration, 52 ILR 227.

8 This would arguably also be unnecessary due to the presumption of unrestricted state sovereignty (see note 9 below) in the absence of explicit rules of international law which attest to the contrary. This would also explain why Art. 2 does not mention sovereignty over resources. However, the fact that Art. 49(2) explicitly confirms sovereignty over resources within archipelagic waters could be explained by a wish to remove all possible doubt on the issue.

9 Cf. the Permanent Court of International Justice in the *Lotus* case (Series A, No. 10, p. 18 (1927)).

baselines are of considerable significance for two main reasons. First, they in fact determine the outer limits of all the coastal state's maritime zones, which means that their establishment will have to meet strict requirements.[10] Secondly, baselines for the measurement of the territorial sea establish a clear boundary between the territorial sea on the one hand and land territory or internal waters on the other hand.[11] The significance of this boundary lies in the fact that the law of the sea and the LOS Convention do not, in principle, apply landward of this boundary.[12] Although the territorial sea, archipelagic waters and internal waters all form part of a state's territory,[13] the LOS Convention grants states other than the coastal state important rights in the territorial sea and archipelagic waters, but not in internal waters (see below).[14]

Apart from the novelty of archipelagic waters, the LOS Convention also recognises the concept of the exclusive economic zone (EEZ). This is a coastal zone extending up to a maximum of 200 nautical miles from the baseline from which the breadth of the territorial sea is measured.[15] With a territorial sea with a maximum width of 12 nautical miles (the EEZ borders thereon), the final scope of this zone depends on the specific geographical situation, something in which the length of the coast and the presence of opposite or adjacent states play a prominent role. In this potentially enormous area, the coastal state has pursuant to Article 56(1)(a) sovereign rights over all natural resources, both living and non-living, and both within the water-column and on, in and below the sea-bed. The EEZ thus comprises elements of fishing rights and rights which belong under the regime of the continental shelf (see below).

In addition to these sovereign rights with an economic nature, Article 56(1)(b) entitles a coastal state to exercise jurisdiction over certain issues, *inter alia* over "the establishment and use of artificial islands, installations and structures".[16] This is further elaborated in Article 60, which recognises the coastal state's "exclusive right to construct and to authorise and regulate the construction,

[10] Art. 5 provides that the normal baseline is the low water line along the coast. Arts 7, 9, 11, 13, 14, 47 and 48 address special cases.

[11] Arts 5 and 8(1). The LOS Convention contains special rules which apply to archipelagic waters, which lie within the archipelagic baselines drawn in accordance with Art. 47. From these baselines the archipelagic state's other maritime zones are measured (Art. 48). Art. 50 allows an archipelagic state to draw closing lines within its archipelagic waters for the delimitation of its internal waters.

[12] Although the LOS Convention contains various references to internal waters (for instance Arts 18(1), 111(1) and 218(1)), it cannot be said to deal comprehensively therewith.

[13] The LOS Convention does not use or define the term "territory" but has opted instead for referring to "sovereignty".

[14] But see Art. 8(2). Also, the contiguous zone which can be established pursuant to Art. 33 is not discussed as it only allows the coastal state to exercise enforcement jurisdiction for purposes which are not relevant here.

[15] Art. 57.

[16] Art. 56(1)(b) further lists jurisdiction over marine scientific research and the protection and preservation of the marine environment.

operation and use of", and "exclusive jurisdiction over", artificial islands. This is clearly meant to establish comprehensive regulatory authority and would thus include construction, operation and use of, and jurisdiction over, an airport on an artificial island.[17] These broad powers are accompanied by a considerable number of safeguards to ensure that rights of other states are not compromised (see Section 1.5).

As already briefly touched upon, a coastal state is entitled to a continental shelf which "comprises the sea-bed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory".[18] The maximum outer limit of the continental shelf is, if not affected by the presence of opposite or adjacent states, to be determined in accordance with the highly complex Article 76 of the LOS Convention. This provision allows a greater width than 200 nautical miles, which would not prejudice the high seas status of the superjacent waters. A coastal state "exercises over its continental shelf sovereign rights for the purpose of exploring it and exploiting its natural resources".[19] Although no explicit mention is made of the exercise of jurisdiction, this would seem to be permitted in so far as this is reasonably related to a coastal state's exercise of its sovereign rights. For the purpose of this paper, it is sufficient to refer to Article 80 which makes Article 60 *mutatis mutandis* applicable to artificial islands on the continental shelf.

Something which should not be left unmentioned is that in the years preceding the entry into force of the LOS Convention, many states, including the Netherlands, established an exclusive fishery zone (EFZ) instead of an EEZ. In this EFZ they claimed only sovereign rights with regard to the living resources; the non-living resources being covered by the regime of the continental shelf. To a great extent this was motivated by the uncertain customary status of the EEZ. One difference between the continental shelf and the EEZ (or EFZ) is that the latter requires an express proclamation. The Netherlands is currently in the (painstakingly slow) process of proclaiming an EEZ.[20] It is recalled that due to the *mutatis mutandis* applicability of Article 60 to the regime of the continental

[17] Cf. K. Hailbronner, "Freedom of the Air and the Convention on the Law of the Sea" (1983) 77 *American Journal of International Law* 490–519 at 509–510, who also refers to existing state practice on the exercise of such jurisdiction over offshore installations. Under the 1958 Convention on the Continental Shelf (Geneva, 29 April 1958, in force 10 June 1964, 499 UNTS 311), a coastal state would merely have certain rights and jurisdiction with respect to "installations and other devices necessary for its exploration and the exploitation of its natural resources" (Art. 5(2)).

[18] Art. 76(1).

[19] Art. 77. Para. (1) defines "natural resources" as "mineral and other non-living resources of the sea-bed and subsoil together with living organisms belonging to sedentary species", such as crabs.

[20] "Kingdom Act on the Establishment of an Exclusive Economic Zone" (Parliamentary Papers, Second Chamber: No. 25 446 (R 1594), Nos 1–5). At the moment of writing the Act has passed the Second Chamber and will probably be adopted soon.

shelf, an EEZ proclamation would not be necessary for the construction and use of an artificial island as an airport.

Impact on Outer Limits of Maritime Zones

Maritime zones can only be generated from land territory over which a state holds title.[21] Consequently, *terra nullius* does not possess maritime zones.[22] This does not mean that all types of land territory are treated on an equal footing. Article 121 of the LOS Convention provides that an island, defined as "a naturally formed area of land, surrounded by water, which is above water at high tide" can generate all the maritime zones as discussed in the previous section.[23] This would *a fortiori* apply to land territory which forms part of the mainland. A well-known exception to the island-rule is incorporated in paragraph (3) of Article 121, which provides that "[r]ocks which cannot sustain human habitation or economic life of their own shall have no exclusive economic zone or continental shelf". This implies that rocks nevertheless have a territorial sea of their own.

Relevant to "Schiphol at Sea" is the fact that an island must be "naturally formed" to possess maritime zones, and evidently this is not the case.[24] Article 60(8) of the LOS Convention makes this absolutely clear by stipulating that artificial islands "do not possess the status of islands". However, were the artificial island genuinely connected with the mainland and thereby not "surrounded by water", it would in fact qualify more appropriately as land-reclamation and not as an "island". This would in principle push the outer limits of all the maritime zones of the coastal state further seaward, as for instance happened when the Port of Rotterdam was extended with the "Maasvlakte".[25]

[21] This takes no account of the fact that the title to land territory can be disputed between two or more states.

[22] Cf. I. Brownlie, *Principles of Public International Law* (Oxford, Clarendon Press, 4th ed., 1990), pp. 121–122.

[23] Art. 13 of the LOS Convention addresses the special case of "low-tide elevations", which can be used as the baseline for measuring the breadth of the territorial sea, if situated wholly or partly at a distance not exceeding the breadth of the territorial sea.

[24] Cf. Art. 60(8) of the LOS Convention. An interesting question would be if an island created by inducing coral growth would qualify as "naturally formed" and thereby as an "island" within the meaning of Art. 121.

[25] Relevant in this context is Art. 11 of the LOS Convention, which provides that "the outermost permanent harbour works which form an integral part of the harbour system", but not artificial islands, are to be regarded as forming part of the coast. The Port of Rotterdam is currently considering a further extension through the "Maasvlakte 2". It would seem that tunnels would not qualify as a "genuine connection". See also the observations by Heijmans, note 1 above at p. 144 who supports a different view, although this was before agreement was reached on Art. 11 of the LOS Convention at UNCLOS III.

Applicability of National Legislation

When an artificial island is located wholly or partly within the outer limit of the territorial sea, it subsequently falls also wholly or partly under the sovereignty of the coastal state. This will be of the utmost relevance for the applicability of national legislation. As international law does not prescribe how states should define the geographical scope of application of their legislation, a variety of approaches can be pursued, as long as they do not overstep the limits imposed by relevant rules of international law.[26]

Conflict with Other Uses

The preceding analysis has shown that there is little doubt that a "Schiphol at Sea" would in principle remain within the broad powers based on coastal state sovereignty in its territorial sea and archipelagic waters, or on its sovereign rights and jurisdiction in the EEZ or over its continental shelf. However, in exercising its sovereignty, sovereign rights or jurisdiction, a coastal state must have due regard to the rights and duties of other states, and act in accordance with the LOS Convention and other rules of international law.[27] Relevant here are not only the many general obligations incorporated in the LOS Convention, but also the recognition of various rights for other states. Within the territorial sea and archipelagic waters, ships of all states enjoy the right of innocent passage.[28] In the EEZ and over the continental shelf all states enjoy certain, but not all the freedoms of the high seas. Those directly relevant here and applicable to both the EEZ and the continental shelf are the freedoms of navigation and overflight and of the laying of submarine cables and pipelines.[29]

Apart from ensuring that due regard is paid to the rights of other states, account should of course also be taken of the interests of the coastal state's own nationals. The way in which this is done is dependent on each individual state's legal framework. The interests of the nationals of third states are only relevant in an indirect sense, namely, by observing the rights of those nationals' state.

The duty to act in accordance with the LOS Convention and other rules of international law is particularly pertinent with respect to the environment. In addition to "due diligence" obligations under customary law, a large number of

[26] The enactments of several states, for example India and Pakistan, claim the competence to extend to their EEZ any enactment in force for that state. Authors such as T. Scovazzi, "Coastal State Practice in the Exclusive Economic Zone: The Rights of Foreign States to Use this Zone" in T.A. Clingan (ed.), *The Law of the Sea: What Lies Ahead? Proceedings of the Law of the Sea Institute 20th Annual Conference, Miami, 1986* (Honolulu, Law of the Sea Institute, University of Hawaii, 1988), pp. 310–328 at p. 313, submit that such enactments "can be interpreted as leading towards a model of creeping territorialism". See also E.J. Molenaar, *Coastal State Jurisdiction over Vessel-Source Pollution* (The Hague, Boston and London, Kluwer Law International, 1998), pp. 370–371.

[27] Arts 2(3), 49(3) and 56(2) of the LOS Convention.

[28] Arts 17 and 52(1). Art. 53 provides for the right of archipelagic sea-lanes (ASLs) passage.

[29] Arts 56(3), 58(1) and 78.

international instruments prescribe both general and specific duties that ensure environmental protection. For the project under scrutiny, the Netherlands should at any rate undertake an extensive environmental impact assessment (EIA) to investigate all possible impacts of the construction and use of "Schiphol at Sea". For example, the impact on marine living organisms, birdlife and ecosystems by the construction itself, atmospheric pollution, noise, etc.[30]

Particular reference should also be made to current developments within the framework of the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention).[31] The 1998 Ministerial Meeting of the OSPAR Commission held in conjunction with the 1998 annual meeting of the Commission, adopted a new Annex V and a new Appendix 3 to the OSPAR Convention. These are entitled "Protection and Conservation of the Ecosystems and Biological Diversity of the Maritime Area" and "Criteria for Identifying Human Activities for the Purposes of Annex V", respectively.[32] The OSPAR Strategy in relation to the newly adopted Annex V identifies the extraction of marine sand and gravel, and land-reclamation as activities which need study. The assessment of the impact of the extraction of marine sand and gravel is currently undertaken by the Working Group on Sea-Based Activities (SEBA) and the issue of land-reclamation by the Working Group on Impacts on the Marine Environment. Their findings could ultimately lead to the adoption of OSPAR decisions, recommendations or action plans, each of which will require corresponding steps by the Netherlands.[33]

The following sections focus on several uses of the sea which conflict with the construction and use of artificial islands, namely, navigation, fishing, offshore activities and the laying of submarine cables and pipelines. The possible conflict with the freedom of overflight will be discussed within the larger framework of air law in Section 2.

[30] The obligation to undertake an EIA is, *inter alia*, laid down in Art. 206 of the LOS Convention. Coastal state obligations with regard to pollution from activities on its sea-bed are specified in Art. 208, which explicitly refers to Arts 60 and 80. Noteworthy also is Art. 60(3) which refers to the obligation to have "due regard to fishing, the protection of the marine environment and the rights and duties of other States". While this obligation is only explicitly meant for the removal of installations or structures, it would seem to apply to the removal and construction of artificial islands as well.

[31] Paris, 22 September 1992, in force 25 March 1998, www.ospar.org.

[32] 22–23 July 1998, Sintra, Portugal. Arts 15, 16 and 18 of the OSPAR Convention require that a minimum of seven contracting parties become parties to an annex or an appendix before they can enter into force. These requirements have not yet been met.

[33] See Art. 13 of the OSPAR Convention. Interestingly, some of the recommendations suggested in a report presented at the 1999 SEBA Meeting (Impact of Marine Sand and Gravel Extraction, SEBA 99/14/1-E(L), pp. 12–13), which discusses relevant information collected in the framework of the International Council for the Exploitation of the Sea (ICES), are also relevant to fisheries management.

Navigation

In planning the construction of an artificial island, the coastal state must respect the use of the seas for navigation. The right of innocent passage and the freedom of navigation in the respective maritime zones of a coastal state are meant to safeguard the navigational interests of other states, and by inference the interests of the coastal state's nationals. This by no means prevents the coastal state from regulating maritime traffic in its territorial sea, although this should not amount to "unreasonably" hampering innocent passage.[34] If the need is felt also to regulate traffic beyond the territorial sea, the coastal state is barred from unilateralism and has to undertake the appropriate steps within the International Maritime Organisation (IMO) in London.

It is submitted that, even with the undoubtedly considerable size of "Schiphol at Sea", this does not necessarily amount to unreasonably hampering innocent passage in the territorial see or an unjustifiable interference with the freedom of navigation beyond the territorial sea. Article 60(7) of the LOS Convention makes an important qualification to this assumption by stipulating that artificial islands may not be established where this would cause interference "to the use of recognised sea-lanes essential to international navigation". Although this provision would in principle only apply directly to the EEZ and continental shelf, non-observance in the territorial sea could certainly be regarded as unreasonably hampering innocent passage.[35] If, in fact, these "recognised sea-lanes" are to be regarded as straits used for international navigation or archipelagic sea-lanes (ASLs), the coastal state is no longer able to pursue an unilateral course on traffic regulation but must take the matter to the IMO.[36] Similarly, if the establishment of an artificial island would interfere with ships' routing measures already adopted by the IMO, the coastal state should also seek

[34] Arts 21(1)(a) and (b), 22, 23 and 24 of the LOS Convention. The term "unreasonably" is used as a qualification because all traffic regulation in fact hampers innocent passage (see Molenaar, note 26 above at pp. 201–202 and 245).

[35] See also Art. 22(3)(b).

[36] See Arts 41(4) and 53(9) of the LOS Convention and para. 3.14 of the General Provisions on Ships' Routing (Ships' Routing Provisions, IMO Res. A.572(14), as amended). The "competent international organization" referred to in these provisions is widely recognized as being the IMO. The so-called co-operative legislative competence which is accorded to the IMO would not only be applicable to the adoption of sea-lanes, ASLs or traffic separation schemes but in fact to any of the ships' routing measures which can be adopted under Regulation V/8 of the International Convention for the Safety of Life at Sea (London, 1 November 1974, as amended, entry into force 25 May 1980). Reg. V/8, which was adopted by IMO Res. MSC.46(65) and which entered into force on 1 January 1997, refers in para. (k) to the legal regime of international straits. Since the construction and use of an artificial island would lead to an area where navigation is no longer possible, this is similar to a so-called area to be avoided (ATBA). An ATBA is not likely to be adopted in areas subject to the regime of transit passage or ASLs passage (see para. 3.7 of the Ships' Routing Provisions; Molenaar, note 26 above at pp. 298–299; IMO Doc. NAV WP.3/Add.1, Annex 7; and UN Doc. A/52/487, para. 113).

IMO involvement.[37] Coastal states are at any rate obliged to give due notice to the construction and presence of artificial islands.[38]

Paragraphs (4) to (7) of Article 60 of the LOS Convention permit a coastal state to establish, "where necessary", safety zones around artificial islands in which "it may take appropriate measures to ensure both the safety of navigation and of the artificial islands". The breadth of these safety zones is not to exceed 500 metres, "except as authorised by generally accepted international standards or as recommended by the competent international organisation". The safeguards for the interests of navigation apply *mutatis mutandis* to the safety zones and due notice must be given of the extent of these zones. All ships "must respect these safety zones and shall comply with generally accepted international standards regarding navigation in the vicinity of artificial islands, and safety zones". Even though several qualifications have thus been incorporated, coastal states retain a wide margin of discretion in establishing safety zones and exercising jurisdiction therein. For the purpose of providing some guidance to both coastal and flag states, the IMO adopted Resolution A.671(16) on "Safety Zones and Safety of Navigation Around Offshore Installations and Structures", which basically elaborates Article 60 of the LOS Convention.[39] Recommendation 1(d) of the Preamble to this Resolution acknowledges that safety zones can be closed to international navigation.

A rather interesting conclusion is therefore that the establishment of artificial islands and the safety zones around them should respect navigational interests but is not subject to IMO approval.[40] Conversely, if a coastal state would want to designate a so-called area to be avoided (ATBA) beyond the territorial sea for a purpose unrelated to artificial islands, installations or structures, IMO approval would certainly be required.[41] However, given the size of "Schiphol at Sea", it would certainly be a sign of good governance to raise the construction plans in the IMO's Subcommittee on Safety of Navigation and to welcome any discussion on the issue, albeit without conceding any loss of decision-making powers. This would perhaps even be required by the coastal state pursuant to the relevant "due notice" obligations in the LOS Convention. Finally, it would also be in the interest of safety of navigation that the global shipping industry becomes aware of the construction plans at an early stage.

[37] See para. 3.12 of the Ships' Routing Provisions.
[38] Arts 24(2) and 60(3) of the LOS Convention.
[39] Adopted on 19 October 1989. The preamble (under "Being aware ") explicitly refers to Arts 60 and 80 of the LOS Convention, and categorises artificial islands as offshore installations or structures.
[40] IMO approval would nevertheless be necessary for safety zones that exceed 500 metres in breadth as IMO Res. A.671(16) does not contain exceptions to the 500-metre limit.
[41] See note 37 above.

Fishing

The construction and use of an artificial island has two main implications for fishing. First, fishing *per se* will not be possible within certain areas due to the construction of the island and, later on, the presence of the island and possibly its safety zones. As certain areas are richer in marine living resources than others, this should be a factor in deciding upon the artificial island's location. Also, those permitted to fish in the envisaged location may need to be compensated for loss of income, if any. Secondly, the construction and use of the artificial island may have negative effects for fishing.[42] This should be examined as part of the required EIA and compliance with other obligations relating to the protection and preservation of the marine environment already referred to and could, among other things, lead to further compensation to stakeholders in fishing.

In light of a coastal state's sovereignty and sovereign rights over the exploitation of the marine living resources in its territorial sea, archipelagic waters and EEZ, these considerations and interests can usually be dealt with at the national level.[43] This would of course be different if the impact of the construction and use of the artificial island extends beyond its maritime zones, including into other states' maritime zones.[44] Moreover, although as a Member State of the European Union (EU), the Netherlands has not delegated jurisdiction related specifically to artificial islands, competence on fisheries rests exclusively in Brussels.[45] One characteristic of the Common Fisheries Policy of the European Community (EC) is equal access of fishing vessels flying the flag of

[42] For instance, the presence of the tunnels linking the artificial island to the mainland may have an impact on trawl-fishing.

[43] Note that, pursuant to Art. 51(1) of the LOS Convention, archipelagic states are to recognise traditional fishing rights in archipelagic waters.

[44] See Art. 194(2) of the LOS Convention.

[45] No provision in the EC Treaty (Treaty Establishing the European Economic Community, Rome, 25 March 1957, in force 1 January 1958, 298 UNTS 11, as amended) empowers the EC to regulate in the field of artificial islands. On the issue of fisheries see Art. 3(1)(e) of the EC Treaty (consolidated version) and the declaration accompanying the EC's instrument of formal confirmation of the LOS Convention, pursuant to Art. 5(1) of Annex IX to the LOS Convention. The caption "Matters for which the Community has exclusive competence" is immediately followed by the words: "The Community points out that its Member States have transferred competence to it with regard to the conservation and management of sea fishing resources. Hence in this field it is for the Community to adopt the relevant rules and regulations (which are enforced by the Member States) and, within its competence, to enter into external undertakings with third states or competent international organisations. This competence applies to waters under national fisheries jurisdiction and to the high seas. Nevertheless, in respect of measures relating to the exercise of jurisdiction over vessels, flagging and registration of vessels and the enforcement of penal and administrative sanctions, competence rests with the Member States whilst respecting Community law. Community law also provides for administrative sanctions." (www.un.org/Depts/los).

EU Member States throughout the Member States' EEZs or EFZs, except within an exclusive fishing zone of 12 nautical miles from the baseline.[46]

If the artificial island would therefore be located wholly or entirely beyond the territorial sea, it will certainly affect the interests of other EU Member States. However, these affected interests are not the result of a form of indirect regulation of fisheries but rather of a conflict of uses. In a highly similar conflict of uses, namely, that between offshore activities (oil, gas, sand and gravel) and fishing, Churchill sees no need to pursue the matter at the EC level.[47] It would indeed seem that as long as the construction and use of the artificial island does not seriously effect the size or condition of fish stocks (the location of spawning and nursery grounds are of particular relevance here) or in any other way seriously frustrates vessels in fishing their quotas, the matter should be treated in a similar way as offshore activities.

Offshore activities

Many of the observations that have been made with regard to fishing apply here as well. The choice of location should take account of the implications on the exploitation of non-living marine resources. As this activity remains entirely within the sovereignty or sovereign rights of the coastal state, it can in principle be dealt with at the national level.

Submarine cables and pipelines

Submarine cables and pipelines are another aspect which the construction and use of artificial islands will have to take into account. Those cables and pipelines already *in situ* may not be able to cope with the pressure of the landmass above them or the altered water currents in the area, or lead to problems of maintenance or other (unexpected) difficulties.[48] The construction and presence of the island will obviously affect the freedom of laying submarine cables or pipelines which exists on a coastal state's continental shelf beyond the territorial sea.[49] Although the coastal state does not have an applicable basis to impede the laying of submarine cables and pipelines, the delineation of their course is subject

[46] Council Regulation 101/76, OJ 1976 No. L20/1 and 19. A further exception is made for ships of Member States with traditional fishing rights in certain fish stocks within 3 to 12 nautical miles from the baseline (Art. 6 of Council Regulation 3760/92 of 20 December 1992, OJ 1992 No. L389/1). Ships registered in Belgium have equal access in the Netherlands territorial sea as well, pursuant to Art. 2 of the Treaty Instituting the Benelux Economic Union (The Hague, 3 February 1958, in force 1 November 1960, 381 UNTS No. 5471, p. 259 (1960)).

[47] R.R. Churchill, *EEC Fisheries Law* (Dordrecht, Boston and Lancaster, Martinus Nijhoff Publishers, 1987), pp. 150–151.

[48] Note the reference to "due regard to cables or pipelines already in position" in Art. 79(5) of the LOS Convention, even though not explicitly in relation to the construction and use of artificial islands. Art. 79(2) and (5) contain references to maintenance.

[49] Arts 58(1), 79(1) and 87(1)(c) of the LOS Convention. Art. 51(2) of the LOS Convention concerns existing submarine cables within the "waters" of the archipelagic state.

to the coastal state's consent.[50] A modified course to circumvent an artificial island would remain within the limits of these powers.

Air Law Aspects

Although the LOS Convention imposes no fundamental restrictions on coastal states with respect to the construction and use of artificial islands other than that account should be taken of other states' rights, there may be other rules of international law that restrict the use of artificial islands as airports. The Convention on International Civil Aviation (Chicago Convention)[51] and the body of rules developed by the International Civil Aviation Organisation (ICAO) established under the Chicago Convention may contain such limitations.

Article 1 of the Chicago Convention stipulates that "every State has complete and exclusive sovereignty over the airspace above its territory". Article 2 defines "territory" as "the land areas and territorial waters adjacent thereto". No mention is made of internal waters although they can be regarded as being comprised in "land areas". Archipelagic waters are not referred to either, simply because this is a concept which was only introduced decades later. Unlike internal waters, however, archipelagic waters cannot be automatically included in the term "territory" as defined in the Chicago Convention. This is due to the right of ASLs passage recognised in Article 53 of the LOS Convention, which includes a right of overflight.[52] A further exception exists for areas subject to the right of transit passage pursuant to Article 38 of the LOS Convention, which also applies to aircraft.[53]

Essentially, the Chicago Convention is based on the fundamental rule that general international law does not grant states a right of overflight over the territory of another state.[54] By becoming parties to the Chicago Convention, which applies only to civil aircraft, states accept certain (limited) exceptions to

[50] See the exhaustive list of grounds for refusal in Art. 79(2) of the LOS Convention and the consent rule in Art. 79(3). Note that Art. 79(4) explicitly refers to artificial islands but presumably this only concerns cables and pipelines "constructed or used in connection with the operations of artificial islands".

[51] Chicago, 7 December 1944, entry into force 4 April 1947, 15 UNTS No. 102, p. 295 (1948), as amended.

[52] See the active involvement of the ICAO in the drafting of the "General Provisions for the Adoption, Designation and Substitution of Archipelagic Sea Lanes" (ASLs Provisions), which are attached as Annex 2 to the Ships' Routing Provisions (see note 36 above). See the Introduction to the ASLs Provisions, which also observes that "[i]nternational air traffic services (ATS) routes above the archipelagic waters to be used by civil aircraft engaged in international air navigation are subject to the approval process of ICAO" (see also IMO Docs NAV 43/15, Annex 4 and MSC 69/22, paras 5.15 and 5.18, and Section 3.3 of the ASLs Provisions).

[53] For a discussion on coastal state powers over aircraft exercising the right of transit or ASLs passage, see Hailbronner, note 17 above. Pursuant to Arts 39(3)(a) and 54 of the LOS Convention, the ICAO Rules of the Air apply to civil aircraft in transit or ASLs passage.

[54] Cf. Hailbronner, note 17 above at p. 491.

this general rule on an *inter se* basis.[55] Nevertheless, aircraft flying over a state's territory must comply with that state's regulations, which can diverge from ICAO rules.[56] The Chicago Convention does not explicitly recognise that a freedom of overflight exists beyond a state's territory. However, this is implicit in the silence on the issue and later confirmed by Article 2(4) of the High Seas Convention[57] and Article 87(1)(b) of the LOS Convention.[58] The only reference to the high seas in the Chicago Convention is made in Article 12, entitled "Rules of the Air", which requires contracting states to ensure that every aircraft carrying its nationality mark, wherever such aircraft may be, complies with the rules relating to the flight and manoeuvre of aircraft there in force. It then goes on to provide that "[o]ver the high seas, the rules in force shall be those established under this Convention". Although the term "high seas" is not defined and no reference is made to the EEZ, it is submitted that Article 12 intends to denote the airspace seaward of the territorial sea.[59]

The Rules of the Air to which Article 12 refers are essentially those contained in Annex 2 to the Chicago Convention, although aircraft in areas over the high seas where states provide air control services must comply with these pursuant to Annex 11.[60] The governing body of the Chicago Convention, the ICAO Council, adopts the international standards and recommended practices and procedures which are subsequently incorporated as annexes to the Chicago Convention. By requiring compliance with this body of rules while civil aircraft are above the high seas and by advocating that in prescribing air regulations generally, contracting states strive for uniformity with these rules, the ICAO has in fact become a universal legislator in a more or less similar fashion to the IMO.[61] Even

[55] See Art. 5 (Right of non-scheduled flight), which is moreover limited by Art. 9 (Prohibited areas).

[56] Art. 38.

[57] Convention on the High Seas, Geneva, 29 April 1958, in force 30 September 1962, 450 UNTS 11.

[58] Cf. N. Grief, *Public International Law in the Airspace of the High Seas* (Dordrecht, Boston and London, Martinus Nijhoff Publishers, 1994), p. 61. On pp. 48–52, he observes that the freedom of overflight over the high seas was already established as a principle of customary international law.

[59] Cf. R.R. Churchill and A.V. Lowe, *The Law of the Sea* (Manchester, Manchester University Press, revised ed., 1988), p. 142 who argue that Art. 12 of the Chicago Convention is one of the "pertinent rules of international law" which by virtue of Art. 58(2) of the LOS Convention apply to the EEZ. See also Hailbronner, note 17 above at pp. 508–509. This is also consistent with the LOS Convention's freedom of overflight beyond the territorial sea, and the absence of coastal state rights or jurisdiction in that field (note that Art. 212 does not extend beyond the territorial sea). See also Art. 221 of the LOS Convention which uses "beyond the territorial sea" and its predecessor, Art. I(1) of the International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (Brussels, 29 November 1969, in force 6 May 1975, UKTS 77 (1975)) which only explicitly refers to "high seas" but is widely accepted as also applying within the EEZ.

[60] Cf. Hailbronner, note 17 above at p. 491; Grief, note 58 above at p. 63.

[61] See F.L. Kirgis Jr., "Shipping" in O. Schachter and C.C. Joyner (eds.), *United Nations Legal Order* (American Society of International Law, Cambridge University Press, 1995), pp. 715–749.

though the freedoms of navigation and overflight might from a fundamental perspective not have been affected by their regulatory activity, this certainly brought an end to the "freedom from regulation".[62]

The Chicago Convention does not recognise that states have unilateral powers to restrict rights or freedoms of overflight beyond their territory, which is generally consistent with the freedom of overflight beyond a coastal state's territorial sea pursuant to Articles 58(1), 78(1) and 87(1)(b) of the LOS Convention. However, Articles 56(2), 58(3) and 78(2) are explicitly incorporated to balance coastal states' rights with the freedoms of other states. Some reasonable limitations of the freedom of overflight would therefore be in accordance with the broad coastal state powers over artificial islands under the LOS Convention.[63] However, if a "Schiphol at Sea" were to be located wholly or partly beyond the territorial sea, it is clear that an unfettered freedom of overflight above the airport, or even in the immediate area, would not allow its safe operation. As this would considerably restrict the freedom of overflight, and since the LOS Convention contains no specific rules to accommodate these conflicting interests, the matter cannot be confined to the national level.[64]

With respect to matters within the ICAO's competence (Regional Air Navigation Plans defining the international air traffic services (ATS) routes, route facilities, communications, etc.), it seems reasonable to argue that only ICAO approval would justify this extent of interference with the freedom of overflight.[65] In matters beyond the ICAO's competence, for example on issues such as liability and aviation security, no clear answers exist on the most preferable course of action.[66] Furthermore, on a bilateral level, the Netherlands

[62] See Molenaar, note 26 above at. p. 530.

[63] See D. Attard, *The Exclusive Economic Zone in International Law* (Oxford, Clarendon Press, 1987), pp. 78 and 80 who mentions wind-energy exploitation devices with more than normal heights and foreign aircraft engaged in the exploration of the coastal state's EEZ resources. See also Churchill and Lowe 1988, note 59 above at p. 142 who, *inter alia*, refer to overflight over artificial islands and dumping from aircraft.

[64] Art. 59 of the LOS Convention is not relevant in this situation as Art. 60 comprises the coastal state's right and jurisdiction over the construction and use of an artificial island as an airport. The absence of specific LOS Convention rules to accommodate conflicting interests also exists with respect to ships' routing measures beyond the territorial sea, which can only be adopted by the IMO (see note 36 above). Heijmans, note 1 above at p. 161 submits that an international authority should supervise the construction and use of artificial islands located beyond the territorial sea.

[65] However, Churchill and Lowe 1988, note 59 above at p. 142, observe that: "If it is correct that ICAO rules do apply in the EEZ, this position might require modification where a coastal state built an airport on an artificial island in its EEZ." Account should also be taken of the similarity between ATS routes and the "recognized sea-lanes essential to international navigation" mentioned in Art. 60(7) of the LOS Convention. Hailbronner, note 17 above at p. 510 refers only to a *mutatis mutandis* application of Art. 60(7), but would not necessarily take this view in relation to a regular size airport. See also Grief, note 58 above at pp. 58–61 who discusses temporary prohibited, restricted or danger zones for aviation beyond the territorial sea.

[66] Liability issues and jurisdiction often hinge on the place of departure or destination in a contracting state (the so-called Warsaw system), while the aviation security conventions (Tokyo, The Hague, Montreal, etc.) have references to the state of landing.

would have to amend bilateral air services agreements, *inter alia*, by ensuring that "Schiphol at Sea" would receive the so-called airport designator code, even though it would not be located in Netherlands territory. It is finally not inconceivable that replacement of airport activity will lead to claims for compensation of economic loss.

Conclusions

The construction and use of an artificial island as a "Schiphol at Sea" remains in principle within a coastal state's authority based on its sovereignty, sovereign rights or jurisdiction in its respective maritime zones. However, irrespective of the location of such an artificial island, a coastal state must have due regard to the rights and duties of other states, and act in accordance with the LOS Convention and other rules of international law. In addition to abiding with applicable environmental obligations under national, EC and international law, account must be taken of conflicting uses of the sea. In this context, relevant uses are navigation, fishing, offshore activities, the laying of submarine cables and pipelines, and overflight.

Arguably, it is only with respect to the freedom of overflight that the Netherlands should pursue the appropriate procedures within the ICAO with regard to matters within that organisation's competence. With regard to other aspects of air law, such as liability and aviation security, there are no clear indicators of the appropriate course to take. In these and other aspects, the uniqueness of an airport at sea requires the Netherlands to tread new ground, requiring it to devise new ways for removing possible obstacles. Finally, even if international law would not require formal approval at the international level, it is not just advisable but frequently simply mandatory to commence consultations in the various relevant fora in order to ensure that the interests of other states are duly taken into account in every stage and aspect of the construction and use of the artificial island as an airport.[67]

[67] Apart from the various LOS Convention provisions that require co-operation, it is especially relevant to refer to Art. 123 of the LOS Convention which contains obligations to co-operate with other states bordering enclosed or semi-enclosed seas. One option would be to pursue the matter in the framework of the Ministerial Conferences in the North Sea.