HOUSE OF LORDS

International Relations and Defence Committee

Corrected oral evidence: UNCLOS: fit for purpose in the 21st century?

Wednesday 3 November 2021

11.10 am

Watch the meeting

Members present: Baroness Anelay of St Johns (The Chair); Lord Alton of Liverpool; Lord Anderson of Swansea; Baroness Blackstone; Lord Boateng; Baroness Fall; Lord Stirrup; Baroness Sugg; Lord Teverson.

Evidence Session No. 4 Heard in Public Questions 30 - 37

Witnesses

I: Dr Youri van Logchem, Senior Lecturer, Institute of International Shipping and Trade Law, Hillary Rodham Clinton School of Law, Swansea University; Dr Richard Caddell, Senior Lecturer in Law, Cardiff Law School.

USE OF THE TRANSCRIPT

1. This is a corrected transcript of evidence taken in public and webcast on www.parliamentlive.tv.

Examination of witnesses

Dr Youri van Logchem and Dr Richard Caddell.

Q30 **The Chair:** Good morning. I welcome to this meeting of the International Relations and Defence Committee Dr Richard Caddell, senior lecturer in law at Cardiff Law School, and Dr Youri van Logchem, senior lecturer, Institute of International Shipping and Trade Law, Hillary Rodham Clinton School of Law at Swansea University. Thank you both for joining us today.

We slightly overran on our first session, so I hope that you will be able to stay with us until 12.10, just 10 minutes before the witching hour that we had originally indicated. May I thank you for joining us to contribute your expertise to our inquiry on the United Nations Convention on the Law of the Sea? We are considering whether it is fit for purpose in the 21st century. At this stage, I always remind both members and witnesses that our session is on the record. It is transcribed and broadcast. I also remind colleagues on the committee to declare any relevant interest they may have when asking their questions.

I shall begin by asking the first question, which is always rather general in scope, before turning to my colleagues for more focused questions. I shall not ask a supplementary in the normal run of things, but I would expect my colleagues to ask a supplementary after their primary question.

Beginning with a general opening question, how do UNCLOS and the related treaties regulate access to economic resources? Which economic maritime zones or economic resources are inadequately regulated?

Dr Richard Caddell: Thank you very much and thank you for the opportunity to speak to you today. Answering that question takes a little bit of a step back in time. We are aware that UNCLOS takes a zonal approach to the management of marine resources. It allows coastal states to establish a series of areas of jurisdiction that they can claim.

As for economic resources within that, there are two major zones. The developments of both these concepts are very significant and important elements of the convention. The first such area is the exclusive economic zone. That extends up to a maximum of 200 nautical miles from the national baseline. These first emerged in the wake of the UNCLOS I and UNCLOS II negotiations, in 1958 and 1960 respectively, where a group of rather enterprising states started to make declarations fencing off areas a little bit closer out to sea.

If you can picture, a state would declare a territorial sea, and then after that, beyond a narrow belt of customs jurisdiction, there would be essentially the high seas. When you think about it, most states tend to use the seas that are closest to their territorial areas. So a number of states started to make declarations that these areas were more exclusively for them. It started off in South America and then rapidly moved out. This became rather haphazard. Some of you may very well

remember the cod wars of the 1970s, in which we saw Icelandic jurisdiction extending outwards and it created a degree of friction. One of the important elements that UNCLOS III needed to fix was to get some clarity on these types of zones.

In essence, the EEZ is probably one of the most significant elements of state claims. If you think of a map of the ocean, I would say that around 36% of ocean space is taken up with EEZs, which seems fairly small, but about 90% of the harvestable resources tends to be in these areas, so there is a significant economic interest within this.

As far as the EEZ is concerned, UNCLOS gives states the sovereign rights to explore, exploit, conserve and manage the natural resources of these waters. They also have sovereign rights over other economic benefits, such as energy production. This goes hand in glove with a series of jurisdictional entitlements that allow the coastal states to exercise jurisdiction over the establishment of artificial islands and installations, marine scientific research and the protection and preservation of the marine environment. All this is tempered and balanced by the need to have due regard to the rights and other duties of other states.

There are other obligations incumbent on the coastal states in these waters, particularly with respect to fish stocks. The coastal state is obliged to set a total allowable catch that is in line with the obligation in the convention to promote the optimal utilisation of the stock. Then, if there is any surplus left over, it has to license access to that to other states, although how it does that is largely a matter of state discretion.

In practice, many of these stocks are actually shared stocks. There are very few discrete fish stocks that are in one country's jurisdictional waters only, so there are obligations to co-operate on the conservation and management of those stocks. In practice, this is done by the establishment of a series of regional fisheries management organisations—RFMOs—that exercise scientific and managerial oversight of these stocks through the will of the coastal states there. There is a patchwork of these, a real alphabet soup out there.

The second major zone is the continental shelf. This became important as the UNCLOS I process began. Technological developments of the Second World War allowed us to push out and use continental shelves in a way that was never really the concern of states previously. In 1945, the United States issued the Truman Proclamation, which exercised sovereignty over the continental shelf in that territory.

This was very firmly on the agenda in the UNCLOS I negotiations and resulted in a treaty on this issue, albeit one that was somewhat vague and unsatisfactory. It talks about phrasing it in terms of depth of 200 metres and thereafter to where the depth of the superjacent waters admits exploitation of the natural resources of these areas. In other words, it frames this in response to how you can exploit these waters, which is obviously variable.

Around the same sort of time, the ICJ also pronounced on entitlements to the continental shelf and incorporated the notion of natural prolongation of the land. This was then built into UNCLOS. It allowed states to claim up to 200 miles of continental shelf, but some that meet fairly complex and exacting geological criteria may claim up to an additional 150 nautical miles, which is determined by a body called the Commission on the Limits of the Continental Shelf.

As for areas of uncertainty, one issue that arises is that, if you have this outer continental shelf, you are able to push out and claim, for the sake of example, an extra 150 nautical miles. This means that your continental shelf might go under an area of what is the high seas. Therefore, you have potential conflicts with user states there. Someone might want to conduct fishing in the water column that is close to your seabed, and there would be a conflict with the state with the outer continental shelf, or there may be a state with the outer continental shelf wanting to exploit these areas.

In the convention itself, this is somewhat of a placeholder set of provisions, in that it is not necessarily clear at the moment how this co-operation is managed. We are currently getting that practice, as more and more states declare these outer continental shelves and we get to see how they are interacting.

Finally, many fish stocks are actually deceptively underregulated as well. If you look at a map of regulatory areas, you will see again this tapestry of regional fisheries management organisations. There are also a large number of gaps within this. Some are due to geopolitical conflict, such as the south-west Atlantic, but a number of fish stocks are deceptively underregulated. A lot of these RFMOs are single-species RFMOs, so a number of other fish stocks within there are not necessarily addressed.

Dr Youri van Logchem: Thank you very much for offering me the opportunity to speak to you today on these very topical and important issues.

In light of the more thorough introduction that Richard gave, I just wanted to add a few points. If you look at the territorial sea and at economic resources. Broadly speaking, the law of the sea convention refers to non-natural resources, primarily mineral resources in the shape of oil and gas, and natural living resources, primarily fisheries. If these resources happened to be located within the territorial sea, they would be completely under the sovereignty of the coastal state.

With regard to the exclusive economic zone, Richard mentioned that the prime resource of interest is fisheries. Within the law of the sea convention, there is also mention, for example, of states exploiting wind energy. If you look at the relevant provisions, it is quite interesting that when the law of the sea convention was being negotiated, there were no offshore wind projects. However, there was already an eye to the future,[1]

[1] That is, on the part of the drafters of the law of the sea convention.

in the sense of "That might actually happen". Extracting energy from wind or the water currents is similarly under the jurisdiction of the coastal state.

Richard stopped more or less at the maritime zones that are under coastal state jurisdiction. Beyond areas under coastal state jurisdiction, there is the deep seabed, which is governed by the International Seabed Authority. In that regard, there is quite a clear gap. I think we will touch on that later with regard to marine genetic resources, an economic resource which the law of the sea convention did not take into consideration—I would say for more obvious reasons, because at the time their economic use was largely unknown. I will stop there. Thank you.

The Chair: I turn next to my colleague, Lord Stirrup, for a question. I shall invite Dr Caddell to respond first. May I explain that, when we get to question 3, from Lord Alton, I know that you have the expertise on this particular area, Dr van Logchem, so I shall invite only you to respond? I appreciate that both our witnesses have spoken to each other about this in advance, so it is not exactly a surprise to them.

Q31 **Lord Stirrup:** Good morning, gentlemen. We have spoken about jurisdiction. Could I ask you about where jurisdiction is not agreed, where there are coastal states that argue about who has jurisdiction over a particular area? What happens about the resources then? What sort of rules apply, and how does international law address these sorts of issues? Can you describe to us how it works in practice?

Dr Richard Caddell: I would defer to Youri on this point. He has quite literally written the book on this subject.

Dr Youri van Logchem: If you look at maritime boundary disputes generally, on a global scale there are still approximately 200 maritime boundaries that need to be delimited. Many of these areas are also automatically disputed, so I will refer to these as being disputed maritime areas.

The main difficulty within these areas is that there are multiple states that claim to have jurisdiction, sovereignty or sovereign rights. There is essentially a co-existence of sovereign rights, or at least competing claims to sovereign rights or jurisdiction, when you talk about the same exclusive economic zone or continental shelf area, which creates quite a number of difficulties.

Prior to delimitation, thus prior to states having determined the maritime boundary, there are many questions surrounding oil and gas resources. I will give some examples of these maritime boundary disputes. In the Aegean Sea, there are significant outstanding issues between Greece and Turkey and, in the eastern Mediterranean, between Israel and Lebanon. If you move to the Asian region, there is the South China Sea and the East China Sea.

These are all examples of disputed maritime areas that quite often generate conflict between the states concerned. An important reason for

that is that if states act unilaterally—by which I mean if they act[2] without the consent of the other claimant state(s)—this may provoke conflict. From the view of international law, you have to question to what extent a claimant state is allowed to act unilaterally. Is it allowed, for example, to conduct seismic work? Is it allowed to start or initiate unilateral drilling?

If you look at the international case law, there is some guidance as to what states would be allowed to do within disputed maritime areas. There is, for example, the maritime boundary dispute involving Guyana and Suriname, where Guyana authorised unilateral drilling and Suriname protested. Ultimately, this issue was also addressed by an arbitral tribunal. In that case, that was not the main issue, as it was mainly about delimitation, but the tribunal also dealt with the issue of whether Guyana was allowed to authorise unilateral drilling. In that regard, the tribunal concluded that that was unlawful from the view of international law.

In this regard,[3] an important role is played by paragraph 3 of Articles 74 and 83 of the law of the sea convention. In a general sense, that paragraph imposes two obligations on states. The first obligation is more positive in nature: it calls on states to make earnest efforts to agree to provisional arrangements. Put differently, states are called upon to co-operate by way of provisional arrangements, but there is no hard obligation for them, under international law, to actually conclude such provisional arrangements.

If they are in existence, the dispute area can often be better managed, although quite often these arrangements are not comprehensive in nature, because they are often quite focused on one activity, for example oil and gas-related activities. It can be quite challenging for states to actually agree on provisional arrangements. It is particularly in their absence that you have issues such as the unilateral drilling issue that I just mentioned.

You can put a unilateral activity—for example, unilateral drilling—in the light of the obligation that is contained in paragraph 3 of Articles 74 and 83 of the law of the sea convention, which refers to the fact that states have to make every effort not to hamper or jeopardise the reaching of a final delimitation agreement. Here, you have the difficulty of what is actually meant by not hampering or jeopardising. On a very general level, you would say that states have to exercise restraint, in that they have to exercise restraint in connection with disputed maritime areas. That is already a given under general rules of international law: if States have a dispute, they have to exercise restraint in their behaviour. This obligation not to hamper or jeopardise can be seen as a conventional rule that calls upon states to be restrained in their behaviour.

When the tribunal in Guyana v. Suriname addressed the issue of unilateral drilling in the light of the obligation not to hamper or

[2] That is, by undertaking or authorising activities falling under coastal State jurisdiction, for example, energy and natural resources activity.
[3] More specifically, as regards disputed EEZ or continental shelf areas generally.

jeopardise, it concluded that unilateral drilling did in fact have the effect of hampering or jeopardising. With regard to seismic work, the conclusion was different. It indicated that this was more a benign activity. It was more transitory in nature; hence the tribunal concluded that usually, in a disputed maritime area, states would be allowed to conduct or engage in seismic work.

There are some difficulties with that conclusion, particularly if you look at state practice. I mentioned the Aegean Sea, where Turkey and Greece still need to delimit their boundary. Here, if one of the states concerned starts seismic work, it will automatically provoke a conflict with the other state, because that state will argue that it is actually unlawful under international law and that you need to have a boundary or consent prior to being allowed to begin activities connected to oil and gas resources.

There was also the question of the extent to which international law is able to address these disputes. Of course, there is always the option for states to turn to compulsory dispute settlement. Up to this point, there has been no case that is exclusively about an act of unilateralism in a disputed maritime area, because the case law that we have is in the much broader context of an underlying maritime delimitation dispute being addressed. The court or tribunal was asked to look at issues of unilateralism in addition.

In practice, it is also more an issue of there being an obligation of restraint, but, if you look at the behaviour of states, they sometimes seem to be less willing to exercise restraint. You can argue that that is a fault of the applicable international legal framework, but I would say that the rights and obligations that pertain to disputed maritime areas are quite extensively regulated. That suggests that the fault lies more with states individually that do not observe their obligations than with the international legal framework itself. I will stop here.

Q32 **Lord Alton of Liverpool:** With 97% of the world's communications transported by fibreoptic submarine cables, with around 436 submarine cables in service worldwide, spanning some 1.3 million kilometres, some of them placed on the seabed or buried in the subsoil of areas claimed by multiple states. What are the issues that arise in that context? How well does the law of the sea currently deal with those challenges?

Dr Youri van Logchem: As was pointed out, international communication cables are of critical importance to maintaining international communications. I think it was mentioned in the previous session that they are susceptible to being damaged as a consequence of competing uses of the oceans, for example anchoring. That is one issue.

Another issue is that some of them are located in disputed maritime areas. The issues here are slightly different compared to the issues related to oil and gas resources which I just mentioned. Submarine cable activities are mostly undertaken by submarine cable companies based in third states. They are often not undertaken by companies based in the claimant state itself.

If we are talking about disputed EEZ or continental shelf areas, there is the question of whether a submarine cable company can freely place a new submarine cable system there. Under the law of the sea convention, they[4] have the freedom to maintain, lay and repair submarine cables. I would argue that, even if you have a disputed EEZ or continental shelf area, the rights and freedoms of third states still exist. They exist still largely untouched. This is a bit of a legal fiction, because, like I said, the activities in practice are actually exercised by the submarine cable companies, but the rights and freedoms themselves are given to a third state.

I was saying that, in disputed areas, third States still have the international rights and freedoms that are applicable in 'undisputed' EEZs as well. However, if you look at state practice, you see that claimant coastal states sometimes use submarine cables as a vehicle to strengthen their claim to the disputed area in question. They do that by way of adopting legislation, for example, that would require a permit to be obtained if a submarine cable company wants to place a new submarine cable system within the disputed EEZ area, or that would require preparing permits.

Thus the main difficulty is that you have an accumulation of requirements for permits from different claimant states. One of the criticisms from the submarine cable industry is that that makes their life much more difficult. They need to go through different permit processes with different coastal states. Some coastal states have quite complicated legislation on this point that would require multiple permits from multiple departments. This translates to extra costs and delays.

To give a more concrete example, after the Hengchun earthquake in, I think, 2006, a number of submarine cables located within the South China Sea and the East China Sea were damaged, and because of the disputed status of these waters it took very long to repair them. That was mainly because of the submarine cable companies having to obtain permits from multiple claimant coastal states.

Then you have the question of whether it would be permissible for a submarine cable company to actually engage in these activities. That depends on the activity in question. However, if there is a plan to develop a new submarine cable system, in general submarine companies try to avoid disputed maritime areas if they can. Their policy is very much that if they can avoid a disputed maritime area, because transiting one would generate quite a number of difficulties for them, they try to avoid it in the planning process.

That may translate into adding thousands of kilometres of extra submarine cables to a system, and from a financial point of view it may not always be feasible to do that. If submarine cable companies have to

[4] More aptly framed, these rights and freedoms are attributed to third States. However, in practice, these rights and freedoms that third States have are mostly exercised by private actors, including submarine cable companies.

go through a disputed maritime area, they will actually follow the rules and regulations of different states because they want to avoid being targeted by one of the coastal states, for example by it exercising its enforcement powers.

I think I have already taken up quite a bit of time. If you want me to elaborate further on this issue, I am happy to, but I will stop here.

Lord Alton of Liverpool: I would like to press you further on the issue of the ownership of submarine cables. Should we be concerned that, in recent years, Chinese state-owned companies have greatly increased their construction of subsea cables, for example Huawei Marine Networks, and ownership of undersea cables, for example China Telecom and China Unicom?

In terms of resilience and national security, what can we learn from the US cable ship security programme? When it comes to submarine cables, are we acting in unison, in alliance, with our Five Eyes partners, as we have done in telecommunications generally? Are we doing the same?

Dr Youri van Logchem: That is a very difficult question for me to answer, because it does not seem to be very related to the law of the sea. I am a bit hesitant to go into that issue. Like I mentioned, there are questions about submarine cables generally. The law of the sea convention addresses issues such as placing cables, repairing cables and maintaining them. It does not really address the security issues that were just mentioned.[5] My hesitancy comes primarily from that. It is a very valid question, but I do not think I have a real, sensible answer to that.

Q33 **Baroness Blackstone:** I turn to what is, at least for some of us, a topical question. What are the consequences of illegal, unregulated and unreported fishing? How well can these challenges be addressed by states and by international law? Could you also tell us who the serial offenders are? Are there any mechanisms currently available to tackle them?

Dr Richard Caddell: That is a very rich and detailed question. There are lots of things to unpack within that. It is helpful to start with some understanding of the scale of the problem, insofar as we can actually do that, given that the clandestine nature of the enterprise means that that is very difficult to measure.

The most widely cited study tends to consider that up to 31% of catches in particular fisheries could be IUU in nature. Of course, there are a lot of

[5] Paragraph 4 of Article 79 of the law of the sea convention does however provide that a submarine cable that is laid on the continental shelf, but also passes through the territorial sea or enters the land territory of a coastal state, requires coastal state approval and has to comply with any conditions adopted by a coastal state. In this respect, the question arises whether this is the case for only the segment that actually passes through the territorial sea (here the coastal State has sovereignty over submarine cables) or whether coastal state authority also extends to before the cable enters the territorial sea.

variables within that statistic, but when you even that out we are looking at possibly 18% of catches, which is one in five wild caught fish. That is a pretty damning statistic. In financial terms, that is worth up to about $25 billion in any given year, so it is a very significant problem indeed.

As for the consequences, for the fish stock the consequences are both biological and behavioural. Biologically, it of course extracts biomass from the stock, which makes it harder for that particular stock to regenerate. It also makes it harder for the fisheries managers to manage the fishery effectively if they do not know how much biomass is coming out in any given year. This also results in damage to the marine environment—the bycatches, the ecological impacts. Those that are fishing legitimately and responsibly in a fishery have to provide this information, and of course those that are not do not.

Behaviourally, it is a pretty obvious picture. If you know that somebody is getting this illegal windfall, more boats will follow and it erodes trust in the fishery. Equally important is the very human side to things. Fishing vessels that have very little interest in the requirements and niceties of getting a licence probably have very little interest in the niceties and requirements of labour and human rights elements. It is usually a bit of a red flag with some of these vessels, that there are other violations taking place as well.

On serial offenders, I do not think it is as easy as unmasking a particular villain. Like a lot of environmental crime, there are small-scale subsistence offenders who are doing this essentially to feed their families, and, of course, at the other end of the scale you have the large-scale criminal enterprises. I do not think that one entity stands out, because you can have cavalier operators on flags that have a reputation for responsibility and responsible operators on flags that have a reputation for being cavalier.

The official evidence is a little inconclusive. The RFMOs maintain collective lists of IUU fishing vessels. If you drill down into those, you see a very clear pattern. Either they have no idea what the flag is, or, if they see a flag, they perhaps doubt whether that flag has been legitimately and genuinely granted. Even if you have clear intelligence on those flags, you see a long history of flag-hopping between registries, changes in corporate ownership every five minutes, changes of name of the vessel. It is all a nautical game of smoke and mirrors to try to avoid detection.

There is an IUU fishing index produced by the Global Initiative against Transnational Organized Crime. I suspect you may get some written evidence in that respect as well. It has a series of different indicators and highlights particular strengths and vulnerabilities. From that, you see that the results are very region-specific. The overarching lesson is that capacity is the determining factor there. The more capacity you have to do inspections and the greater enforcement presence out there, clearly the greater strength you have in dealing with this problem.

How is international law dealing with this? It is through a variety of ways and mechanisms. We are getting better at detecting it. Technology is a really important driver in building a bigger picture of where we are with that. I know that you have looked at that in previous sessions. Vessels are now having increasing numbers of technical requirements on them, such as electronic log books, which have become far more difficult to falsify. There are vessel monitoring systems, essentially GPS, reporting requirements at fixed intervals, and automatic identification systems, which also allow for tracking, but of course you can always turn them off.

One thing we see is the use of satellite technology. Bodies such as Global Fishing Watch are now able to track the 'dark' fleets—the ones that you do not see, the ones that are not using the VMS and other technical fixes to identify their locations. They are lit up at night. You can see these little lights moving around in areas where you know that fishing is banned. This is helpful, because it detects areas of non-compliance. It also demonstrates where the ships are coming from and, equally important, where they are taking the catch. Where is this actually getting into the supply chain? It means that you can start to think about some market-based measures.

As to whether more legalistic concerns are in play, the first place to look is the flag state, which of course bears the brunt of enforcement obligations. Compliance responsibility rests here. This can be a problem. There have been a few inroads into trying to get flag states to be more responsible in this. In 2014, the FAO's voluntary guidelines for flag state performance were instituted after a very lengthy gestation, but of course the clue is in the same: they are voluntary. Also, the substance of them is a little lacking, unfortunately. There is very little detail on performance assessments and other metrics by which you might indicate compliance.

More recently, in 2015 the International Tribunal for the Law of the Sea adopted an advisory opinion in response to a question posed to it by the West African Sub-Regional Fisheries Commission, which wanted clarity on obligations of states and international organisations in relation to IUU fishing in the EEZs. Basically, ITLOS reinforced the fact that UNCLOS has stated very clearly that flag states have responsibilities to ensure that their vessels comply with law and regulation that is adopted in the EEZ, and that they need to exercise jurisdiction and control in administration, technical and social matters on their vessels.

This obligation is one of due diligence, which has been emerging as a concept through the pronouncements of international courts and tribunals over the last decade or so. It is an obligation of conduct rather than result. The important part is that it opens the door to liability, albeit one that has not been terribly well sketched out yet. The mechanics of doing this on the basis of state responsibility are still open to debate, but it presents the possibility of litigation by an affected state if a flag state is patently refusing to take its obligations seriously.

Putting a bit more on the flag states is one possibility. There are other workarounds on this, too. There is the growing role of port states and

market states within this. Port state enforcement is one of the key innovations of UNCLOS on an environmental footing. In 2016, the Food and Agriculture Organization's Port State Measures Agreement entered into force. In a nutshell, this allows parties to deny port access to fishing vessels that are engaged in IUU practice. There are a few issues as to how you demonstrate this, the evidential burdens. So far, there are 69 parties to that, including the UK.

Slightly more controversially, market states are also starting to make these types of things bite a little. The classic example is the EU's IUU fishing Regulation of 2008. It is a little controversial, but it allows the EU, in the fight against IUU fishing, to identify states as non-co-operating third states. It puts them on a negative list and there is a carding system, with the ultimate sanctions being trade restrictions. There are a couple of ways around that, too.

Another possibility is to move towards looking at greater criminalisation. We are seeing a movement to use the toolkit of criminal law to go after IUU fishers, largely because, for a number of the most serious enterprises here, IUU fishing is just one of a fairly extensive portfolio of criminality. You can almost take the Al Capone approach in that, if you do not get them for this, you might get them for that.

There are some difficulties with that. Essentially, the law of the sea speaks one language and international criminal law speaks another. The law of the sea talks of 'IUU fishing', and international criminal law talks of 'fisheries crime', which is a broader suite of serious crimes that may take place on the locus of a fishing vessel. There have been attempts by some states—Indonesia in particular has been leading the charge on this—to get this recognised as a transnational organised crime, although of course the tipping point for recognising this as a transnational organised crime is that IUU fishing has to carry a sentence of four years or more in prison. That is not always the case. We have seen with a lot of environmental crimes that this is not necessarily the firmest of infractions on this.

Finally, we are increasingly using the language of human rights here, which is a welcome development. In the international system, there is a bit of a disconnect as to who takes the lead. If you are talking about working conditions on a vessel, is it the International Labour Organization or the International Maritime Organization that is involved? If you move out more panoramically and are talking about fishing vessels, it brings the FAO into play as well. This has been seen by default as the purpose of the ILO. Perhaps this is a smaller part of the agenda of the ILO than those of us who are engaged in looking at IUU fishing might want.

The Chair: As ever, time is the enemy, particularly when we have such excellent and comprehensive answers, so I apologise to my colleague Baroness Blackstone.

Q34 **Baroness Blackstone:** The only question I wanted to ask was not answered. Who are the main culprits in this area? That takes one minute to answer.

Dr Richard Caddell: It is very much on a regional basis. The global index demonstrates strengths and weaknesses in particular regions on that point. China has been flagged up quite significantly here. The real problem is that many of these fishing vessels do not actually have a legitimate flag. Identifying culpability on the basis of nationality is a challenge in that respect.

Q35 **Baroness Fall:** Climate change is putting pressure on the sea in many ways. One is the search for new sources of energy, and the other is rising sea levels, which is surely playing havoc with some of the economic zones that we talked about earlier. With that in mind—I will not ask a supplementary in the interests of time—what are the new and emerging economic uses of the sea? Are the laws as they stand able to deal with them? How might we need to change in the interests of the rise in sea levels and sources of new energy, which I mentioned at the beginning?

Dr Youri van Logchem: That is a very broad question. There are many new uses of the sea. Potentially there is increased development in oil and gas exploration on the continental margin, the outer continental shelf. There is also the issue of using the seas and oceans for generating energy via wind, as mentioned. The latter, as mentioned at the beginning, is surprisingly well regulated under the law of the sea convention, given that the law of the sea places emphasis on the fact that the coastal state has sovereign rights over economic activities that occur in the exclusive economic zone, which would include wind activities for example.

Further new uses I can think of, and where there would also be some sort of impact from is Arctic shipping, for example. Where the Arctic ice cover is receding this is very much linked to climate change. There is the increased option for shipping companies to use the Arctic shipping routes—the north-west passage, the northern sea route. That[6] might be a bit of a double-edged sword in a sense. Economically, it might be of interest to shipping companies, although currently those routes are still unpredictable. There is annual variability in ice cover, so they are normally accessible for only part of the year. As the effects of climate change are exacerbated, the prediction is that they will be open for the majority of the year. That creates economic opportunities, but there is a dark side to that as well.

The other side of the coin would be if we want to have increased shipping activities within the Arctic. The Arctic is a more pristine marine environment. Canada and the Russian Federation, two of the coastal states that abut the Arctic Ocean, have already adopted unilateral legislation to combat the effects of pollution, which would be more severe in the Arctic environment. There have been questions about whether this will be tenable once the ice coverage disappears. Can Canada and the Russian Federation then still rely on Article 234 of UNCLOS, which is about ice-covered areas?

[6] i.e., to use the available Arctic shipping routes.

It allows the coastal state to adopt shipping regulations that go beyond the generally internationally accepted rules and standards, the IMO conventions effectively. This article is premised on the area being ice covered for a majority of the year. At least on a textual interpretation of that article, you can question whether it would not become redundant at some point. If the ice cover actually disappeared, could you still argue that that would be an ice covered area? I think the Russian Federation is saying that it is not so much about ice coverage, but that this article was designed specifically to deal with the Arctic, irrespective of ice cover.

The other new use, which I think was also mentioned in the previous session, is using autonomous vehicles for shipping purposes. Of course, there is quite a clear economic attraction here, but there are quite a number of issues, especially relating to law of the sea convention. Recently, the IMO conducted a scoping exercise to identify the gaps in the IMO shipping conventions, including SOLAS.

A broader question is the extent to which the IMO would be able to completely remedy all challenges and difficulties surrounding autonomous commercial shipping. Under the law of the sea convention, there is the threshold question of whether they are a ship or a vessel. The majority opinion seems to be that they would qualify as such. If you accept them being a ship or a vessel, the flag state also has numerous obligations. For example, it needs to make sure that vessels are adequately manned. They need to have a master. As you can imagine, in the context of autonomous vessels this creates all sorts of challenges, especially if you have fully automated vessels that are operated not by a master but by an algorithm. Are you then going to say that the master is in fact the computer or the algorithm? I will stop here.

Dr Richard Caddell: I will make three very brief points on this. It is a sense of evolution rather than revolution in many key respects. First, I think we will see more seabed mining and mineral extraction. There is a slight plot twist to this in that it will not be by the people you expect. Essentially, there has been quite a lot of democratisation of resources in many respects. We are starting to see a number of small-island developing states taking steps to outsource and sponsor activities on their continental shelves and indeed in the international seabed area.

That has been aided by an advisory opinion on the rights and responsibilities of sponsoring states in the International Seabed Area. A lot of those states have been busy getting together very extensive mining legislation on this. It might very well surprise you to find that the most extensive mining provisions are in the statute books of Tonga and places like that. We will see a lot more of that, and small island states making moves to sponsor these sorts of things.

This has been said before, in that a lot of the innovations will be environmental in nature, in the sense that we are trying to solve environmental problems, so we are talking about geoengineering and carbon capture and storage for example. I think Professor Malgosia Fitzmaurice mentioned those previously. There is dealing with ocean

plastic. There are examples, as Youri has mentioned, of autonomous vehicles being used to collect this. Of course, this will become monetised as we go. There is dealing with dwindling water supplies and food security elements—probably more aquaculture, desalination and these sorts of things. There is the really wacky, mad-professor stuff. There has been some talk of iceberg harvesting, which I think is one of the ones for science fiction at the moment. Ultimately, as Youri mentioned, we will be looking at old activities in new areas, possibly opening up the Arctic.

On your second question, about disputes over marine resources, we are increasingly seeing climate change forcing major behavioural shifts in marine living resources. They are turning up in areas where they have never been before and this is creating new aspects of conflict. We will need to come up with a very sympathetic and mature mechanism to reflect the fact that compositions of EEZs are changing in terms of natural resources, particularly fish.

Q36 **Lord Teverson:** There is a new treaty on biodiversity coming through. I take quite an interest in this area, particularly marine. I was not aware of it, but it seems to be under the auspices of UNCLOS. When I looked at the UN website, it seemed to have done not a lot from about 2015. This is clearly a key area of marine biodiversity. What issues does this seek to address? What are its chances of success? If successful, how would this relate to UNCLOS? I am interested also in whether deep sea mining is a real threat. Are there real conflicts here between biodiversity and these future resources at deep sea level?

Dr Richard Caddell: There are a lot of moving parts with this particular development. In essence, it is first appropriate to ask why this is necessary. The simple reason is that we are using the high seas a lot more for economic activities. We are fishing further and deeper and, again, climate change is also impacting on patterns of that.

More to the point, as well as the existing activities at the moment, we are doing new things out on the sea that were not really in the contemplation of the UNCLOS III negotiations, especially with regard to bioprospecting, using genetic resources, which I will come to in a moment. A lot of the high seas provisions of UNCLOS are very vague, ambiguous and unmade. UNCLOS of course says very little about biodiversity, so it has become rather clear that this all needs addressing and filling out.

Before we look at what is in it, it is important to see what is not in it. The big issue is fisheries. There was a lot of opposition to this, because we already have an Implementation Agreement that deals with fish. Also, there was the possibility that it might undermine a series of other pre-existing institutions if fisheries were to be regulated through this mechanism. Of course, there are political problems that come with fisheries, as we saw last week. A lot of other states have pointed out that fish are biodiversity too, so how do we square that particular circle?

The other key issue is that new institutions will not come out of the deliberations. The emphasis is on working on and through existing

structures and actors, rather than making new ones, apart from a fairly assertive COP. How this will work out in practice is still being sketched out. It means that the negotiations are subject to the negotiating philosophy of "not undermining" institutions, which gives this a rather stilted and curious psychology.

The negotiations were launched in 2015. Alas, 2020 was intended to be a very big year for the negotiations, and this has been comprehensively derailed by the pandemic. There are thoughts that it will get back on track in 2022 and hopefully emerge from there.

Very briefly, there are four key subjects of concern. The first, and probably most problematically, is marine genetic resources. There is this idea that the biodiversity of the high seas may have industrial or pharmacological uses that we can harness. The big question is whether we pursue this through the freedom of the seas, in which case you have more or less free access to this, subject to the obligations of due regard, or whether these resources are the common heritage of humankind. If it is the common heritage of humankind, which is broadly accepted, how do we regulate access to this?

The thoughts on this are that there is likely to be an access and benefits sharing scheme. What will this look like? Will it be financial or in-kind exchanges? Will it include data? There are huge intellectual property implications of this. Big pharma is involved and it has got very messy.

The second key issue is less conceptually problematic. It is area-based management tools. Essentially, these are protective designations in the oceans. The oceans are largely regulated on a sectoral basis. There is a real alphabet soup of regional seas bodies, RFMOs and global regulators, such as the IMO and the International Seabed Authority. In theory, they could undermine each other, in the sense that somebody could designate a protected area where there is no fishing, and then somebody could come along either with a vessel that is allowed by the IMO or deep seabed mining that is allowed by the ISA. The question is how we can get these kaleidoscopic protections and sectoral regulators talking to each other.

The third point is environmental assessment. There is some recognition, albeit very limited, in UNCLOS. This is the product of its negotiating conditions. Environmental assessment was in its legal infancy in the 1970s, so there were very few obligations or templates to draw upon. This has changed rapidly over the intervening 40 years, but the environmental assessment obligations that we have and the practices that we exert are still very terrestrially oriented.

There are a lot of questions over what activities require an environmental assessment, when they require it, if they are exempt if somebody else is already regulating it. What type of environmental assessment do we need? Do we follow the environmental impact assessment that is more site based, or do we take a more panoramic view and use a strategic environmental assessment? It is the difference between seeing what the

localised disturbance of a particular oil platform would be and saying, "Let's look at the North Sea and see how cumulatively that adds to the cacophony of noise and other issues". It also raises severe problems with regard to what the requirements of consultation and notification are.

The final element of this is technology transfer and capacity building. This is very briefly sketched out in part 14 of UNCLOS, but it is very brief and very vague, and it does not look as if it is getting any clearer in the BBNJ accord either. The major issue is whether technology transfer capacity building should be voluntary or compulsory. That feeds into how you want to regulate marine genetic resources as well.

The Chair: Dr Van Logchem, is there anything you wish to add to that?

Dr Youri van Logchem: No, Richard more or less covered everything. At the beginning, the project to have a treaty dealing with biodiversity beyond national jurisdiction was very ambitious. As Richard is also probably pointing to, the end result may be slightly less ambitious than a lot of people had hoped.

Q37 **Baroness Sugg:** Turning specifically to the UK, how do you assess the UK's policy and practice within the current legal framework? We discussed many of the challenges here today. Do you think the UK is currently doing enough in this area? Where would you like to see the UK do more and take more leadership?

Dr Youri van Logchem: If I stay closer to what is more my area of expertise, I think about maritime boundary disputes and the effects of climate change on existing maritime boundaries and small island states. The UK has a number of overseas territories that are still faced with a number of maritime boundary disputes. Think of the Turks and Caicos Islands, for example, which still need to delimit their boundary with the Dominican Republic. There are more examples of that. More generally, those island states will be affected more severely by climate change. They are going to face issues with disappearing islands. Then, how are you going to deal with baselines?

In terms of expertise, small island states are still very reliant on what the UK Government are offering them. In that regard, the UK perhaps should take a more active role with regard to maritime boundary disputes and resolving them. As I mentioned, in the absence of maritime boundaries, issues may arise. It is not only about oil and gas resources, submarine cables, but also about fisheries, for example.

There are significant issues involving disputed maritime areas. There is thus an imperative for the UK to address boundary disputes and the broader effects of climate change on these small island states. If they have maritime boundaries, there may be issues there, too. Further, I think it was mentioned in the previous session that there has been no UK judge for quite some time at the International Tribunal for the Law of the Sea. The UK could be more active in that regard, too.

Dr Richard Caddell: I pretty much agree with what has been said by previous speakers. The first obvious point to make as an island nation is about climate change. The oceans in the climate negotiations have been rather evocatively described by one of our law of the sea experts, Professor David Freestone, as the Cinderella, because nobody ever asks her to the ball, largely because it seems to fall between two stools. The climate negotiations are busy looking at emissions, forests and other elements like that and consider this a law of the sea problem. Arguably, the law of the sea considers this a climate change problem. There is an immediate opportunity to develop something there.

Also, as previous speakers have mentioned, through EU membership there have been a lot of achievements with regard to environmental standards and the shipping safety elements of that which it would be important not to roll back on.

Another issue is financial in nature. The effects of austerity need to be considered here. There has been a lot of discussion about austerity. One of the first institutions to really feel the cuts was the Maritime and Coastguard Agency, which lost £80 million of its budget more or less overnight. That has a real impact on closures of coastguard centres, with a loss of personnel, loss of capacity. A running theme throughout these discussions has been how we improve inspection, enforcement, shipping safety capacity. The coastguard should not be cut. Also, some of the overseas development aid goes into training and improving capacity and enforcement of other states.

The Chair: Thank you very much indeed. Time has defeated us, but certainly this morning both our witnesses have enabled us to avoid defeat in our inquiry in the way that we have had several pathways forward explained to us. Thank you very much indeed for sharing your expertise. It has been a very valuable session.