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The seas, the air and outer space

INTRODUCTION

With almost three-quarters of the globe being covered by water, regulation of the seas has always been of crucial importance to international law. Some of this importance stems from security concerns, but much of it resides in the economic relevance of the seas. This relevance, in turn, stems from two uses to which the seas can be put. They are, first, media of communication, allowing the transport of goods from point X to point Y, and for a long time provided the most obvious means available. Second, the seas and their subsoil are rich in resources, from fish stocks via oil and natural gas reserves to manganese nodules. What holds for the seas also holds, with only minor differences, for the air and outer space. These too are vital channels of communication, be it by means of airplanes or by means of radio waves, and to some extent, have resources to offer as well. The latter applies in particular to the moon and other celestial bodies.

For Grotius, writing his classic *Mare Liberum* more than four centuries ago, there could be no doubt that the seas should be free. For one thing, this was clearly God's wish; otherwise He would have made sure that the same animals and spices would exist everywhere, and maritime transport would not be necessary. More pragmatically, Grotius also held that the seas were incapable of being possessed; the oceans are too vast to be controllable by a single power, and since legal title has to start with actual possession, it followed that ownership of the seas was impossible.[1]

Ever since then the law of the sea, mainly dealing with what states are allowed to do, has been an ever-changing compromise between freedom on the one hand, and the exercise of jurisdiction by coastal states on the other. This was already visible in Grotius' own work. In a reply to a contemporary critic, he conceded that even though the seas could not be possessed, coastal states might exercise jurisdiction over them.[2] And in his *magnum opus*, published a decade and a half later, he had come round to the idea that

[1] See Hugo Grotius, *The Free Sea* (Indianapolis, IN: Liberty Fund, 2004 [1609], R. Hakluyt trans.).
[2] Both the critique by William Welwod and Grotius' reply are reproduced in Grotius, *The Free Sea*. The concession regarding jurisdiction is most explicitly spelled out at 128–30.

states owned the territorial seas off their coasts.[3] Presently, most of the seas are still free, in that states cannot claim ownership of most parts of the sea. Yet states have managed to appropriate some zones over which they exercise exclusive, or functional, jurisdiction. This chapter will discuss these maritime zones and their regimes, as well as delimitation between them, before moving on to a brief discussion of air and space law.

OUTLINE OF THE MARITIME REGIME

The general law of the sea used to be governed, and to some extent is still governed, by customary international law. For all practical purposes though, much of it can be found in a large treaty concluded in 1982, the UNCLOS, the product of almost a decade of intense negotiations. This convention entered into force, belatedly and with the dubious distinction of effectively having been amended even before entry into force, in 1994. The main reason perhaps why negotiations lasted so long, and why the original version was no longer deemed acceptable, resides in the fact that the convention aims to introduce an element of distributive justice into international law by using the possible proceeds of deep seabed mining for the greater good of mankind. It thus manifests a more or less 'leftist' approach to global resources, and it is possibly no coincidence that the USA, under the Republican president Reagan, was instrumental in blocking the convention.

In line with customary international law, the convention divides the seas into a number of maritime zones. Inside a state's territory, naturally, are its internal waters: its rivers, lakes and canals. These are simply considered as part of the national territory, although delimitation issues may arise with boundary rivers or boundary lakes. Here, often the middle of the navigable channel (the so-called *thalweg*) marks the boundary between adjacent states,[4] but states are free to agree on a different regime, including full sovereignty by one of them in conjunction with specific rights for the other.[5]

Closest to the coastline, and considered an integral part of a state's territory, is the aptly named territorial sea. This may (but need not) be accompanied by a contiguous zone, an exclusive fisheries zone or, most commonly, an exclusive economic zone (EEZ). While the territorial sea is considered part of the state and need not be claimed, these other zones must be claimed. States are entitled to them, but may also waive their rights. Finally, beyond the EEZ, there are the high seas, and these cannot be claimed. They are deemed to be *res communis* – common property.

Also of interest are the soil and subsoil underneath the seas. Closest to the coast is the continental shelf but this, geographically, is a tricky concept. Sometimes the continental shelf hardly exists (this happens where the seabed 'dives' steeply), whereas in other cases

[3] See Hugo Grotius, *On the Law of War and Peace* (London, 1814 [1625], A. C. Campbell trans.), book II, Ch. 3.

[4] See e.g. Ian Brownlie, *Principles of Public International Law*, 7th edn (Oxford University Press, 2008), at 160.

[5] This is the situation of the San Juan River between Costa Rica and Nicaragua, as confirmed by the ICJ in case concerning the *Dispute Regarding Navigational and Related Rights* (*Costa Rica* v. *Nicaragua*), judgment of 13 July 2009, nyr.

the geographical continental shelf can extend for hundreds of miles[6] into the sea. Beyond the continental shelf lie the deep seabed and the ocean floor.

UNCLOS was not the first attempt to codify the law of the sea. In particular, the 1950s saw the conclusion of a number of separate multilateral conventions on the law of the sea, concluded in Geneva. While these probably functioned reasonably well, they quickly became outdated upon the development of technology enabling, for instance, large-scale fisheries, and dealing as they did with separate aspects of the law of the sea, these treaties did not form a coherent whole. Hence the impetus arose to come to a comprehensive convention, and negotiations started in 1973.

These negotiations were as much about experimenting with negotiating techniques as they were about codifying international law. It turned out that many states were open to back-scratching deals: you do me a favour on topic X, in return for which I will do you a favour on topic Y or Z. While this is conducive to productive negotiations, it also ends up bringing the existing law in question, and it is fair to say that there is some unclarity at present about which parts of UNCLOS represent customary international law (and therewith are also binding upon non-members) and which do not. While the problem may seem largely academic in the light of the circumstance that 162 states and the EU[7] are parties to the convention, there is a strong practical consideration here; the USA is not a party. And since the USA is not only an economic, political and military superpower but also has a lengthy coastline and an extensive continental shelf, its non-participation is of considerable relevance.

Many of the ratifications to UNCLOS, and in particular those of a large number of Western states and Japan, date from the second half of the 1990s. This owes much to Western dissatisfaction with the earlier provisions on the deep seabed. When the USA had led the opposition thereto, a compromise was reached in the form of an additional treaty, concluded in 1994, to replace the earlier Part XI of UNCLOS, and it was this 'amendment' which spurred a number of states to proceed with ratification.[8] This separate treaty has 141 parties at the time of writing.

Institutionally, many relevant activities with respect to shipping take place in the IMO, in existence since 1948 and headquartered in London. This international organization has as its main task the security and safety of shipping and the prevention of marine pollution, and at the time of writing has 170 member states. The IMO was originally created as the IMCO – the somewhat unwieldy name was changed in 1982. It has sponsored the conclusion of some important conventions, the best-known of which is the 1974 Convention for the Safety of Life at Sea (SOLAS). This contains fire safety regulations, as well as regulations concerning lifeboats and lifejackets, and addresses in particular the safety of transport of dangerous products at sea. Also of great import is the International

[6] In the law of the sea, the term 'miles' refers to 'nautical miles'.

[7] The EU has some powers over maritime issues which render its membership pertinent, as the EU powers preempt its member states from acting. For more detail, see Jan Klabbers, *The EU in International Law* (Paris: Pédone, 2012).

[8] Its official name is Agreement Relating to the Implementation of Part XI of the Convention of 10 December 1982.

Convention for the Prevention of Pollution from Ships (MARPOL) of 1973, including two later protocols.[9]

Disputes concerning the law of the sea have been one of the staples of the ICJ's work since 1945, with a prominent place in particular for cases involving maritime delimitation, as will be seen below. The entry into force of UNCLOS marked the creation of a separate court – the International Tribunal for the Law of the Sea, located in Hamburg.

INTERNAL WATERS

Waters on the landward side of the baseline are usually referred to as internal waters, and may include rivers, lakes, canals, bays and, importantly, ports. Over its internal waters, the territorial state exercises jurisdiction, and this includes, as a matter of principle, criminal jurisdiction. None the less, states usually tend to exercise their jurisdiction only when their interests are at stake; for minor offences taking place on board a vessel lying in port or sailing on a river, they readily defer to the jurisdiction of the flag state. Should a ship have been seized upon allegations of breaching the coastal state's EEZ laws, the ship and its crew must be promptly released upon posting a reasonable bond or security.[10]

Importantly, ships have no right to enter another state's ports or waters in the absence of a treaty provision to that effect, and while it is generally conceded that there is a presumption that ports and waterways are open to foreign merchant ships, this presumption has not crystallized into a customary right. The one exception relates to ships in distress, but even this is limited to situations where human life is at risk – it is not generally accepted for instance that this also extends to saving a ship's cargo.

A different regime relates to internationalized waterways, typically canals that have been dug to facilitate shipping between different seas, such as the Suez Canal and the Panama Canal. These are open, depending on the precise terms of the treaty by which the regime was created, to ships of all nations. Thus, article 1 of the Suez Canal treaty provides that the canal 'shall always be free and open, in time of war as in time of peace, to every vessel of commerce or of war, without distinction of flag'.[11]

TERRITORIAL SEA AND CONTIGUOUS ZONE

When Grotius wrote his *Mare Liberum*, the main economic interest in the seas resided in navigation and fishing. This is no longer the case. The sea and its subsoil are rich in resources, ranging from oil and natural gas to all sorts of mineral products that can be found in the deep seabed. In addition, there is a security consideration; states have found out that they may be vulnerable to attacks from the sea, the result being that they may be highly interested in being able to patrol their coasts and control everything that goes on there. Of more recent origin are additional threats, real or perceived; the seas can be

[9] See also Chapter 14. [10] See article 73 UNCLOS

[11] This is the Constantinople Convention Respecting the Free Navigation of the Suez Maritime Canal, concluded in 1888 between the great European powers of the late nineteenth century.

(and have been) polluted, with sometimes dire consequences for the coastal state, and all kinds of illicit trafficking goes on at sea; from drugs to migrants.

Traditionally, the outer limit of the territorial sea was set at three miles, to be measured from the so-called 'baseline'. This baseline is the low-water line along the coast, as it is officially depicted in accepted charts. The three-mile rule had several possible explanations. Some suggested that this was the theoretical distance of the horizon as seen from the beach, while for others it marked the range of a cannon when shot from the beach.[12] Either way, the current rule is more extensive; states may proclaim a maximum width of twelve miles, but are allowed to settle for less. The advantage of settling for less is that it may be cheaper; while a state has exclusive rights within its territorial sea, with those rights come responsibilities. Still, most coastal states have opted for the twelve-mile zone. States typically adopt national legislation to this effect[13] specifying the width by means of geographical coordinates, and notify the UN, which has a Division for Ocean Affairs and the Law of the Sea.

While states enjoy exclusive jurisdiction over their territorial waters (as well as the seabed, subsoil and superjacent air space), there is one important exception; states have to allow the 'innocent passage' of ships through their territorial waters, and this innocent passage is defined as all passage which 'is not prejudicial to the peace, good order or security' of the coastal state. Certain activities are automatically deemed to be non-innocent; these include threats or use of force (obviously), but also exercises with weapons, unlawful loading or unloading of commodities, currencies or persons and fishing.[14] Submarines must navigate on the surface and show their flags,[15] while nuclear-powered ships or ships with nuclear cargo must observe special precautionary measures.[16] In principle, the coastal state must not exercise either criminal or civil jurisdiction over ships availing themselves of the right of innocent passage.[17]

Sometimes, due to geographical configurations, territorial waters also function as international straits; the Strait of Gibraltar is a prominent example, as is the Strait of Hormuz – a vital waterway for the transport of oil from the Middle East. In such a case, ships and aircraft enjoy a right of 'transit passage'.[18] This is similar to the right of innocent passage, but with the important caveat that no specific conditions for 'innocence' are attached. Thus, one might say that the rights of the coastal state are diminished in comparison with the regular regime relating to the territorial sea, although ships and aircraft exercising transit passage are under an obligation to refrain from the threat or use of force. Transit passage may not be suspended by the coastal state except, perhaps, in self-defence.[19]

States would sometimes get worried about ships dedicated to smuggling lying just outside their territorial waters and enact so-called 'hovering laws', especially during the

[12] See J. E. S. Fawcett, *The Law of Nations* (New York: Basic Books, 1968), at 71.
[13] See e.g. the Netherlands Territorial Sea (Demarcation) Act of 9 January 1985, available at www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/NLD_1985_DemarcationAct.pdf (visited 4 January 2012).
[14] See article 19 UNCLOS. [15] See article 20 UNCLOS. [16] See article 23 UNCLOS.
[17] See articles 27–8 UNCLOS. [18] See articles 37–44 UNCLOS.
[19] See R. R. Churchill and A. V. Lowe, *The Law of the Sea*, 3rd edn (Manchester University Press, 1999), at 107.

eighteenth century. As a result, a custom arose to the effect that states could exercise some control over shipping outside their territorial waters properly speaking, and nowadays it is generally accepted that states can exercise powers in a so-called 'contiguous zone' for the enforcement of customs, fiscal, migration and sanitary laws. Under article 33 UNCLOS, the contiguous zone may not extend more than twenty-four miles off the coast. Hence, if a state's territorial sea measures twelve miles, it can proclaim an additional twelve miles as contiguous zone. Unlike the territorial sea, the contiguous zone must be claimed, and relatively few states have done so; reportedly, by 1997, this only applied to a few over fifty states.[20]

EXCLUSIVE ECONOMIC ZONE (EEZ)

The EEZ is a relatively novel phenomenon, and comprises a band of water up to 200 miles off the baseline. As the name suggests, states may exercise economic rights here; the concept arose predominantly to safeguard local fishing industries against fishing by distant-water Western states, and the first claims to this effect were made by African states in the early 1970s, while Latin American states made similar claims relating to what was called the 'patrimonial sea'. By the late 1970s, Western states had started to claim exclusive fisheries zones, and these concepts would merge during the course of the negotiations leading to UNCLOS. By the 1980s the EEZ had become part of customary international law, as confirmed by the ICJ.[21] Most coastal states have claimed an EEZ, although some (such as the UK) are still content with a fisheries zone, and in some cases of states bordering semi-enclosed seas, the claims have been smaller; claiming the full 200 miles may simply not be possible.[22]

In the EEZ the coastal state has sovereign rights related to the natural resources present there, whether living or not. This applies to the seabed and subsoil as well as to the superjacent waters and to possible ancillary economic activities, such as the production of energy from water, currents or wind. Moreover, the coastal state has jurisdiction relating to the establishment and use of artificial islands and installations (think of oil drilling platforms in particular), as well as marine scientific research and the protection and preservation of the marine environment.[23] Other states enjoy the traditional freedoms of the high seas, with one major exception; there is no freedom of fisheries in the EEZ. Still, those other states still enjoy freedom of navigation and overflight and of laying submarine cables and pipelines.

Since the EEZ usurped part of the high seas, landlocked states (i.e. states surrounded by land, such as Switzerland, Chad or Ethiopia since the split with Eritrea) felt that the creation of EEZs has worked to their disadvantage; these landlocked states have a smaller share of the high seas available for fishing. Consequently, a complicated compromise was reached in UNCLOS. The coastal state is to determine the total amount of fish that may be caught in its EEZ, in the light of conservation and other concerns. This 'total

[20] Ibid., at 136. [21] See *Continental Shelf* (Libya/Malta), [1985] ICJ Reports 13, para. 34.
[22] See Churchill and Lowe, *Law of the Sea*, at 160–1. [23] See article 56 UNCLOS.

allowable catch' is then divided between the coastal state, determining its own capacity to harvest the natural resources, and other states, on the basis of bilateral or regional agreements. Here landlocked states have the right to participate on an equitable basis. The same right appertains to so-called 'geographically disadvantaged states', i.e. states that have a small coastline, are bordering semi-enclosed seas or are otherwise dependent on the exploitation of someone else's resources. Where 'landlocked' is easy to verify, 'geographically disadvantaged' is a more problematic category, dependent on political decision-making. And to make things more complicated still, neither of these two groups has exploitation rights in the EEZ of a coastal state whose economy is 'overwhelmingly dependent' on its own EEZ.[24] Be that as it may, the system does not seem to work very well, or at all; landlocked states typically have no fishing fleet, and the costs of building up a fleet in order to partake of the possible surplus of other states probably far outweighs any benefits.[25]

CONTINENTAL SHELF

The continental shelf came to prominence, as discussed above,[26] during the 1940s, when states discovered oil and natural gas deposits and started to develop the technology to explore and exploit these. Following US President Truman's proclamation, other states too claimed a continental shelf, and the concept rapidly crystallized into customary international law. It is now well settled that the continental shelf is to be considered as an extension of the state's territory.

Like the EEZ, the continental shelf may extend 200 miles off the coast, and like the EEZ, it too covers the seabed and subsoil (but not the superjacent waters). Consequently, states may have two independent bases for rights relating to exploration and exploitation of natural resources, and this, one might say, constitutes unnecessary duplication. An important difference though is that whereas the EEZ must be claimed, the continental shelf is generally accepted to belong to coastal states as prolongation of their territory, whether they want it or not. Another relevant concern is that the feasibility of exploring and exploiting the continental shelf depends in part on geographical factors; some states have, by nature, a very limited one, whereas nature has endowed others with a vast shelf.

Importantly, the legal status of the continental shelf does not affect the status of the superjacent waters or air space, and the coastal state is under a general obligation, while exercising its rights, not to interfere unjustifiably with navigation or other rights and freedoms enjoyed by other states, including the freedom to lay pipelines and cables.

The coastal state has sovereign rights of exploration and exploitation of its continental shelf which, in practice, mostly means that the coastal state can drill for oil and natural gas. It can do so by exclusion of all others, but may issue drilling licences. Where the shelf extends beyond 200 miles, UNCLOS envisages a system of contributing to global welfare. States that are lucky enough to have a vast shelf are to contribute a small percentage of the

[24] See articles 69–71 UNCLOS.
[25] See Churchill and Lowe, *Law of the Sea*, 437–40.
[26] See Chapter 2 above.

surplus value (at most 7 percent), to be distributed by the International Seabed Authority (which will be discussed below). In particular this provision is a bone of contention for the USA, with some conservatives claiming that this constitutes an international tax. On the other hand, the US government has pointed out that the revenue-sharing obligation was developed with input from representatives of the US oil and gas industry, and that this industry largely supports the regime.[27]

HIGH SEAS

The high seas are free for ships of all nations, and traditionally the regime recognizes four particular freedoms: the freedom to navigate, freedom of overflight, the freedom to lay submarine pipelines and cables and freedom of fisheries. Article 87 UNCLOS added two newer freedoms: the freedom to construct artificial islands and other installations, and the freedom of scientific research. These freedoms, while extensive, are not unlimited; their exercise must take place with 'due regard' for the interests of other states, and the high seas may only be used for peaceful purposes. The latter is a broad notion – it is generally accepted that military training exercises and even weapons testing are allowed.[28]

While the result of all this freedom could be a veritable anarchy, none the less the high seas are a regulated area, and the key to understanding regulation of the high seas, as Evans puts it, resides in the notion of flag-state jurisdiction.[29] All vessels must be registered and thereby have a nationality, and on the high seas the flag state has, in principle, exclusive jurisdiction over things happening on board. This covers not merely legislative jurisdiction, but enforcement jurisdiction as well. In cases of collisions (the *Lotus* scenario),[30] article 97 UNCLOS provides that penal measures may be instituted by the flag state or by the state of nationality of the responsible individual.

Certain activities are actively prohibited on the high seas. This applies to the transport of slaves, illicit traffic in narcotics, unauthorized broadcasting and, most prominently, piracy. States have a general obligation to cooperate in combating these activities (although this is not made explicit with respect to transport of slaves), and in addition have an obligation to cooperate 'in the conservation and management of living resources'.[31] To this end, in 1995 the Straddling Fish Stock Convention was concluded under UN auspices, addressing the problem of managing migratory species (tuna, swordfish and sharks, among others); it entered into force in 2001 and at the time of writing has been ratified by seventy-eight states.

It can easily be imagined that a vessel is engaged in illicit activities in a state's maritime zone, and aims to flee from local authorities. In such a case, it would not be very useful if pursuit had to stop upon reaching the high seas; hence, international law traditionally

[27] See the position as reproduced in Sean D. Murphy, *Principles of International Law* (St Paul, MN: Thomson/West, 2006), at 365–7.
[28] See Churchill and Lowe, *Law of the Sea*, at 206.
[29] See Malcolm D. Evans, 'The Law of the Sea', in Malcolm D. Evans (ed.), *International Law*, 3rd edn (Oxford University Press, 2010), 651–86, at 665.
[30] See Chapter 2 above. [31] See article 118 UNCLOS.

recognizes a right of 'hot pursuit', codified in article 111 UNCLOS. Hot pursuit must commence in a state's maritime zones and must continue without interruption (otherwise it is no longer 'hot'), but ceases when the vessel enters the territorial waters of its own state or a third state. It may only be exercised by warships or military aircraft, or ships otherwise clearly identifiable as governmental.

While many thought for a long time that the crime of piracy had become more or less obsolete, recent events, in particular off the Somali coast, suggest otherwise. UNCLOS defines piracy as illegal acts of violence or detention, or depradation, committed for private ends by the crew of a private ship or aircraft against another private ship or aircraft on the high seas or otherwise outside any state's jurisdiction.[32] The main characteristic of piracy is the absence of governmental authority or sanction; therefore, government ships by definition cannot engage in piracy, unless the crew revolts and turns against the government.[33]

Of great relevance is the jurisdictional point. It is generally accepted that all states can exercise universal jurisdiction over piracy,[34] yet piracy itself is defined as taking place outside the reach of any particular state's jurisdiction. Hence, acts of violence, detention or depradation taking place in a state's territorial sea do not qualify as piracy for the purposes of international law: they take place within a single state's jurisdiction. For these purposes, a serious argument can be made that the EEZ and other maritime zones still qualify as high seas, with the result that acts of violence taking place in a state's EEZ can still be considered as piracy.[35]

THE DEEP SEABED

In the late nineteenth century, it was discovered that the deep seabed was rich in certain metallic nodules, comprising valuable metals such as manganese, iron, nickel and cobalt. At the time, exploitation was a pipe-dream, but by the 1960s and 1970s the technology to mine these nodules had been developed and although start-up costs are prohibitive, deep seabed mining started to look like a viable commercial activity. This would have the effect of depriving some states, in particular developing states, of their current share of the world market, and thus a movement gathered force to establish a regime to share the spoils, all the more so since the deep seabed lies outside the jurisdiction of any state and, thus, no single state can claim the resources as belonging to it. This would take the form of Part XI of UNCLOS, establishing an intricate system to be managed by a newly created International Seabed Authority. As explained earlier in this chapter, this result was a bit too *dirigiste* for most Western states, and the original Part XI has been modified by a later Agreement on the Implementation of Part XI which, to some extent, bowed to Western demands.

[32] See article 101 UNCLOS.
[33] See the authoritative study by Douglas Guilfoyle, *Shipping Interdiction and the Law of the Sea* (Cambridge University Press, 2009), at 36.
[34] See Chapter 5 above. [35] See Guilfoyle, *Shipping Interdiction*, 42–5.

The basis of the system is still that the deep seabed, ocean floor and subsoil thereof (commonly referred to, in Orwellian terms, as 'The Area') are to be considered the 'common heritage of mankind'. No state can claim sovereign rights here; all rights relating to resources in the Area 'are vested in mankind as a whole', represented by the (also rather Orwellian) Authority – the International Seabed Authority – and activities are to be carried out 'for the benefit of mankind as a whole'.[36] The Authority is set up as an international organization. All parties to UNCLOS are its member states, and it has a plenary body (Assembly), an executive body (Council), a secretariat, and two functional organs: a Finance Committee and a Legal and Technical Commission.

The basic idea is that deep seabed mining is to be carried out by private consortia, either alone or jointly with a possibly to be created Enterprise,[37] under auspices of the Authority. The proceeds then are to be distributed by the Authority. Given the high costs of exploitation, those private consortia are, typically, comprised of Western companies, whereas distribution of the proceeds would obviously involve a redistribution of wealth, to the benefit of the poorer nations. In addition, the convention envisages a compulsory transfer of technology, also to the benefit of poorer nations. At the time of writing, the Authority has concluded contracts with a number of consortia and governments.

For private consortia to participate, they must be sponsored by a state party; this, in turn, has given rise to the question of the exact responsibilities and obligations of those sponsoring states. When Nauru and Tonga both sponsored consortia but became worried about the possible financial implications (What to do, for instance, if a consortium does not deliver, or violates applicable regulations?), the Council of the Authority submitted a request for an advisory opinion to the Seabed Disputes Chamber of ITLOS, which held that while the sponsoring state was under a due diligence obligation to make sure that a consortium complied with laws and regulations and conducted such activities as an environmental impact assessment, none the less the sponsoring state was not directly liable for the acts or omissions of the contractors it sponsored. In passing the Chamber also treated regulations issued by the Authority as binding, despite the absence of a clear provision to this effect in UNCLOS or in the basic documents of the Authority.[38]

MARITIME DELIMITATION

In much the same way as it is useful to establish boundaries on land, so too is it useful to have maritime boundaries delimited, and this is one area in which the ICJ has been highly active over the years. As noted, normally speaking delimitation will start from the baseline, but there may be circumstances justifying a departure. One of these is the possible existence of a historic right, as with Norway's *skjaergaard*.[39] UNCLOS also allows

[36] See articles 136–40 UNCLOS.

[37] The Enterprise would be the commercial arm of the Authority, but will only be set up once deep seabed mining becomes commercially viable – and this, so some suspect, may never happen.

[38] See *Responsibilities and Obligations of States Sponsoring Persons and Entities with respect to Activities in the Area*, advisory opinion, ITLOS case no. 17, opinion of 1 February 2011. Its constituent document, so to speak, is section 4 of Part XI of UNCLOS, articles 156–85.

[39] See Chapter 2 above.

straight baselines to be drawn over smaller bays and historically recognized larger ones, and around archipelagos.

In principle, two different situations can be envisaged: states can be located opposite each other, or can be located next (adjacent) to each other. UNCLOS treats both situations in the same way, and instead makes a distinction based on the zones concerned. With the delimitation of territorial waters, the basic rule (article 15 UNCLOS) is the so-called 'equidistance rule'; the boundaries must follow the baseline and be equally distant at every point, unless the states concerned agree otherwise.

This would not easily work with the much larger EEZ and continental shelf, largely for two reasons. First, there is a considerable possibility of overlap where states are located opposite each other, such as the Netherlands and the UK, or South Korea and Japan. The seas in between are too narrow to grant both coastal states the full 200 miles. Second, the application of equidistance following the configuration of the coastline leads to fairness issues if a state happens to have either a well-rounded coastline, or rather a hollow one. Hence, with the EEZ and the continental shelf, the basic rule (in both cases) is that states should agree on how their zones will be delimited, 'in order to achieve an equitable solution'.[40]

The problem came to the fore, in highly visible manner, in the 1969 *North Sea Continental Shelf* cases, involving Germany, Denmark and the Netherlands. The three states are adjacent to each other, with Germany's coast being squeezed in between, and being concave. As a result, application of the equidistance principle would have resulted in Germany having a rather small continental shelf, which was all the more painful as surveys indicated nice reserves of oil and natural gas. Holland and Denmark argued, among other things, that the equidistance rule had become customary international law, but the ICJ disagreed, and ordered the parties to negotiate an equitable settlement. The Court even suggested, in a rather unprecedented move, what a negotiated settlement should include; the parties should take into account

> the general configuration of the coasts of the Parties, as well as the presence of any special or unusual features . . . the physical and geological structure, and natural resources, of the continental shelf areas involved, [and] the element of a reasonable degree of proportionality.[41]

This set the tone for later cases of maritime delimitation, which are to a large extent about reaching equitable solutions, even though the Court has come to accept that the equidistance principle is a useful starting point.[42] Thus, in 2002, it suggested that the start of any investigation resided in the equidistance principle and, from there, should go on to consider whether there were factors that needed to be taken into account in order to reach

[40] See articles 74 and 83 UNCLOS.

[41] See *North Sea Continental Shelf* cases (Germany/Denmark; Germany/Netherlands), [1969] ICJ Reports 3, para. 101 D.

[42] Some suggest that the Court has come to accept equidistance, accompanied by the need to reach an equitable result as ordained by customary international law, but since the rule is a methodological device rather than a rule of substance, its status as customary law is debatable. The argument is made by Evans, *Law of the Sea*, at 678–9.

an equitable result.[43] That is not to say that the Court should always take all kinds of factors into consideration; in establishing the maritime boundary between Romania and Ukraine, it reached the conclusion that none of the circumstances invoked by the parties warranted a departure from the provisional equidistance line.[44]

Still, in particular the presence of islands off the coast may be a relevant factor; islands tend to generate their own zones (including continental shelves), but giving full effect to these islands may result in unfairness – an extreme example would be the British Channel Islands, located off the French coast. Giving them full effect would deprive France of much of its maritime zone; giving them no effect at all would be unfair to the UK. Hence, the Court's typical suggestion has been to give 'partial effect' to islands: take them into account but without giving them full weight. In the Tunisia/Libya case, the Court suggested this with respect to the Kerkennah Islands, off the Tunisian coast.[45] The Court also issued a wise word of warning:

> Clearly each continental shelf case in dispute should be considered and judged on its own merits, having regard to its peculiar circumstances; therefore, no attempt should be made here to overconceptualize the application of the principles and rules relating to the continental shelf.[46]

Likewise, great disparities in the lengths of the coastline may constitute a relevant factor.[47] While the Court has rejected the argument that economic poverty *per se* is a relevant factor in boundary delimitation (a country may be poor one day, but rich the next upon the discovery of some valuable resource), it has accepted that the presence of oil wells in contested areas may be a factor,[48] and has accepted in the abstract that security and defence concerns may also be of relevance.[49]

Given the size of the areas involved, it is inevitable that the delimitation of zones between two states will often also come to affect the interests of others; delimitation of the shelf between Tunisia and Libya is bound to somehow affect Malta and Italy, located on the other side of the Mediterranean Sea. Accordingly, when Tunisia and Libya went to the ICJ, Malta tried to intervene in the proceedings on the basis of article 62 ICJ Statute, and when later Malta and Libya seized the Court, Italy tried to do the same. In both cases the Court rejected the request, and indeed it has been decidedly stingy in granting requests to intervene in proceedings. The main reason for this reluctance is that it would be practically impossible to protect the intervening state without at the same time also saying something about the validity of that state's maritime claims, yet without giving the real parties to the dispute the chance to contest the intervening state's claims. Since judgments are only binding between the parties to the dispute (article 59

[43] See case concerning the *Land and Maritime Boundary between Cameroon and Nigeria* (*Cameroon* v. *Nigeria*; *Equatorial Guinea Intervening*), [2002] ICJ Reports 303, para. 288.
[44] See *Maritime Delimitation in the Black Sea* (*Romania* v. *Ukraine*), [2009] ICJ Reports 61.
[45] See case concerning the *Continental Shelf* (Tunisia/Libya), [1982] ICJ Reports 18, para. 129.
[46] Ibid., para. 132. [47] See *Continental Shelf* (Libya/Malta), para. 73.
[48] See case concerning the *Continental Shelf* (Tunisia/Libya), para. 107.
[49] See *Continental Shelf* (Libya /Malta), para. 51.

ICJ Statute),[50] there is no chance of Italy being bound by a judgment between Malta and Libya; in those circumstances, allowing Italy to intervene would give it a preferential status, to the disadvantage of Malta and Libya. In 1999, however, the Court unanimously allowed Equatorial Guinea to intervene in a demarcation dispute between Cameroon and Nigeria, partly because with the states being adjacent and Cameroon being sandwiched with a concave coastline between them, it seemed that the latter's legal interest was sufficiently established, perhaps partly also because neither Cameroon nor Nigeria had any objections.[51]

Since both the EEZ and the continental shelf can run to a maximum of 200 miles off the baseline, there is some merit in drawing a single boundary line, and it would seem that with negotiated boundaries, this is indeed more or less the standard practice.[52] Yet the ICJ is usually asked to focus on one maritime zone at a time, mostly the continental shelf. The most prominent exception was the explicit request by Canada and the USA to come to a single boundary in the *Gulf of Maine* case.[53]

Often enough, boundary delimitation is inspired most of all by the desire to achieve clarity in rights over natural resources, be they fish or oil and natural gas. Instead of drawing up a boundary, states can also decide to collaborate and set up joint fisheries zones, or joint exploration zones. Several examples exist, for instance between South Korea and Japan, or between Norway and the UK. Typically, the states concerned decide to manage and exploit the resources together, and then divide the proceeds. As long as these zones are located within overlapping claims of the states concerned, it would seem that no interests of third parties are immediately affected.

AIR LAW

When aircraft were first invented, there were no rules on the use of air space, and the basic assumption was that aircraft should, like ships in territorial waters, enjoy a right of innocent passage. Indeed, the British Imperial General Staff, as late as 1909, advised the UK government that airplanes would never come to be of much use, and thus that there would be little harm in acknowledging innocent passage.[54] World War I, however, taught a harsh lesson about the potential of aircraft, and a customary rule arose quickly to the effect that states enjoyed exclusive sovereignty over their air space. This meant that foreign aircraft could not enter the air, let alone land, without the territorial state's consent. The rule would become codified in one of the main air law treaties, the 1944 Chicago Convention on International Civil Aviation. This applies only to the air above a state's territory though; above the high seas, there is freedom of overflight.

[50] See more generally Chapter 8 above.
[51] See *Land and Maritime Boundary between Cameroon and Nigeria* (*Cameroon* v. *Nigeria*), application to intervene, Order, [1999] ICJ Reports 1029.
[52] See Churchill and Lowe, *Law of the Sea*, at 192–3.
[53] See *Delimitation of the Maritime Boundary in the Gulf of Maine Area* (Canada/USA), [1984] ICJ Reports 246.
[54] See Fawcett, *Law of Nations*, at 80–1.

As a result, air law is based on a network of treaties, both bilateral and multilateral, addressing what are sometimes (a little misleadingly)[55] referred to as the five freedoms: freedom of overflight, landing for non-traffic purposes such as emergencies; disembarking passengers, cargo and mail embarked elsewhere; embarking passengers, mail and cargo for a destination within the state; and finally embarking passengers, mail and cargo coming from, or going to, a third state. Aircraft must have a nationality (like individuals and ships), and criminal jurisdiction on board rests with the flag state as well as the state subjacent at the moment a crime is committed.[56]

The 1944 Chicago Convention is of great relevance, in that it details not only rules on the use of air space but also on air safety. Thus, it specifies that pilots must be licensed, and that aircraft may only take off when in possession of a certificate of airworthiness – it provides for mutual recognition of such certificates. The convention also serves as the constituent instrument of the International Civil Aviation Organization (ICAO), which has become part of the UN family of international organizations and which can (and does) adopt so-called recommended standards and practices; states are expected to implement these to the fullest extent practicable.[57] The ICAO has a genuine legislative power to regulate air traffic over the high seas.[58]

The liability of air craft carriers is regulated by the 1999 Montreal Convention, the successor to the 1929 Warsaw Convention. Under the Montreal Convention, air carriers are liable for the death or injury occurring on board or during take off and landing, and are liable for damage to checked baggage.[59] Much the same applies to damage to cargo, as long as the damage occurred in the air. Compensation for loss of checked baggage is dependent on the terms of the contract between the carrier and the passenger. The air carrier's liability is rather limited, though; the convention sets a ceiling of 1000 special drawing rights per passenger for lost baggage.[60]

Air craft carriers are united in IATA (the International Air Transport Association), which functions as an interest group for the industry. As such, it even used to be able to harmonize air fares, but this has been deemed to be in conflict with competition rules. Additionally, among IATA's main activities are the distribution of three-letter airport codes, and the coordination of the scheduling of air travel.

Many of the details about air traffic are laid down in bilateral agreements. These agreements (between governments) will determine which aircraft carriers can fly from and to which airports, and will contain provisions on computerized reservation systems, on customs duties, on user charges, and much, much more. Within the EU, the power to

[55] This is a little misleading as these freedoms need to be negotiated. Without a treaty, there are no freedoms.

[56] See Peter Malanczuk, *Akehurst's Modern Introduction to International Law*, 7th edn (London: Routledge, 1997), at 201.

[57] The leading study is still Thomas M. Buergenthal, *Law-making in the International Civil Aviation Organization* (Syracuse University Press, 1969).

[58] See article 12 Chicago Convention: 'Over the high seas, the rules in force shall be those established under this Convention.'

[59] See article 17 Montreal Convention.

[60] Special drawing rights are the virtual currency developed by the IMF. At the time of writing (January 2012), 1 SDR equals roughly 1.2 euro and 1.5 US dollar.

conclude such agreements rests with the EU rather than with its member states, following a string of cases brought by the EU Commission claiming that in concluding bilateral agreements the EU's member states had violated EU law.[61]

Aircraft are considered extremely vulnerable, and have often been used for terrorist purposes. As a result, several conventions have been concluded to safeguard aircraft, including the 1971 Hijacking Convention, officially known as the Convention on the Suppression of Unlawful Seizure of Aircraft. The convention makes hijacking a crime over which universal jurisdiction may be exercised (article 4) and incorporates the principle *aut dedere, aut judicare* (article 7: either extradite or prosecute). After the Lockerbie incident in 1988, for which Libya was deemed responsible, the UN Security Council imposed sanctions on Libya in order to force it into handing over the suspects. Libya, in turn, went to the ICJ claiming it was perfectly willing to prosecute the suspects, in accordance with the convention.[62] The ICJ, however, never addressed the merits of Libya's claim.

Since states enjoy sovereignty over their air space, it follows that they need not tolerate intrusions of that air space. Civil aircraft found to be trespassing may be escorted and ordered to land. They may not, however, be shot; this is, it would seem, a rather absolute rule. While an attempt to formalize it by amending the 1944 Chicago Convention narrowly failed to generate the required majority of states a later attempt, following the forceful interception in 1983 of a South Korean airliner by the (then) USSR, proved more successful.[63] Article 3*bis* of the Chicago Convention, in force since 1998, now reads, in relevant part and fairly soft terms, that the contracting parties 'recognize that every State must refrain from resorting to the use of weapons against civil aircraft in flight and that, in case of interception, the lives of persons on board and the safety of aircraft must not be endangered'. Either way, it is telling that the USSR did not claim a right to shoot down civil aircraft; instead, it claimed it had mistaken the aircraft for a US military plane. This then also suggests that shooting down trespassing military aircraft may be considered justifiable.[64]

SPACE LAW

There is no agreement yet on the altitude where air space ends and outer space begins but, for the time being, this is not considered to be problematic. Space is occupied, so to speak, by satellites, spacecraft, planets and celestial bodies, and the lowest altitude at which these move is still far higher than the highest air planes can reach. That said, spacecraft will

[61] For discussion, see Jan Klabbers, *Treaty Conflict and the European Union* (Cambridge University Press, 2008).

[62] Libya brought two separate cases, one against the USA and one against the UK. It could not bring proceedings against the Security Council, as the latter is not a state (see article 34 ICJ Statute). The cases were removed from the Court's list in 2003. See e.g. case concerning *Questions of Interpretation and Application of the 1971 Montreal Convention Arising from the Aerial Incident at Lockerbie* (*Libya* v. *USA*), Order, [2003] ICJ Reports 152.

[63] For a fine discussion of the incident and its aftermath, see Gilbert Guillaume, *Les grandes crises internationales et le droit* (Paris: Éditions du Seuil, 1994), at 61–78.

[64] See Malanczuk, *Akehurst's Modern Introduction*, at 199.

first have to move through airspace before they reach outer space, so at some point a boundary between the two will need to be established. As with territory generally, it may well be that the decisive criterion will be that of effective control; if so, then it may be expected that the boundary will move upward as time and technology progress.

Unlike the air column above states, outer space is not subject to territorial sovereignty. Space law gained momentum in the 1950s and especially the 1960s, when it first became possible to send spacecraft to the moon, and the first satellite (the USSR's Sputnik I) came to orbit the earth. In 1958 the General Assembly of the UN adopted the first important resolution on outer space. It suggested that mankind had a common interest in outer space, and established the principle that outer space should only be used for peaceful purposes.[65] Three years later, it adopted another resolution, stating that outer space and celestial bodies were not subject to national appropriation, but were free for exploration and use by all states.[66] These principles were cemented in a 1963 resolution under the title Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, and still form the bedrock of the international law of outer space.[67] In the same spirit as the earlier resolutions, the declaration also proclaims that astronauts are to be regarded as the 'envoys of mankind', and should be assisted on their way back to the state of registration of the spacecraft they occupied.[68] These principles were codified in the form of the 1967 Outer Space Treaty, which, in essence, repeats the above-mentioned principles in legally binding form.

Arguably the biggest legal problem that may arise is the question of liability. Who is responsible if a satellite comes crashing down, or if parts of a spacecraft land somewhere on earth? To this end, in 1972 a Liability Convention was concluded. The core of this convention is its article II: 'A launching State shall be absolutely liable to pay compensation for damage caused by its space object on the surface of the Earth or to aircraft in flight.' In other words, if damage occurs, the state concerned is liable, regardless of whether the damage was the result of an internationally wrongful act, or whether the launching state was at fault. This then marks a firm departure from the general principles of state responsibility in international law which, as noted earlier, include an internationally wrongful act as a necessary element.[69]

This strict liability regime may, naturally, lead to claims for compensation for the damage incurred. Typically, claims are dealt with through diplomatic channels (so as to avoid litigation), but where no agreement between the disputing parties can be reached on the amount of compensation, the convention creates the possibility of setting up a claims commission. The most celebrated instance occurred in the 1978 Cosmos 954 incident;

[65] General Assembly Res. 1348 (XIII), 13 December 1958.
[66] General Assemby Res. 1721 (XVI), 20 December 1961.
[67] General Assembly Res. 1962 (XVIII), 13 December 1963. This quick succession of resolutions prompted Bin Cheng to formulate the thesis that in some circumstances, 'instant custom' could be created. See Bin Cheng, 'United Nations Resolutions on Outer Space: "Instant" International Customary Law?', reproduced in Bin Cheng, *International Law: Teaching and Practice* (London: Stevens and Sons, 1982), 237–62.
[68] This is further fleshed out in the 1972 Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space.
[69] See the discussion in Chapter 7 above.

debris from a USSR satellite came down in Canada, causing environmental damage. After intense negotiations, the USSR paid some compensation, albeit less than what Canada had asked for. None the less, the fact that the USSR paid up reaffirms the convention's notion of strict liability.[70]

The scope of article II of the Liability Convention is limited to damage on the surface of the earth and aircraft in flight. When damage is caused elsewhere, the convention prescribes fault liability; the launching state is only liable if it is at fault. If space objects are the project of two or more states, these will be held liable jointly and severally.

Outer space is not only used for exploring new planets, but is also where satellites are in orbit. Some of these are engaged in collecting meteorological data, some are used for 'remote sensing' (tracking resources, early warning of pollution, possibly also military activities), and quite a few are used for broadcasting purposes. The use of satellites for remote sensing has raised the issue of whether the prior consent of the observed state is necessary; the idea that outer space is free to use would suggest that no consent is needed, but on the other hand, the existence of sovereignty over air and land would suggest that some consent might indeed be required. Additionally, the question has arisen of what to do with all the data acquired through remote sensing; should it be shared for the benefit of mankind? Likewise, the use of satellites for broadcasting has given rise to political divisions; some cherish the freedom of information, whereas others would suggest that a state does not need to allow satellite television programmes on its territory, if only so as to avoid political propaganda. In both cases, it would seem that the 'freedom of information' position has eventually won the day.

The only way for satellites to have continuous contact with ground stations is if they are in geostationary orbit at some 22,300 miles directly above the equator. Hence, the geostationary orbit is capable of accommodating only a limited number of satellites; it is a finite resource. As a result, eight equatorial states in 1976 signed the Bogotá Declaration, in which they claimed sovereignty over the geostationary orbit above their territory.[71] This claim has met with serious objections and seems difficult to reconcile with the idea that outer space should be free, but then again, much the same could be said about the Truman Declaration with respect to the continental shelf.[72] The equatorial states (none of them highly industrialized) view the geostationary orbit as a natural resource, and their declaration suggests, at the very least, that such concepts are socially constructed; a natural resource is something that is accepted as such.

While there is no specific international organization devoted to outer space issues, the General Assembly, in 1959, created a Committee on the Peaceful Uses of Outer Space (COPUOS). COPUOS discusses, as its name suggests, the peaceful uses of outer space and is, in a sense, the main body dealing with space law issues in general. Matters relating to satellites are the province of the International Telecommunications Union (ITU), one of the oldest international organizations: it was founded, in 1865, as the International

[70] For a brief discussion, see I. H. Ph. Diederiks-Verschoor and V. Kopal, *An Introduction to Space Law*, 3rd edn (Alphen aan den Rijn: Kluwer Law International, 2008).
[71] See http://bogotadeclaration.wordpress.com/declaration-of-1976/ (visited 11 January 2012).
[72] See the discussion in Chapter 2 above.

Telegraphic Union. Currently, among ITU's tasks is the allocation of satellite orbits. The actual operation of satellites (or networks of satellites) often takes place through private companies, such as Intelsat and Eutelsat.

FINAL REMARKS

One of the most interesting things about space law and, to some extent, the law of the sea is that these fields of international law have moved beyond the classic Westphalian model. While it is doubtful whether, as has been claimed, in space law 'the sovereignty principle has been abandoned',[73] none the less the proclamation of the high seas and the moon as the 'common heritage of mankind', the idea that surplus extraction of resources in the EEZ and the continental shelf should be shared with the less fortunate, and the idea of joint exploration of the deep seabed all testify to a growing global awareness. This renders the law of the sea and space law veritable laboratories for political experimentation with joint ownership, common management of resources and the like.

That said, there is no reason to be overly optimistic. The history of the law of the sea, with is creeping extensions of functional jurisdiction, suggest that global idealism still needs to take a backseat when confronted with the possibility of making a handsome profit, and there can be little doubt that if the geostationary orbit had been conveniently located above Western industrialized nations, it would have been subject to national appropriation by now.

[73] See Diederiks-Verschoor and Kopal, *An Introduction*, at 57.