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Climate Change and the Rule of Law
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Looking back

I will start by looking back at the progress of the law in this area over recent years. It is convenient to begin in October 2014, when I was invited to speak in Kuala Lumpur on the topic "Environmental law in a global society". This was part of the series of annual lectures by senior common law judges in memory of Sultan Azlan Shah, former Chief Justice of Malaysia.[1] I took my theme from a lecture given by the Sultan himself in 1997, speaking of the role of the law in tackling environmental degradation:

> "Legal principles and rules help convert our knowledge of what needs to be done into binding rules that govern human behaviour. Law is the bridge between scientific knowledge and political action."[2]

I will adopt the same theme – law as the bridge between science and political action in the context of climate change – as the underlying theme of my talk tonight.

In my 2014 lecture I traced the development of environmental law over the 50 years since I first had contact with the law as a student in the 1960s. In those days environmental law was not a recognised subject at university or law schools. That was before the ground-breaking 1972 Stockholm Declaration, which first affirmed our shared responsibility to protect and improve the environment for present and future generations, and set out the basic principles which became the foundation of modern environmental law. 20 years later they were given more precise form in the principles set out in the 1992 Rio Declaration.

I spoke in that lecture of an early test of the interaction of science, law and politics. Its success has some lessons for our response to climate change. That was the global response to the threat to the Ozone layer[3] from CFCs (chlorofluorocarbons), used in a wide variety of refrigerants and other industrial processes. Two major conventions[4] led in due course to the vast majority of ozone-depleting chemicals being phased out worldwide. Critical to success were the steps taken to protect the differentiated interests of developing countries, to ensure access to resources and alternative

technologies[5]. There was also a compliance procedure supervised by an Implementation Committee, whose approach was said to be "non-judicial and non-confrontational".[6]

I ended the lecture by referring to the role of the law in the response to climate change. Our problem, I said, was not lack of understanding of what was happening or what needed to be done, but how to translate that understanding into political action. I thought that we should look to the law to provide a bridge, and to the judges to offer at least some of the building blocks.

To give force to that idea, in September 2015, ahead of the COP 21 summit in Paris, I co-hosted an international judicial conference in London on Climate Change and the Law.[7] We looked at the potential role of the law, international and domestic, in combatting climate change. There had by then been some important judicial interventions in different parts of the world. We could look back to the great case of *Massachusetts v EPA* (2007)[8] in the US Supreme Court, in which the majority decided that the EPA's powers under the Clean Air Act extended to greenhouse gas emissions, such as CO2 emissions from motor vehicles, and that the agency's failure to take any action was "arbitrary and capricious" and therefore unlawful. In due course, following a change of administration, that decision provided the legal basis for the radical climate change policies developed by the new President Obama, to the crucial U.S.-China Joint Announcement on Climate Change in November 2014, and to his leadership of the global efforts to achieve agreement in Paris.

As it turned out, 2015 was something of an annus mirabilis for climate change law. In that year in the months before our conference, there were two other important judicial developments from very different legal systems - the *Urgenda* case in the Hague District Court in the Netherlands[9] and the *Leghari* case from the Lahore High Court in Pakistan[10]. Judges involved in both cases spoke of their experiences at our conference. In both cases, the national courts upheld challenges to their governments' failures to implement effective policies to counter climate change. The Hague judgment was of enormous symbolic importance as the first successful case of its kind, although at that stage it turned on what seemed a rather esoteric point of Dutch tort law. It later acquired more general significance when it was affirmed in the Court of Appeal and Supreme Court by reference to articles 2 and 8 of the European Convention on Human Rights. I will come back to that aspect.

The *Leghari* decision seemed of wider relevance at the time. It was based on the constitutional protection of the right to life. At our conference

the Judge, Mansoor Ali Shah (now in the Pakistan Supreme Court), told us how he had devised a new form of order to deal with the problem that the government simply was not implementing its own climate change policies. He ordered the setting up of an independent Climate Change Commission, chaired by a senior lawyer,[11] bringing together all the interests involved including NGOs, government officials, and independent experts, reporting regularly to the court. It was key to its success that the court was not imposing solutions on the executive, but giving practical effect to its own policies.

Another important development in September 2015 was a speech by the Bank of England Governor Mark Carney, warning financial institutions of the risks and challenges of the transition to a carbon free economy. He spoke of the need for early action to manage the transition. As he said:

> "We don't need an army of actuaries to tell us that the catastrophic impacts of climate change will be felt beyond the traditional horizons of most actors – imposing a cost on future generations that the current generation has no direct incentive to fix…. In other words, once climate change becomes a defining issue for financial stability, it may already be too late."

As we will see, one of the developing themes in the legal response to climate change has been about the legal responsibilities of investment funds, and corporate entities of all kinds, and of their directors, to take proper account of the risks of climate change, and to be transparent about those risks.

The Paris Agreement of December 2015 was a truly monumental achievement. I visited Paris briefly during the conference period for a side-event on the role of the courts. I was struck first by the sheer scale of the operation[12]. It is easy to forget now that it came only two weeks after the unprecedented terrorist atrocities in Paris, leading to 130 deaths. That had raised doubts as to whether the conference could go ahead at all.[13] In spite of it over 150 heads of state (more than at any climate COP before) gathered on the very first day of the COP. It may have been the fresh memory of those terrible events that helped to concentrate the minds of the participants and made failure unthinkable.

It is unnecessary in this lecture to spend time on the detail, which has been exhaustively discussed and analysed in the ensuing years. As is well known, the key obligations lie in the "nationally determined

contributions" (NDCs), which each party is legally required ("shall") to prepare, communicate and maintain. The NDC is to be achieved through "domestic mitigation measures" (art 4.2). Although the content of the NDCs is left to the individual states, there is to be progressive improvement, so that each successive NDC is to "represent a progression", and reflects the state's "highest possible ambition" (art 4.3); and accompanied by "the information necessary for clarity, transparency and understanding" (4.8). Article 13 fills in the detail of what is described as "an enhanced transparency framework", designed to feed into the five-yearly "global stocktake" under article 14, the first stocktake to be in 2023.

In spite of the historic nature of the agreement, there were no illusions as to how much remained to be done. In an article written in 2016, Professor Michael Gerrard[14] of the Sabin Centre, international guru of climate change law, contrasted the aspiration of limiting temperatures to "well below 2°C above pre-industrial levels" (art 2), with the reality of the current NDCs, estimated to lead to increases of 3.5 degrees, which he described as "catastrophic":

> "An increase of 3.5 degrees would not only drown the small island nations. It would also submerge significant portions of Bangladesh, the Nile Delta, the Mekong Delta, and other low-lying areas of the world, and would lead to melting of the Antarctic and Greenland ice sheets that would endanger many of the world's coastal cities, from New York to Shanghai. There appear to be no estimates of the number of people who would be displaced in such a situation…"[15]

But the general mood was optimistic. I liked the way it was put by Jacob Werksman, European Commission representative[16]:

> "… with the Paris COP only weeks behind us, I am hopeful that we landed upon a unique compromise in which international obligations to prepare, communicate, pursue, account for, track and successively and progressively update targets will, in the bright light of regular international attention and in the heat of a warming planet, sink deep roots into domestic legal and political systems…"

The momentum was carried into 2016. Almost as remarkable as the agreement itself was the speed with which it was brought into force. That required ratification by at least 55 parties representing at least 55% of

global greenhouse gas emissions. The threshold was reached at the beginning of October, and the agreement came into effect a month later on 4 November – four days before the USA Presidential elections. Since then more than 190 countries have ratified the agreement.

In November 2016 also came the ground-breaking decision of Judge Aiken in the US District Court of Oregon in *Juliana v USA*,[17] refusing to strike out the claim by a group of young citizens against the government for failing to protect them against the consequences of climate change. Citing authorities from round the world she held that the right to a climate system capable of sustaining human life is fundamental to a free and ordered society, and thus protected by the Due Process clause of the Constitution, and by the Public Trust doctrine.

The Trump years

The new global consensus suffered a rude setback with the election as US President of Donald Trump, followed in summer 2017 by his announcement of intended withdrawal from the Paris agreement. Although under the agreement that could not take effect until November 2020, in the meantime he embarked on a series of executive orders evidently designed to unwind most of his predecessor's climate policies.

To a legal observer, against the background of the apparently definitive *Massachusetts* judgment, it was somewhat shocking that there seems to have been no serious attempt to justify this dramatic reversal of policy by reference to legal principle, or scientific evidence. I attempted at various times to discover from the EPA's website what its formal position now was. As far as I could see, on 20 January 2017 they had deleted the Climate Change section and all references to climate change[18]. Instead there was a note under the heading "This page is being updated". As far as I know, no serious attempt was made to update the website, and no revised EPA policy was formulated during the Trump presidency – not even in November 2018, when the government itself published its Fourth National Climate Assessment, which left no apparent doubt as to the devastating social and economic effects of climate change on the USA and elsewhere, and the need for urgent global action to address them.[19] The President's reported response was that he had read parts of the report but "didn't believe it".[20] Happily the EPA website has now been brought into line with the policies of the Biden administration.

Meanwhile the *Juliana* case progressed slowly through the courts, carrying perhaps a beacon of hope that at least in the courts, unlike politics, fake news would not win the day. After Judge Aiken's ruling and the exchange of pleadings, the case had become embroiled in procedural wranglings which found their way to the Supreme Court, and eventually came back to the Court of Appeals for the 9th Circuit, leading to a decision in early 2020[21]. Although the claim was dismissed by the majority on procedural grounds, there was no disagreement as to the factual basis of the claim. The majority judgment of Judge Hurwitz was in strong terms:

> "A substantial evidentiary record documents that the federal government has long promoted fossil fuel use despite knowing that it can cause catastrophic climate change, and that failure to change existing policy may hasten an environmental apocalypse…"

It is notable that, whatever the personal views of the President, his lawyers had not apparently attempted to challenge that factual assessment. The reasons for refusing relief were about practicality and the limits of the court's constitutional role. Any effective plan would require "a host of complex policy decisions entrusted, for better or worse, to the wisdom and discretion of the executive and legislative branches"; the fact that the other branches "may have abdicated their responsibility to remediate the problem" did not confer on the courts "the ability to step into their shoes."

Although the decision was a serious setback for the climate litigants in the USA, it was important in affirming the reality of climate change and its consequences, and of the USA's responsibility. It will be interesting to see what happens to any further appeal in the *Juliana* case, under the new administration.

It may not have helped that the USA, unlike the great majority of states, does not have environmental protection built into its constitution[22]. It is fair to observe, however, that the response of the court was not so different from that of the Norwegian Supreme Court last year,[23] in the context of a specific duty under the Constitution to protect the environment. The case was a challenge to the government's decision to allow oil exploration on the Norwegian Continental Shelf, under article 112 of the Constitution, which confers a right to "an environment that is conducive to health", and imposes on the state authorities duty to implement it [24]. The challenge was rejected. The Court upheld the lower court's ruling that the constitution protects citizens from environmental

harms, including climate harms created by burning exported oil. However, it was said (in language similar to that of the *Juliana* court) that -

> "… decisions in cases regarding fundamental environmental issues often involve political balancing and broader prioritisation. Democratic considerations therefore support such decisions being taken by popularly-elected bodies, and not by the courts."

Article 112 was accordingly to be read as "a safety valve" allowing the courts to set aside a legislative decision, only if the legislator had not addressed a particular environmental issue, or the duties under the article had been "grossly disregarded", the threshold being "very high."[25]

The role of the environmental judge

While on the Norwegian case I will allow myself a digression on the proper role of an "environmental" judge, and the limits of judicial "activism". Although I am not myself a specialist environmental judge, I have taken a particular interest in this area of the law since 2003, when I was invited to join a judicial taskforce set up by UN Environment to promote judicial understanding of environmental law round the world. That followed the UN-led Global Judges' Symposium in Johannesburg in 2002, attended by some 60 chief justices from round the world. It led to a declaration, affirming that "members of the Judiciary… are crucial partners for promoting compliance with, and the implementation and enforcement of, international and national environmental law"[26]. I have since helped in the establishment of international judicial groups concerned with the environment,[27] and spoken at many judicial conferences round the world. It has never to my knowledge[28] been suggested that this interest disqualifies me from sitting on environmental cases at any level of the domestic court system.

I was surprised therefore to learn of the objection taken to one of the judges in the Norwegian Supreme Court, because of her perceived environmental sympathies.[29] The judge in question, Judge Ragnild Noer, is a highly respected member of the court, nationally and internationally. She has become well-known to me through our joint participation in a number of judicial conferences round the world, although of course as a member of a generalist Supreme Court her judicial expertise ranges much more widely than environmental law. The principal objection related to her involvement in the World Commission on Environmental Law (WCEL)[30], as a member of its steering committee. Two particular WCEL

pronouncements attracted attention. The first came in a declaration adopted at a WCEL meeting in 2016 at which the judge had been present, which including a reference to the so-called "in dubio pro natura" principle, that is that "in cases of doubt, matters before courts should be resolved in a way most likely to favour the protection of the environment." The other was in a project on the WCEL website under the title "Fighting climate change: a best practice guide for Judges and Courts". It included a passage emphasising the need to involve all three pillars of the state, the legislative, the executive and the judiciary; and suggesting that in the face of the reluctance of the first two in some countries to take the lead "courts and judges can play decisive roles in holding governments and actors accountable for effectively addressing climate change."

In the view of the majority of the court, these statements (even though not directly attributable to the judge) went beyond acceptable limits, in that they expressed what the result should be in court cases dealing with environment and climate change, or "must at least be read as a wish that certain considerations are given particular weight."

With great respect to that court, I find their conclusion a little disturbing. In the context of a constitutional clause which provides special protection for the environment and natural resources, it seems odd to exclude a judge of acknowledged environmental expertise, merely because she may subscribe to the view that there should where legally possible be a presumption in favour of protecting nature and the environment, and further that, where ministers fail in that task, it is the job of the courts to hold them to account. In any event, one of the strengths of a plenary court of a number of judges should be that it brings together judges with different specialisations and points of view, and allows for constructive debate between them. If anything, the overt exclusion of that expertise and that point of view might be thought likely to weaken, rather than strengthen, the perceived authority of the ultimate decision. I am not of course suggesting that in this particular case her involvement would have led to a different outcome.

Climate change litigation today

Against that background I return to the main theme of my lecture, which is to assess how the law can best contribute to the task of bridging the gap between science and political action. Since our conference in 2015,

there has been a massive growth in climate litigation round the world. My task has been made easier by the publication, soon after I agreed to give the lecture, of an important new academic treatise on the subject: a Handbook on Climate Litigation, edited by Professors Kahl and Weller of Heidelberg University, from which I have been able to draw both ideas and illustrations.[31] The case-law has been fully documented in databases maintained by the Sabin Centre and the Grantham Institute, and in recent studies by UNEP,[32] the Asian Development Bank[33], and most recently a volume under the fascinating title Comparative Climate Change Litigation: Beyond the Usual Suspects (2021)[34], looking at the litigation actual and potential in some 30 different jurisdictions, ranging from South Africa to Slovenia. I have also found a valuable judicial overview of the cases in two articles by Judge Brian Preston in the 2020 Journal of Environmental Law.[35]

There is room for varying views about the practical value of all these cases. While there has been a mass of litigation in different parts of the world, and cases may have influenced government and corporate policy choices in different ways,[36] notable successes for climate campaigners have been relatively few. Cases tend to take a very long time. The Urgenda case took 5 yeasr to get to the Dutch Supreme Court. The *Juliana* case is still awaiting final resolution more than 4 years after Judge Aiken's decision. We still look back to *Leghari* in 2015 as a case which worked, because it achieved immediate results. But that was because the court took direct control, and it was working within the grain of government policy, and by strengthening the hands of those within government who were trying to do something about it.

Even the successes do not necessarily lead to effective action. For example, an important victory for campaigners was the 2018 judgment of the Colombia Supreme Court in the *Future Generations* case.[37] 25 young claimants complained that the Colombian State had failed to guarantee their constitutional rights to life and protection of the environment, in particular through deforestation in the Amazon. The Supreme Court agreed, relying *inter alia* on the right to a healthy environment, enshrined in the Colombian Constitution.[38] The Court issued an order to the President and the relevant ministries to create an "intergenerational pact for the life of the Colombian Amazon," with the participation of the plaintiffs, affected communities, and scientific organizations.

It was an important success for the claimants. However, the wide-ranging nature of the order has been criticised as creating problems, by cutting across the established government and social structures.[39] It is also unclear to what extent the order has yet resulted in any practical action on the ground. In December 2020 it was reported by the Colombian NGO Dejusticia that there had been limited compliance with the orders, and the claimants had been obliged to return to court on at least two occasions to seek further orders.[40]

More positively, two recent cases at the highest level in European national courts show how judges can give force to the Paris commitments where a suitable legal peg is available within domestic legislation, and where government policies are supported by independent expert advisory committees. The *Grande-Synthe* case in the French Conseil d'État last year[41] concerned a request to the French government to take the necessary measures to limit emissions to comply with the commitments under (inter alia) the Paris agreement. A legal peg was provided by the relevant EU regulation[42] and the implementing domestic laws. The Paris Agreement was regarded as relevant to their interpretation. The court accepted that the municipality of Grande-Synthe had a sufficient interest because of its level of exposure to the risks from climate change, and that the court had jurisdiction to consider whether the government's current proposals would achieve its national and international commitment (40% reductions by 2030 and carbon neutrality by 2050). The government was ordered to provide further information, which will be considered at a future hearing.

The other case, in the Irish Supreme Court, concerned a challenge by Friends of the Irish Environment to the National Mitigation Plan, required by section 4 of the Climate Action and Low Carbon Development Act 2015. As the court noted, the "overriding requirement" of a national mitigation plan under the section was that it must "specify" the manner in which it is proposed to achieve the national transition objective (NTO), defined by the Act as requiring transition to a low carbon economy by 2050. The court held that the current plan fell "a long way short of the sort of specificity which the statute requires", since it would not enable the reasonable observer to know, in any sufficient detail, "how it really is intended, under current government policy, to achieve the NTO by 2050…"[43]

It is noteworthy that, although the arguments in both cases were wide-ranging, the decisions turned in each case on specific domestic

legislation. Neither court was impressed by arguments relying on articles 2 and 8 of the ECHR, such as had succeeded in the *Urgenda* case in the Dutch Supreme Court. In the Conseil d'État, the judge rapporteur (Stéphane Hoynck) had examined the relevant case-law under the Convention, including the *Urgenda* judgment, but shared the view of commentators that -

> "these convention-based rules were not enacted to restrict the margin of appreciation of States by imposing judge-made standards of conduct. This is all the more true when, as is the case here, the State has responded to the issue at stake." [44]

He observed that the Irish Supreme Court had taken a similar view.[45]

It may be that when one is dealing issues as complex and wide-ranging as climate change, human rights law is an imperfect tool. It remains to be seen how the Strasbourg court itself will deal with climate change issues in the case brought last year by a young Portuguese group against 32 European states.[46] They complain of failure by the respondent states to comply with their positive obligations under Articles 2 and 8 ECHR, read in the light of the commitments made under the 2015 Paris Agreement. In November last year the case was given priority by the President, and communicated to the respondent states, seeking their comments. Other cases are pending round the world, for example the potentially important Carbon Majors inquiry by Philippines' Commission on Human Rights, begun in 2016 and still awaiting a conclusion.[47] Meanwhile the recent *Teitota* case before the UN Human Rights Committee (an unsuccessful claim for refugee status in New Zealand due to the rising sea levels in Kiribati) has shown how incomplete is the protection available under international human rights law for climate change refugees.[48]

Turning to private law, there have been some brave, but so far generally unsuccessful, attempts to use tort law to challenge the activities, past and future, of fossil fuel and energy companies. A seemingly extreme example is the *RWE* case in the German courts.[49] The claimant, Mr Lliuya a Peruvian farmer, is suing RWE, Germany's largest electricity producer. He alleges that RWE, having knowingly contributed to climate change by emitting substantial volumes of greenhouse gases (GHGs), bore a measure of responsibility for the melting of mountain glaciers near his home town of Huaraz, causing flooding, and substantial loss of life and damage to property. He asks the court to order RWE to reimburse a portion of the

costs of future flood protection, assessed at 0.47% of the total cost, which is equivalent to RWE's estimated contribution to global industrial greenhouse gas emissions since the beginning of industrialisation. The case was dismissed at first instance, but accepted by the Appeals Court (Higher Regional Court of Hamm) as admissible, and permitted to go forward to the evidentiary phase.

Others present today will be much better able than I to comment on the potential merits of the case. From a common law perspective, the claim seems surprisingly ambitious, not least the attempt to link activities apparently lawful under German law, with damaging consequences as far away as Peru. I note that, in a chapter in the Handbook on Climate Change Litigation in Germany, Professor Weller has spoken of the limited potential of tort law for victims of climate change, not "idiosyncratic" to German law: as he says "in a nutshell, causation and breach of duty cannot be established".[50]

Climate change litigation can claim more success when it is aimed at specific targets, such as individual fossil fuel projects[51]. One of the most important judgments in recent years was that of Judge Preston in the New South Wales Land and Environment Court in the 2019 *Gloucester Resources* case.[52] The court upheld the refusal of permission for an open cut coal mine (the Rocky Hill Coal Project), planned to produce 21 million tonnes of coal over 16 years. The judgment is particularly valuable, not only because of the expertise of the judge, but also because he was sitting in a court with full legal and merits jurisdiction. It is perhaps the most comprehensive judicial discussion available anywhere of the technical and legal issues raised by such a project. Notable in particular is the judge's acceptance as relevant of the climate change impacts of consequential emissions by users; his rejection of arguments based on that the relatively small contribution to the global total of GHG emissions; and his rejection of the argument that the coal extraction would simply take place elsewhere. Of that he said:

> 'If a development will cause an environmental impact that is found to be unacceptable, the environmental impact does not become acceptable because a hypothetical and uncertain alternative development might also cause the same unacceptable environmental impact'. [para 545]

Another route to the same end may be through company law[53]. This was used successfully by ClientEarth to stop a proposed coal-fired power plant in Poland. It bought shares in the developer, the Polish utility company ENEA, and began a share-holder action claiming that the consent resolution for construction of the power plant harmed the economic interests of the company due to climate-related financial risks. They were said to include: rising carbon prices, increased competition from cheaper renewables, and the impact of EU energy reforms on state subsidies for coal power. The Court held the authorisation for the plant was invalid. The project has apparently been dropped by the companies/.

It seems likely that more climate litigation in the future will be led by investors or share-holders, directed at the responsibilities of companies and their directors.[54] There is increased recognition by the gloal legal community that climate-related risks would be viewed by courts as reasonably foreseeable and directors who fail to respond appropriately could be found to have breached their duty of care and diligence.[55]

Conclusions

As lawyers I believe we have a responsibility to show the world how the law can make an effective contribution to tackling climate change. At the international level we are unlikely to improve on the framework provided by the Paris Agreement. As Judge Brian Preston has said:

> "… the Paris Agreement represents a global legal consensus that mirrors the IPCC scientific consensus on climate change." [56]

There is no doubt room for improvement and much to be done to fill in the detail. In her introductory chapter to the Handbook Christina Voigt[57] warns against premature criticisms of the agreement, at a time when its processes have not yet been "cranked in motion". She reminds us that the NDCs were set to come into effect in 2020, and the first global stocktake is not until 2023. But as she says: "Lawyers need to defend it, use it in international and domestic courts, base their legal arguments on it; in particular its goals, its principles of progression and the need to reflect highest possible ambition in NDCs. …" I agree.

At the domestic level, experience shows that litigation, without effective legislative underpinning, is an imperfect tool for achieving real and timely progress. The World Bank has recently published a Reference

Guide to Climate Change Framework Legislation[58] The report sets out twelve key principles.[59] The first is:

> "Does the law enshrine emissions reduction targets for 2050 and include a net zero target (ideally by 2050 or shortly thereafter)?

Other principles ask whether the law ensures access to independent expert advice (principle 6), and to parliamentary oversight (principle 12). We are told that 2050 net zero targets are so far included in climate laws or executive acts in only ten countries, one of which is the United Kingdom. A proposal to make Europe the first net-zero continent by 2050 is now built into the Commission's proposed European Green Deal[60]. I would like the global legal community to direct more of its efforts, in the year of COP26, to ensuring that domestic laws enshrining mandatory targets of net-zero emissions by 2050, supported by informed policies, become the norm throughout the world.

The United Kingdom as the host for COP26 is well-placed to take the lead. Our Climate Change Act 2008 was a world first in setting a mandatory target for reduction of emissions by 2050, now set at net-zero by 2050.[61] The Act contains detailed machinery for successive five-year carbon budgets, to be set on the advice of a highly respected, independent Climate Change Committee, and reported to Parliament. So far five carbon budgets have been set taking us to 2032. In December 2020 the Committee published its proposals for the 6th budgetary period (2033-2037), which Ministers will be required to take into account before setting the budget by not later than 30 June this year.[62] The world will be watching.

I end by echoing the words of Lord Deben, Chairman of the Committee in last year's progress report:

> "The most effective and decisive action to secure our recovery from COVID-19 will also accelerate the transition to Net Zero and strengthen our resilience to the changing climate. Unifying these aims is absolutely necessary and entirely possible… Strong domestic action will provide the basis for the UK Government's vital international leadership in the coming year as it takes on the presidency of the COP26 climate summit in 2021. The UK's international credibility is on the line…"[63]

[1] The lecture is available on the Supreme Court website: https://www.supremecourt.uk/docs/speech-141009.pdf
[2] HRH Sultan Azlan Shah *The New Millennium: Challenges and Responsibilities* Lecture to Universiti Kebangsaan Malaysia, Bangi, Selangor 23 August 1997
[3] See eg Evelyn Swain, *Marking the 25th Anniversary of the Most Successful Global Environment Agreement* (2012) http://www.thegef.org/gef/greenline/july-2012/montreal-protocol-marking-25th-anniversary-most-successful-global-environment-agv - accessed 1 October 2014
[4] The 1985 Vienna Convention on the Protection of the Ozone Layer, and the 1987 Montreal Protocol on Ozone Depleting Substances (ODS)
[5] See Ian Rowlands in *The Oxford Handbook of International Environmental Law* (OUP 2007) p 325-6
[6] *Ibid* p 324. Rowlands describes the process used in the 1990s to secure compliance by the Russian Federation -"perhaps the most significant case of non-compliance under the terms of the Montreal Protocol."
[7] It was organised by the Supreme Court jointly with the government Foreign Office and Kings College, London, and, and attended by judges, practitioners and academics from different parts of the world. https://www.kcl.ac.uk/archive/news/law/climate-courts/index
[8] *Massachusetts v. Environmental Protection Agency*, 549 U.S. 497
[9] Urgenda Foundation v. The Netherlands [2015] HAZA C/09/00456689
[10] Leghari v Federation of Pakistan (2015) W.P. No. 25501/201
[11] As the Chairman, Dr Parviz Hassan, explained in a paper the following year (20th APCEL Anniversary Conference Round Table on Climate Change Adaptation and Resilience in Asia Pacific: Opportunities and Barriers, at the National University of Singapore, Singapore, on 10 November 2016), six Implementation Committees were established on different aspects of the framework: Water Resource Management; Agriculture; Forestry, Biodiversity, and Wildlife; Coastal and Marine Areas; Disaster Risk Management; and Energy. On the basis of their reports the Commission made 16 recommendations. Its final report to the court was presented in 2018.
[12] Forty thousand attendees came from around the world—educators, students, government officials, and non-profit and private sector leaders—so it was held at Le Bourget, best known as the airplane hangar for the Paris air show: A View from #COP21 in Paris, byAnn Hunter-Pirtle: https://blog.epa.gov/2015/12/22/a-view-from-cop21-in-paris/
[13] The attacks were a series of coordinated Islamist terrorist attacks on Friday 13 November 2015. Beginning at 9:15pm, three suicide bombers struck outside the Stade de France in Saint-Denis, during an international football match, after failing to gain entry to the stadium. Another group of attackers then fired on crowded cafés and restaurants in Paris, with one of them also blowing himself up. A third group carried out another mass shooting and took hostages at a rock concert attended by 1,500 people in the Bataclan theatre, leading to a stand-off with police. The attackers were either shot or blew themselves up when police raided the theatre. The attackers killed 130 people, including 90 at the Bataclan theatre. Another 416 people were injured, almost 100 seriously. (Wikipedia)
[14] Director of the Sabin Centre for Climate Change at Columbia University,
[15] Michael Gerard, "Sadly the Paris Agreement isn't enough" Environmental Forum Nov/Dec 2016
[16] Jacob Werksman, Principal Adviser, European Commission
[17] *Juliana v United States* Case No. 6:15–cv–01517–TC
[18] www.epa.gov/climatechange
[19] Some useful work did continue with US participation, resulting for example at COP24 in Katowice in 2018 in the adoption of the "Paris Agreement Rulebook".
[20] *Holden, Emily (November 26, 2018). "Trump on own administration's climate report: 'I don't believe it'". The Guardian. Washington, DC. Retrieved November 26, 2018*
[21] *Juliana v United States* No. 18-36082 D.C. No. 6:15-cv-01517- AA
[22] Kahl/Weller p 83 notes that the constitutions of 150 states include clauses on the protection of the environment.
[23] The Norwegian Supreme Court judgment of 22 December 2020, HR-2020-2472-P. Unofficial translation:https://www.klimasøksmål.no/wp-content/uploads/2021/01/judgement_translated.pdf
[24] Article 112 of the Constitution provides: "Every person has the right to an environment that is conducive to health and to a natural environment whereby productivity and diversity are maintained. Natural resources shall be managed on the basis of comprehensive long-term considerations, which will safeguard this right for future generations as well.

In order to safeguard their right in accordance with the foregoing paragraph, citizens are entitled to information on the state of the natural environment and on the effects of any encroachment on nature that is planned or carried out.
The authorities of the state shall take measures for the implementation of these principles."
[25] Judgment paras 140-1
[26] The Johannesburg Principles on the Role of Law and Sustainable Development adopted at the Global Judges Symposium in Johannesburg August 2002
[27] The EU Forum of Judges for the Environment (EUFJE), and the Global Judicial Institute on the Environment (GJIE). At the discussions leading to GJIE, we had an interesting debate as to whether the institute should be "for" or "on" the environment, and decided on the latter as appropriately neutral.
[28] A possible exception arose from our 2015 conference after a lecture by Professor Philippe Sands QC, hosted by me at the Supreme Court, on the possibility of the ICJ giving an advisory opinion on the legal obligations of states in respect of climate change. This attracted the attention of the Breitbart News Channel in the USA, under the headline "A Supreme Court justice and the scary plan to outlaw climate change", and ending with the memorable words: "Sands is a dangerous man; even more so the man who instigated the conference, a hitherto obscure activist judge called Lord Carnwath". Happily it was not taken seriously by my colleagues.
[29] The order of the Norway Supreme Court of 28 October 2020 is available in English: https://www.domstol.no/globalassets/upload/hret/decisions-in-english-translation/hr-2020-2079-p.pdf
[30] As the judgment noted: WCEL is "part of the International Union for Conservation of Nature (IUCN), a non-political organisation whose members are states and organisations, including the (Norwegian) Ministry of Climate and Environment".
[31] Published by Verlag C H Beck oHG (February 2021) I shall refer to it below as "the Handbook"
[32] The Status of Climate Change Litigation – A Global Review https://wedocs.unep.org/bitstream/handle/20.500.11822/20767/climate-change-litigation.pdf?sequence=1&isAllowed=y
[33] Climate Change Litigation in Asia and the Pacific and Beyond ADB Dec 2020
[34] Francesco Sindico, Makane Moïse Mbengue, *Comparative Climate Change Litigation: Beyond the Usual Suspects* (2021) International Academy of International Law
[35] Brian Preston (Chief Judge of the New South Wales Land and Environment Court) *The Influence of the Paris Agreement on Climate Litigation: Legal Obligations and Norms* (Parts I & 2) Journal of Environmental Law, 2020, 00, 1–33
[36] See Kim Bouwer and Joana Setzer *Climate litigation as climate activism: what works?* https://www.thebritishacademy.ac.uk/publications/knowledge-frontiers-cop26-briefings-climate-litigation-climate-activism-what-works/
[37] *Demanda Generaciones Futuras v. Minambiente* STC 4360-2018. See: https://www.dejusticia.org/en/climate-change-and-future-generations-lawsuit-in-colombia-key-excerpts-from-the-supreme-courts-decision/
[38] Colombian Constitution 1991: right to life (arts 11, 1, 2), right to health (arts 44 and 49), right to nutrition (art 44), right to a healthy environment (art 71)
[39] Alvarado and Rivas-Ramırez *A Milestone in Environmental and Future Generations' Rights Protection: Recent Legal Developments before the Colombian Supreme Court* 30 Journal of Environmental Law (2018) pp 519–526 The authors observe that the judgment has had "serious implications on the territorial autonomy of local communities.. and (obliging) all local authorities… to reformulate their local policies in order to address this judicial order…"
[40] See: https://www.dejusticia.org/que-le-hace-falta-al-gobierno-para-implementar-la-sentencia-contra-el-cambio-climatico-y-la-deforestacion/
[41] *Commune de Grande Synthe v France* (2020) Conseil d'Etat No. 427301 http://climatecasechart.com/non-us-case/commune-de-grande-synthe-v-france/
[42] EU Regulation 2018/842
[43] *Friends of the Irish Environment CLG* v *Government of Ireland* [2020] IESC 49 [6.46].
[44] Commune de Grande Synthe v France (2020) Conseil d'Etat No. 427301 – Opinion of Mr Stephen Hoynck (Public Rapporteur) 7.
[45] In the Handbook, Professor Payandeh says of the Urgenda decision: "In the absence of concrete legally binding mitigation targets the determination of specific limits by the courts is problematic. The determination of a concrete emission threshold is an inherently political task": Handbook p 77
[46] *Duarte Agostinho et al v Portugal and 32 other States* no. 39371/20
[47] Discussed in Sindaco and Mbengue *op cit* p 248ff

[48] See the *Teitota* case, in the New Zealand courts ([2015] NZSC 107)) and before the (UN Committee on Human Rights, CCPR/C/127/D/2728/2016). See also Confronting a rising tide: a proposal for a convention on climate change refugees Bonnie Docherty, Tyler Giannini 2009 Harvard Environmental Law Review Vol. 33 p 349

[49] *Luciano Lliuya v RWE AG* (Higher Regional Court of Hamm): http://climatecasechart.com/non-us-case/lliuya-v-rwe-ag/ For a full discussion seeHandbook p 410-11

[50] Hand427book p

[51] See for example *EarthLife Africa Johannesburg v Minister of Environmental Affairs* Unreported Case No 65662/16 (Gauteng High Court Pretoria, 8 March 2017) (a successful challenge to a coal-fired power station); discussed by Tracy-Lynn Humby *The Thabametsi Case*: Journal of Environmental Law, Volume 30, Issue 1, March 2018, Pages 145–155

[52] Gloucester Resources Limited v Minister for Planning [2019] NSWLEC 7 https://elaw.org/system/files/attachments/publicresource/AU_GloucesterResources_8Feb2019.pdf

[53] *ClientEarth v ENEA* Current Report No. 57/2018 See Handbook p 180

[54] See Handbook p 466ff *Investorled action for ckimate change and business sustainability.* Preston op cit Pt 2 p 15ff

[55] Preston op cit Pt 2 p 16 citing a "landmark" legal opinion, two Australian barristers, Noel Hutley SC and Sebastian Hartford Davis, accepted as legally sound by the Australian Securities and Investments Commission (ASIC). This subject is examined in reports of the Commonwealth Climate and Law Initiative: https://ccli.ouce.ox.ac.uk/

[56] Op cit Pt II p 4

[57] Handbook p 4-5. She is professor of law at Oslo University, and co-chair of the Paris Agreement's Implementation and Compliance Committee. See further Voigt, Christina and Xiang, Gao (2020) Accountability in the Paris Agreement: The Interplay between Transparency and Compliance, Nordic Environmental Law Journal 2020:1, 31-57.

[58] https://openknowledge.worldbank.org/bitstream/handle/10986/34972/World-Bank-Reference-Guide-to-Climate-Change-Framework-Legislation.pdf?sequence=5 It draws on the work of my Grantham colleague Alina Averchenkova, and the Grantham Climate Change Laws of the World database.

[59] The 12 headings are:

1. Long Term Targets:
2. Intermediate and Sectoral Targets:
3. Risk and Vulnerability Assessments:
4. Climate Change Strategies and Plans:
5. Policy Instruments:
6. Independent Expert Advice:
7. Coordination Mechanism:
8. Stakeholder Engagement:
9. Subnational Government:
10. Financing Implementation:
11. Measurement, Reporting, and Verficiation:
12. Oversight:

[60] https://ec.europa.eu/clima/policies/eu-climate-action/law_en

[61] Section 1 provides: "It is the duty of the Secretary of State to ensure that the net UK carbon account for the year 2050 is at least 100% lower than the 1990 baseline." The 1990 baseline is defined as the "the aggregate amount of (a) net UK emissions of carbon dioxide for that year, and (b) net UK emissions of each of the other targeted greenhouse gases for the year that is the base year for that gas."

[62] Climate Change Act 2008 ss 4(2), 9(4)

[63] Committee on Climate Change *Reducing UK emissions Progress Report to Parliament* July 2020 Foreword