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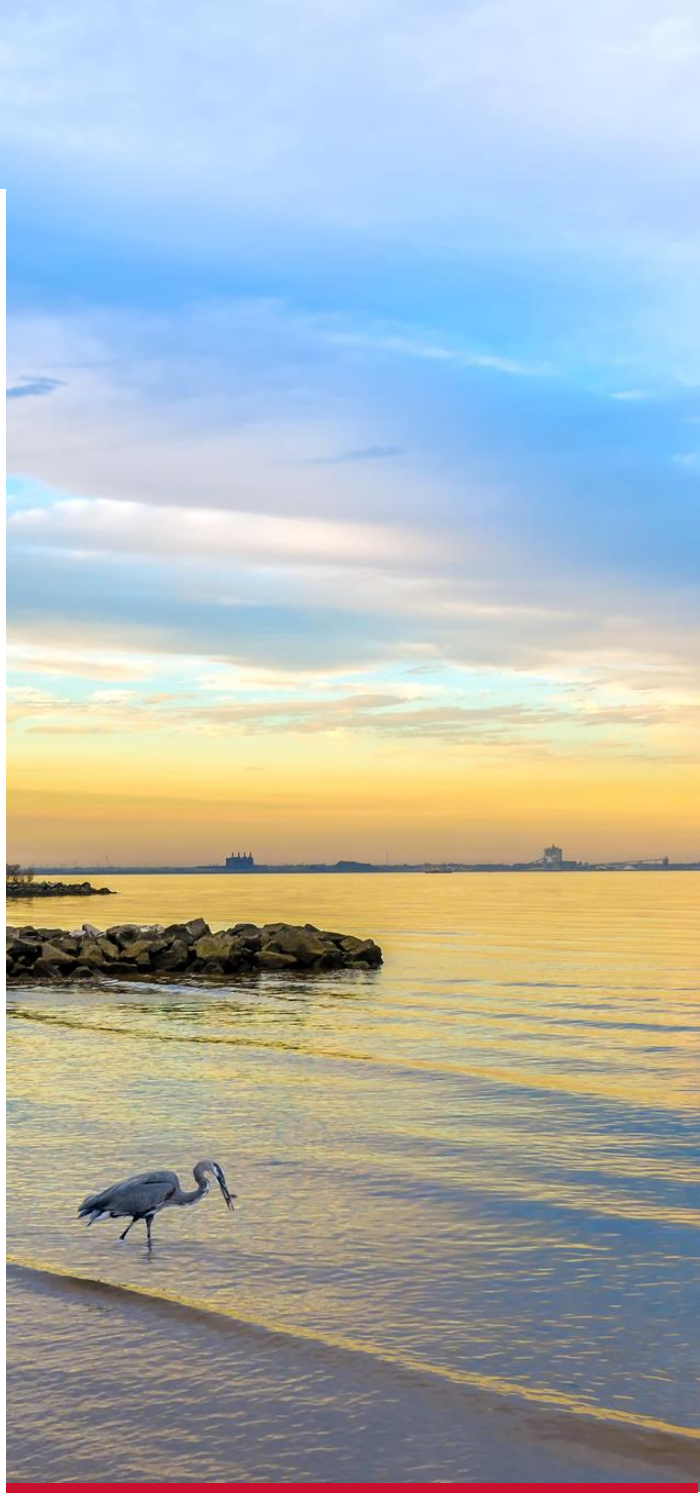

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A Word From the Editors

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The special theme of this edition is *Climate change laws and regulations* and it appears just after the United Nations Climate Change Conference (COP 26). This COP marked an important step forward as it stressed "the urgency of enhancing ambition and action in relation to mitigation, adaptation and finance in this critical decade to address the gaps in the implementation of the goals of the Paris Agreement". This COP also resulted in the completion of the Paris Agreement rulebook, with renewed and expanded transparency and reporting obligations for governments[1]. There is now a common system for all Parties, that is more rigorous and standardizes the information to be reported by Parties. This, it is hoped, will build trust toward the common goal of keeping global warming well beyond two degrees Celsius of pre-industrial conditions. The overall objective of this process is to promote the implementation of national climate action plans (Nationally Determined Contributions, or NDCs) and the flow of support for climate action. Domestic laws and regulations are fundamental from this point of view. The Grantham Research Institute at the LSE database includes more than 2000 climate laws and policies at the national level in around 200 countries around the world.[2] These legal tools aim at setting out targets to reduce greenhouse gas emissions, defining carbon budgets, promoting implementation tools, encouraging the mainstreaming of climate objectives into all domestic policies, etc. They acknowledge increasingly a commitment to reach carbon neutrality before 2030, 2040, 2050 or 2060. However, short-term trajectories are not always coherent with long-term objectives, and policies are not always in line with the Paris Agreement long-term goal (keeping the increase in global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit it to 1.5°C). COVID-19 pandemic recovery spending has so far missed the opportunity to accelerate climate transition and to build back better.

Consequently, climate law and regulations are more and more challenged before domestic courts, and litigants are more and more successful. The third pillar, the judiciary are, in some countries, taking leadership roles in the face of reluctance of governments and executives.[3] From this point of view, it is

[1] See Decision 1/CMA.3, Glasgow Climate Pact, and https://unfccc.int/process-and-meetings/the-paris-agreement/the-glasgow-climate-pact/cop26-outcomes-transparency-and-reporting, last accessed 31 December 2021.

[2] https://www.lse.ac.uk/granthaminstitute/climate-change-laws-of-the-world-database/ last accessed 3 January 2022.

[3] Judicial Handbook on Climate Litigation, World Commission on Environmental Law, IUCN,

worth noting that the voice of youth is being heard in many places with novel cases holding governments to account for not complying with their NDCs, like for instance in Australia,[4] Germany,[5] before the Committee on the Rights of the Child[6] and from young Portuguese people before the European Court of Human Rights[7]. The recent German ruling is particularly interesting from this point of view, in that it interprets the German Constitution in the light of an imperative of intergenerational justice. German law "must not place disproportionate burdens on the future freedom of the claimants". Furthermore, "it follows from the principle of proportionality that one generation must not be allowed to consume large portions of the CO2 budget while bearing a relatively minor share of the reduction effort, if this would involve leaving subsequent generations with a drastic reduction burden and expose their lives to serious losses of freedom – something the claimants describe as an "emergency stop".[8] In a way, consuming a large part of the CO2 budget in the coming years unacceptably aggravates the risk of serious losses of freedom for future generations, who will have no choice but to undergo a painful transition.

Our special issue highlights how these aspects vary with national contexts and the balance between laws, executives and judiciary.

In Part 1, Mathilde Hautereau-Boutonnet demonstrates that France has piled up legislation for years, with limited success in meeting its climate objectives. Mingzhe Zhu explains that China has adopted a 'developmentalist' approach to climate governance, that gave birth to a regulatory paradigm of 'governing by planning', producing positive outcomes but lacking public participation, transparency, and accountability. Umair Saleem explains that Pakistan, which is particularly vulnerable to climate change, has adopted various unprecedented approaches to adapt and mitigate the effects of climate change. However, there are still gaps in adaptation and mitigation policy and Umair recommends ways to strengthen the existing legal framework. Melanie Murcott presents recent legal developments in

https://www.iucn.org/commissions/world-commission-environmental-law/our-work/climate-change-law/judicial-handbook-climate-litigationviewed 26 January 2022. See Urgenda [2015] HAZA C/09/00456689 http://climatecasechart.com/climate-change-litigation/non-us-case/urgenda-foundation-v-kingdom-of-the-netherlands/.

[4] Sharma v Minister for the Environment [2021] FCA 560.

[5] First Senate of the German Federal Constitutional Court, 24 March 2021 (publication 29 April) BvR 2656/18.

[6] Petition before the Committee on the Rights of the Child on 23 September 2019, Chiara Sacchi et al. c. Argentina, Brazil, France, Germany, Turkey. Decision adopted by the Committee on the Rights of the Child under the Optional Protocol to the Convention on the Rights of the Child on a communications procedure in respect of Communication No. 106/2019, 21 September 2021.

[7] https://youth4climatejustice.org/ viewed 31 December 2021.

[8] Abovementioned Decision, § 188, §192.

South Africa, but she also highlights a sharp contrast between policy and practice. Susana Borràs-Pentinat shows that Spain, which is the country most vulnerable to climate change in Europe, has adopted in 2021 its first Law on Climate Change and Energy Transition, but still needs to gain more ambition to address the climate emergency.

Climate change is also at the core of Part 2, providing rich data sets for teachers on environmental law through three Australian articles looking at techniques to imbue Law students with skills in this changing era.[9] The first article by Judith A. Preston is on youth courts where students organize themselves to conduct a hearing to express their concerns about how climate change impacts them and the environment and to hold national, subnational and local governments to account for their inaction or insufficient action to address the climate crisis. Inspired by Justice Preston's presentation on *Climate Conscious Lawyering,* Andrew Ray, Annika Reynolds and Heather Roberts advocate for a process of teaching students to write parliamentary inquiry submissions. The third article, authored by Jennifer McKay, Abhinava Barthakur and Srecko Joksimovic, looks at the reflections of students on an environmental law presentation and the law in Australia. This makes the case for reflection as a tool in legal education.

In Part 3, country reports inform on interesting legal and policy developments in IUCN Academy members' jurisdictions. In this issue, we find again climate change law and regulations, at the core of synthetic reports from Austria (Birgit Hollaus), Iran (Mehdi Piri and Amir Hossein Korhani) and New Zealand (Trevor Daya-Winterbottom). Beyond climate change, this edition reports also on some initiatives from the Philippines, where the Supreme Court granted a *writ of kalikasan* (that is to say: nature) against the growing plastic crisis in the country (Rose-Liza Eisma-Osorio) and from The Netherlands, where new developments took place regarding standing rights in environmental matters and environmental impact assessment (Lolke Braaksma and Bas Tadema).

In addition, the reader will find in Part 4 two insight pieces of great value. The first one, by Michael Adams (University of New England), concerns greenwashing in Australia, where an existing provision against misleading and deceptive conduct was used in November 2021 to uphold a $125 million (AUS)

[9] These contributions derived from the Frontiers of Environmental law Colloquium, online, February 2021 UniSA Justice and Society, Adelaide SA. https://www.unisa.edu.au/contentassets/3c76bad61bd0406288db357f367ead29/final-summary-notes-7th-frontiers.pdf last accessed 31 December 2021.

fine against VW for two-mode software that could hide nitrogen oxide emissions. In the second insight piece, Maria Antonia Tigre (Columbia Law School, United States) advocates for the need for global collaboration on climate litigation and provides details on an international network to better understand the powerful tool of climate change litigation.

Finally, Part 5, coordinated by Sam Varvastian (Cardiff University, School of Law and Politics, UK), gives the reader an overall picture of a selection of recent books published in the field of environmental law, of particular interest to an international audience.
We wish you a very good read and warmly invite you to contribute to future issues of the Journal. We will soon publish the call for papers for the 2022 issue, which will focus on the "duty of care" of both public and private actors in environmental protection. Watch out for this!

Jennifer McKay (University of South Australia, Australia) and Sandrine Maljean-Dubois (CNRS and Université Aix Marseille, France), Co-Editors-in-Chief

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Special Theme for 13th Edition

Considerations of judges when sentencing climate activists international comparison.
The IPCC reports and the recent COP26 have sheeted home climate change to human induced burning of Fossil fuels. The report from Glasgow aimed to keep 1.5 Degree raising in the game.
Judges on all continents have been faced with civil disobedience by international, domestic or local citizen groups as they protest over permits to allow increased GHG.
This edition invited scholars to consider judicial acceptance of climate change by case review and also to look at the penalties imposed.

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Part 5. Book Reviews

Part 1. Climate Change Laws and Regulations

Climate Change Regulation in French Law

Mathilde Hautereau-Boutonnet[*)]

Regulation of the fight against global warming in French law has its roots in international law and European Union law. France is a party to the United Nations Framework Convention on Climate Change (1992), to the Kyoto Protocol (1998) and to the Paris Agreement (2015), and it is also a member of the European Union. As such, for over twenty years, France has been striving to adopt measures to fight global warming.[1] Legislation has been piling up, either ratifying, clarifying or supplementing EU law.

The Grenelle II Law No. 2010-788 of 12 July 2010 on the National Commitment to the Environment (ENE law), the Law No. 2015-992 of 17 August 2015 on Energy Transition for Green Growth, the Law No. 2019-1147 of 8 November 2019 on Energy and Climate, the Law No. 2021-1104 of 21 August 2021 on fighting climate change and strengthening resilience to its effects: all these pieces of legislation, together with those focused on strengthening environmental protection, sustainable real estate or the circular economy, demonstrate the French State's desire to fight global warming.

Of course, this does not mean that it will succeed. In a country where the main sources of greenhouse gas emissions are transport (30%), housing (18%), agriculture (17%) and industry (12%), the challenge is immense.[2] However, the aim of our contribution is not to judge the effectiveness of French regulation with regard to climate change, but to draw up a picture of the means employed by the French State to play its part in this issue. On closer examination, French climate law is based on two logics. On the one hand, the State sets itself quantified objectives. These are set out in legislative and regulatory acts and must be complied with. On the other hand, the State acknowledges its objectives and therefore mobilises various tools to achieve them. Yet, despite the wide range of resulting measures, efforts are still needed. Thus, understanding the way in which French law addresses climate change implies not only highlighting these targets that the State must meet (I), but also the various measures that should be reinforced (II).

1. Targets to be met

In order to comply with EU law, which it is required to implement, the French State has set quantified targets with regard to fighting global warming. What do these targets include (A) and what is their impact (B)? Answering these questions is important as targets that are too vague and/or too soft can undermine the credibility of climate policy.

1.1. The substance of the targets

According to the recent Climate and Resilience Act (2021): "In accordance with the Paris Agreement adopted on 12 December 2015 and ratified on 5 October 2016, and pursuant to the European Green Deal, the State reiterates its commitment to meeting the objectives to reduce greenhouse gas emissions, in accordance in particular with the upcoming revision of regulation (EU) 2018/842 of the European Parliament and of the Council of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No 525/2013" (Article 1).[3]

Looking at French law more specifically, the Energy Transition Act (2015) followed by the Energy-Climate Act (2019) set out the objectives of the "national energy policy", which is supposed to "address the ecological and climate emergency". According to Article L. 100-4-I para. 1 of the Energy Code, the goal is to "reduce greenhouse gas emissions by 40% between 1990 and 2030 and to reach carbon neutrality by 2050 by dividing greenhouse gas emissions by a factor of more than six between 1990 and 2050". Carbon neutrality is defined as "a balance, on the national territory, between anthropogenic emissions by sources and anthropogenic absorptions by greenhouse gas sinks, as mentioned in Article 4 of the Paris Agreement ratified on 5 October 2016".[4]

This provision of the Energy Code also details the objectives to be reached according to the different sectors to be mobilised. These are some of the targets set by the State : reducing final energy

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[1] On this point, see: E. Truilhé, « Horizon 2050 et neutralité : quelques observations sur la pertinence des instruments européens », in *La fabrique d'un droit climatique au service de la trajectoire « 1,5 »*, dir. C. Cournil, éd. Pedone, Paris, 2021, p. 71 s.

[2] See the website of the French Ministry of Ecological Transition: https://ree.developpement-durable.gouv.fr/themes/defis-environnementaux/changement-climatique/emissions-de-gaz-a-effet-de-serre/article/panorama-des-emissions-francaises-de-gaz-a-effet-de-serre

[3] Our translation.

[4] Our translation.

consumption by 50 % in 2050 compared to the 2012 baseline by targeting certain intermediate objectives ; reducing primary energy consumption of fossil fuels by 40 % in 2030 compared to the 2012 baseline year ; increasing the share of renewable energies to 23 % of the gross final energy consumption in 2020 and to at least 33 % of this consumption in 2030 ; having a building stock in which all the buildings are renovated according to "low consumption building" or similar standards by 2050. Furthermore, in the energy sector, according to Article 2 of the decree of 27 October 2016 on the multiannual energy programming, "The targets for reducing fossil primary energy consumption compared to 2012 are as follows: for natural gas: - 8.4 % in 2018 and - 15,8 % in 2023; for petroleum: - 15.6 % in 2018 and - 23.4 % in 2023; for coal: - 27.6 % in 2018 and - 37 % in 2023. II. – The target for reducing final energy consumption compared to 2012 is - 7 % in 2018 and - 12.6 % in 2023."[5].

To steer the achievement of all these objectives,[6] the State has put in place the "National Low-Carbon Strategy" (or SNBC), a regulatory instrument which, according to Article L. 222-I-B of the Environmental Code, defines the course of action at the national level. Adopted in 2015, the first SNBC has now been succeeded by the second SNBC set out in decree No. 2020-247 of 21 April 2020. The SNBC sets up "carbon budgets", i.e. greenhouse gas emission caps established for five-year periods, except for the 2015-2018 period. These caps require the State not to exceed a level of greenhouse gas emissions in general and broken down by activity sectors. Thus, once again, the reasoning is based on numbers: the first three "carbon budgets" resulting from decree No. 2015-1491 provided for an emission cap of 442 MtCO2eq for 2015-2018, of 399 MtCO2eq for 2019-2023 and of 358 MtCO2eq for 2024-2028. However, having exceeded its first carbon budget and being on track to exceed the second one, the French State, by a decree dated 21 April 2020 (No. 2020-457), raised the cap for the 2019-2023 period and lowered the cap for the last period with the hope to reach carbon neutrality in the end.

Therefore, behind the numbers, doubts arise: these targets set by the State for itself so that, in the end, the average temperature on earth doesn't exceed 1.5°C. compared to the pre-industrial period, are they imperative? Is the State bound by them? Can it change them as it pleases, as it has already done? If so,

[5] Our translation.
[6] On this point, see: A. Van Lang, *Droit de l'environnement*, PUF, éd. 2021, p. 510.

this could seriously jeopardise the achievement of the objective to be reached in 2030 (40% reduction in greenhouse gas emissions) and in 2050 (carbon neutrality).

It is therefore welcome that the French courts have stepped up to clarify the impact of the objectives set: by setting its own objectives, the French State has made a commitment to respecting them and it must therefore adopt measures to that effect. If it fails to do so, it may be sanctioned.

1.2. The impact of the targets

The Energy-Climate Act (2019) created the High Council on Climate.[7] Put in place by the French President, this independent institution is tasked with assessing the State's climate policy and issuing opinions to determine whether the objectives can be achieved. It can then alert on the shortcomings of the French climate policy. For example, it did not hesitate to point out the overspending of the first carbon budget, to criticize the raising of the cap of the second carbon budget and the postponement of all the efforts to the 2024-2028 period, or to denounce the inadequacies of the recent law No. 2021-1104 of 22 August 2021 on fighting climate change and strengthening resilience.

More importantly, this scrutiny is not without consequence. Indeed, the opinions issued by the High Council on Climate are made public. Citizens can then be made aware of the State's failure to meet the objectives it has set for itself. Worse still, civil society can react and decide to bring the matter before the courts to ask them to force the State to achieve its targets. This is actually what happened in two "climate cases" brought before the administrative court.

In the first case, which is referred to as "Commune de Grande Synthe", the French State was ruled against following an appeal for excess of power, a process by which the administrative court controls the legality of an administrative act and annuls it if it does not respect a norm that is hierarchically superior to it.[8]

[7] https://www.hautconseilclimat.fr

[8] In particular, S. Hoynck, « Le Conseil d'État enjoint au Gouvernement de prendre des mesures supplémentaires pour atteindre les objectifs de réduction des émissions de gaz à effet de serre en 2030 », *Énergie-Environnement-Infrastructures* oct. 2021, comm. 77 ; F.-X. Fort et C. Ribot, « Commune de Grande-Synthe : tsunami juridique ou décision de circonstance ? », *La Semaine Juridique Administrations et Collectivités territoriales* n° 36, 6 September 2021**, 2264**

In this particular case, the Town of Grande-Synthe and its mayor argued that the measures taken by the French State would not enable it to achieve the objectives imposed on it with regard to greenhouse gas emissions (resulting from international law, EU law and the above-mentioned domestic law) and asked the State to change its policy in order to curb emissions. After the State refused to do so, the Council of State handed down two decisions.

In a first ruling dated 19 November 2020 (No. 427301: https://www.conseil-etat.fr/fr/arianeweb/CE/decision/2020-11-19/427301), the Council of State found that France, in accordance with the UNFCCC, the Paris Agreement and European legislation, has set itself objectives: to reduce greenhouse gas emissions by 40% before 2030 and to reach carbon neutrality before 2050. It also highlighted that the achievement of these objectives relies on "carbon budgets". However, according to the court, exceeding the first carbon budget and raising the cap of the second budget means achieving emission reduction at a pace that has never been achieved before. It then asked for further investigation so that the State could demonstrate how it intends to meet the planned trajectory to reach the - 40% objective by 2030. At the end of this investigation, in a second ruling dated 1 July 2021 (No. 427301: https://www.conseil-etat.fr/fr/arianeweb/CE/decision/2021-07-01/427301), the Council of State found that the elements presented by the State did not prove that it would be possible to achieve this trajectory. In addition to noting a small decrease in emissions in 2019 and an insignificant decrease in 2020, it found that the reduction planned for the 2024-2028 period would not enable the objectives to be reached without additional measures taken quickly. It therefore ordered the State to take additional measures by 31 March 2022 in order to achieve the target of reducing greenhouse gas emissions by 40% before 2030.

The second case, known as the "Case of the Century", also led to the State being found liable, this time on the basis of a civil liability action – an action enabling the court to assess the harmful conduct of the State, in particular with regard to its failure to act.[9]

In this case, a number of associations (Oxfam France, Greenpeace France, Notre Affaire à Tous and the Fondation de La Nature et l'Homme) argued that, by exceeding the caps set by the first two carbon

[9] In particular, M. Hautereau-Boutonnet, « L'affaire du siècle, entre logique comptable et corrective », *JCP* G. n° 46, 15 nov. 2021, p. 1195 ; C. Cournil et M. Fleury, « De "l'Affaire du siècle" au "casse du siècle" ? », *La Revue des droits de l'homme* [En ligne], Actualités Droits-Libertés, févr. 2021 : http://journals.openedition.org.lama.univ-amu.fr/revdh/11141; A. Van Lang, A. Perrin et M. Deffairi, « Le contentieux climatique devant le juge administratif », *RFDA*, 2021, p. 747.

budgets, the State is contributing to the ecological damage caused to the climate and must therefore compensate this damage. They brought an action before the Administrative Court in 2019. The court partially allowed the claim in a preliminary ruling dated 3 February 2021.

In the preliminary ruling, in order to find the State liable for part of the ecological damage residing in "a modification of the atmosphere and of its ecological functions", the court found that the State had acknowledged the existence of an urgent need to fight climate change as well as its ability to act. It pointed out that the State had chosen to make international commitments and "at the national level, to exercise its regulatory power, including by conducting a public policy to reduce greenhouse gas emissions emitted from the national territory, by which it has committed to reach, at specific and successive deadlines, a number of targets in this area". Finally, after noting the overspending of the first carbon budget, the court found that the State had not "carried out the actions it had itself identified as likely to reduce greenhouse gas emissions". [10] In the final ruling, handed down after a period of investigation, the court ordered the State to take all necessary measures to remedy and put an end to the resulting damage before 31 December 2022. The aim is to correct the overspending of the first carbon budget in order to, ultimately, be in a position to meet the targets set by the State (40% by 2030 and carbon neutrality in 2050).

While these two decisions result from two different types of claim, they point in the same direction:[11] on the one hand, they give binding force to the objectives set in the instruments formalising the commitments entered into by France, be they laws setting final targets or decrees setting emission caps. On the other hand, they contribute, by means of a control mechanism leading to injunction, to ensuring compliance with the objectives set. Of course, the effectiveness of the rulings can be questioned. It is possible that the State will not comply with the courts' injunctions. However, if this happens, the courts will be able to impose a penalty at the end of the prescribed period. The financial risk can thus be an incentive for the State to adopt more effective measures with regard to climate change. The measures currently in place to reach the objectives mentioned will then necessarily have to be reinforced.

[10] Our translation.
[11] H. Delzangues, *AJDA* 2021, p. 2115.

2. Various measures to be strengthened

Climate change law is based on targets to be met. To that end, for many years now, parliament and the government have been activating a number of possible levers. What are these measures? (A) How can they be strengthened? (B) Here as well, answering these questions shines a light on the credibility of the French climate policy.

2. 1. The current state of the measures

These measures are varied and cross-cutting.[12] They attest to the need to go knocking on every door in order to fight climate change. They stem from normative instruments that target all types of players: the State, local authorities, companies, farmers, investors, shareholders, banks, landlords, lessors and tenants. They affect a wide range of sectors: energy, transport, real estate, construction, agriculture, consumption, labour, distribution – see for reference the first six titles of the recent Climate and Resilience Act (2021) mentioned above: "Consuming, producing and working, moving, housing and feeding ourselves". In each case, the measures take various forms. While it is impossible here to list all the measures aimed, since the ENE law of 2012 (National Commitment for the Environment, aforementioned law), at contributing to the fight against global warming and, since the Energy Transition law of 2015, at implementing the previously discussed targets, a few examples perfectly illustrate two main characteristics.

First of all, the fight against global warming is based on a graduated state action, revealing a policy that is sometimes interventionist, sometimes liberal.

On the one hand, the policy-making State is in action.[13] It plans, negotiated, delegates, approves, encourages and finances. Generally speaking, as a key feature of French territorial decentralisation, planning allows national objectives to be implemented at a local level.[14] Take for example, with regard to the energy policy,[15] the Territorial Climate-Air-Energy Plans (Plans Climat-Air-Énergie Territoriaux or PCAET) created by the ENE law in 2010 and updated when the Energy Transition law of 2015 was

[12] On this paragraph, see the contributions gathered in the book by C. Cournil, *La Fabrique d'un droit climatique au service de la trajectoire 1,5*, cited above.

[13] L. Fonbaustier, « L'État face au changement climatique », *Recueil Dalloz*, n° 39, 2015, p. 2269.

[14] I. Michallet, « De l'action local au droit global : l'engagement climatique des villes », *RJE* 2017, p. 105.

[15] H. Delzangles, « La climatisation du droit de l'énergie, faciliter sans contraindre ? », in *La Fabrique d'un droit climatique au service de la trajectoire 1,5*, dir. C. Cournil, éd. Pedone, 2021, p. 174.

adopted. They require metropolises and inter-municipal bodies with their own tax system to draw up a carbon assessment and to define, according to a phased timetable, their objectives in terms of fighting and adapting to global warming as well as a programme of actions enabling energy efficiency to be improved (detailed by sector) and a monitoring system. Another example is found in the transport area. Since the Mobility Orientation Law referred to as the LOM law (Law No. 2019-1428 of 24 December 2019), while the State allows mayors to introduce traffic regulations and low-emission zones, it also relies on economic players by encouraging them to reimburse part of their employees' travel expenses when they use a mode of transport that reduces emissions, such as cycling or carpooling.[16]

On the other hand, at the opposite end of the spectrum, symbolising a certain withdrawal of the State and reflecting a liberal model that is reluctant to impose too many constraints on businesses, directive 2003/87/EC of the European Parliament and of the Council created the European Union Emissions Trading Scheme. Transposed into French law by an order dated 15 April 2004 (No. 2004-330), the system works as follows: every year, certain industrial installations are granted emission allowances by the State, within a previously established ceiling. At the end of the calendar year of allocation, the companies in question must surrender a number of allowances corresponding to the total emissions they emitted, on pain of criminal sanctions. While companies that adopt measures to reduce the greenhouse gas emissions generated by their activity will find themselves with a surplus of allowances that they can sell on a dedicated market, those that emit greenhouse gases beyond their allocation will be able to purchase emission allowances on the market in order to make up for the shortfall between their actual emissions and their number of allowances. The market for energy saving certificates, created by Law No. 2005-781 of 13 July 2005 on the programme setting out orientations for energy policy (POPE law) and modified by the Climate Energy Law (Law No. 19-1147 of 8 November 2019), is in the same vein: the State requires certain players (the obliged parties) to make energy savings in all the economic sectors concerned (transport, real estate...). To that end, they are awarded energy saving certificates (CEE) which they can sell or acquire on a dedicated market according to the reduction operations they have managed to have carried out by the third parties, companies or consumers with whom they deal.

[16] S. Mouton, « La gouvernance de la mobilité durable en France : la loi LOM au service de la trajectoire 1,5 », in La *Fabrique d'un droit climatique…*, cited above, p. 147 s.

In all these cases, the instruments referred to are not without weaknesses: while planning can turn out to be too soft, the market can suffer from a lack of state regulation negatively affecting its effectiveness.

Secondly, the fight against global warming brings to the fore the many nuances that legislation built around incentives can take. It is true that obligations can have the direct effect of reducing greenhouse gas emissions. In addition to the obligations mentioned above not to emit greenhouse gas beyond the ceiling set by the quotas granted and to carry out energy saving operations, we can add, in the real estate sector, the obligation to build buildings in accordance with standards that guarantee their energy efficiency, i.e. the various thermal regulations (RT) recognised by decrees which have followed one another and become more stringent over the past 50 years.[17] However, in the fight against global warming, it is mostly the obligations with incidental effects that occupy the legal field. The challenge here is to encourage people to change their behaviour.

On the one hand, this is done through financial and fiscal aid. For example, owners can receive a grant to renovate their property, this system having been recently reinforced by the 2021 Climate and Resilience Act (the aforementioned energy saving certificates, eco-loans, tax credits, etc.) and subsidies are available for purchasers of clean vehicles (LOM Law), with the system of the "bonus écologique". In particular, this allows the purchaser of an electric vehicle for an amount of less than 45,000 euros to obtain 5,000 euros from the State and to add "a scrapping bonus" allowing him to obtain an additional sum of 2500 euros to which must be added aid from some Regions. There are also the payments for environmental services (known as PSE) stemming from the Agro-Environmental Measures (MAE) system. Following the reform of the Common Agricultural Policy in 2013 and pursuant to the 2014-2020 programming, they are now known as Agricultural Environmental and Climate Measures (MAEC). They refer to the compensation farmers receive when they decide to perform a service to protect the environment or the climate. Contracts also have a special place in the implementation of financial support: while the energy performance contract (European directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency) allows a project manager and a specialised company to improve the energy performance of a building through

[17] M. Poumarède, « Bâtiment et climat : quels droits pour tenir les objectifs climats ? », in *La Fabrique d'un droit climatique au service de la trajectoire 1,5*, dir. C. Cournil, éd. Pedone 2021, p. 132 ; J.-Ch. Rotouillé, « La loi du 8 nov. 2019 relative à l'énergie et au climat : une nouvelle étape dans la lutte contre les passoires thermiques », *RDI* 2020, p. 1.

investments in works, supplies or services, the type of contract envisaged in the "tertiary decree" (No. 2019-771 of 23 July 2019 relating to obligations to reduce final energy consumption in tertiary sector buildings) require the parties, in certain commercial leases, to agree to include measures in order to make energy savings.

Incentives are also provided through information.[18] Upstream, it is a matter of requiring certain people to obtain information. See for example the obligation to carry out a carbon assessment imposed on certain public or private legal entities [since the law], and the obligation for owners of certain dwellings to establish an energy performance diagnosis (DPE), which results from the order of 15 September 2006 on the energy performance diagnosis for buildings offered for sale [and the obligation]. With the Climate and Resilience Act (2021), the DPE affects an even greater number of owners and involves a greater amount of information. It purports to estimate the energy consumption and greenhouse gas emission rates of a dwelling by operating a classification ranging from class A (extremely efficient) to G (extremely inefficient). Downstream, the aim is to pass on information. Here, a whole range of legal branches are involved: first, in real estate law, owners must provide the DPE to their tenant or buyer. The parties involved are supposed to be encouraged to carry out renovation work (especially since they must sometimes attach an energy audit intended to specify the work to be carried out to improve the building's energy performance). Second, under company law, certain companies are subject to an environmental "reporting" obligation. Since the NRE Law of 15 May 2001(No. 2001-420), this obligation has continued to grow, especially under the influence of European directive 2013/34/EU of 22 October 2014 on the disclosure of non-financial reporting. It now includes information on companies' climate policies. In this case, on the basis of the information reported, companies can be encouraged to change their conduct by their shareholders and investors. Lastly, consumers are also impacted with the introduction by the Climate and Resilience Act (2021) of the eco-score, "a display intended to provide consumers with information on the environmental impacts, or on the environmental impacts and compliance with social criteria, of a good, a service or a category of goods or services" (Article L. 541-9-11 of the Environmental Code).[19] Here as well, the aim is to encourage the public to

[18] In particular: A.-S. Epstein, *Information environnementale et entreprise : contribution à l'analyse juridique d'une régulation*, diff. LGDJ-Lextenso éditions, 2015, Collection des thèses, 940 p.

[19] Our translation.

choose "low-carbon" products or services and to push companies to meet the public's expectations on the market.

As we can see, there are many incentive tools. However, the weaknesses of incentives cannot be ignored: there is no question here of forcing a reduction in greenhouse gas emissions. It is true that the Climate and Resilience Act strengthens climate action. But it did not dare to impose renovation on building owners. The only thing they will be forbidden to do, according to a phased timetable, will be to rent out dwellings that do not meet the required energy performance. Going forward, in order to achieve its targets in terms of reducing greenhouse gas emissions, should the State not take stronger measures?

2.2. The future of the measures

The French measures are significant in quantitative terms, but we must not be fooled by this.[20] Relying on various expert opinions, including the opinions of the High Council on Climate, administrative courts has made it very clear : the measures previously adopted have not made it possible to meet the objectives supposed to be achieved in the field of energy efficiency, of renewable energies and of the reduction of greenhouse gas emissions The surplus of CO2 greenhouse gas due to the overspending of the carbon budget for the 2015-2018 period prevents the State from meeting its final targets, despite the progress made by the Climate and Resilience Act. Ultimately, by postponing its efforts to future periods, the State jeopardises the possibility of meeting the trajectory set out in the Paris Agreement (1.5°C). It must therefore adopt measures to remedy this. But what measures?

Greater constraint is naturally expected. It is true that there are significant difficulties. Imposing more stringent requirements to reduce greenhouse gas emissions in various sectors would necessarily lead to restrictions on the freedom of enterprise (Art. 4 of the Declaration of the Rights of Man and of the Citizen) and on the right to property (Art. 2 and 17 of the Declaration of the Rights of Man and of the Citizen of 1789 and Art. 544 of the Civil Code). However, on the one hand, while the French Constitutional Council ensures the protection of these rights and freedoms, it also recognizes that the

[20] On these weaknesses, see: S. Maljean-Dubois, « Voyage au cœur de la machine d'un droit climatique pour construire un monde à 1,5°C. », in *La fabrique d'un droit climatique…,* cited above., p. 465 s.

protection of the environment can justify restrictions as long as they remain proportionate.[21] On the other hand, counterbalancing these economic rights and freedoms, French law recognizes environmental rights and duties of constitutional value. According to the 2005 Constitutional Charter for the Environment, in addition to the right to live in balanced environment which shows due respect for health (Article 1), all persons are recognised as having a duty to participate in preserving and enhancing the environment (Article 2), to avoid, in the conditions set out by law, the occurrence of any damage he or she may cause to the environment, or, failing that, to limit the consequences of such damage (Article 3) and to contribute to the making good of any damage (Article 4). Furthermore, the Constitutional Council has also created for every person a duty of vigilance with regard to environmental damage that could result from one's activity.[22] As for administrative courts, they did not hesitate, in the Case of the Century, to rely on the duty to prevent environmental damage (Article 3) to find that the State had acknowledged its ability to act with regard to climate change and had undertaken to meet certain objectives in this respect.

More importantly, we are also witnessing at the legislative level the birth of environmental duties imposed on businesses: the duty of vigilance and the duty of responsible management.

First of all, since the law of 27 March 2017, a number of large companies are subject to a duty of vigilance which consists in establishing and effectively implementing a vigilance plan (Article L. 225-102-4 of the Commercial Code). This plan must include "reasonable vigilance measures to identify risks and prevent serious violations of human rights and fundamental freedoms as well as damage to the health and safety of individuals and to the environment, resulting from the activities of the company and from those of the companies it controls within the meaning of paragraph II of Article L. 233-16, directly or indirectly, as well as from the activities of subcontractors or suppliers with whom an established business relationship is maintained, when these activities are linked to that relationship" (Article L. 225-102-4-I para. 3).[23] In other words, parent companies or principals must disclose the measure they have adopted to prevent environmental damage related to their activity, but also to the

[21] Recently, Constitutional Council Decision No. 2019-823 (following an application for a priority preliminary ruling), 31 January 2020, note by L. Fonbaustier, *Droit administratif*, avril 2020, n° 4, 8 p.

[22] Constitutional Council Decision No. 2011-116 dated 8 April 2011 (following an application for a priority preliminary ruling): https://www.conseil-constitutionnel.fr/decision/2011/2011116QPC.htm.

[23] Our translation.

activity of their subsidiaries and economic partners in France and abroad. Failing this, the system provides that any person with an interest in bringing proceedings may ask a court to order the companies in question to comply with the law. For instance, the Paris Court of Appeal, in a ruling dated 18 November 2021, recognised the competence of judicial courts to rule on a dispute between several associations and towns against Total as to whether Total should modify its vigilance plan and include more appropriate measures in terms of prevention of risks caused to the climate.[24] Secondly, the Pact Act (No. 2019-486) of 22 May 2019 reformed the French Civil Code. According to Article 1833 paragraph 2 of the Civil Code, "The company is managed in its corporate interest, taking into account the social and environmental issues related to its activity". Of course, this does not mean that the company has to operate without causing damage to the environment. But according to legal academics, it does require a "responsible management", i.e. the need to adopt a conduct that shows that the environmental risks (including climate-related risks) created by the activity have been taken into account.[25] Failing this, a director could face a liability claim if mismanagement is established. In both cases, French law reveals a change in the role expected of companies in this fight: designed to make profits, they must also adopt a conduct that respects the environment and the climate especially. And, in both cases, judicial control can result in the reinforcement of the measures to fight global warming.

This raises a question: in the future, should the legislator not extend such duties to other persons and to other sectors, specifying, in order to ensure their enforcement, legal actions to put an end to unlawful acts? Some authors envisage a "duty" of ownership to counterbalance the negative effects of the "right" of ownership. This would involve imposing an obligation on owners not to abandon the harmful products of the property they own, i.e. greenhouse gases, and creating a 'reattribution' action which, in the event of non-compliance, would lead these owners to recover their emissions or to offset them.[26] Other authors argue that the climate should be viewed as a common thing according to Article 714 of the Civil Code: a thing which belongs to no one and whose use is common to all.[27] As such, subject to a duty of conservation and implying a right of reasonable use, the climate would be given greater protection. Its misuse would justify legal action to prevent and repair the damage caused to it. In any

[24] https://www.novethic.fr/actualite/environnement/climat/isr-rse/devoir-de-vigilance-total-perd-un-bras-de-fer-dans-son-contentieux-climatique-150325.html

[25] P. Abadie, « Le volet RSE et la loi Pacte : aspects pratiques, *BRDA* 13/19.

[26] W. Dross, « De la revendication à la réattribution : la propriété peut-elle sauver le climat ? », *D.* 2017, p. 2553 s.

[27] See the work of J. Rochfeld and in particular: *Justice pour la climat, Les nouvelles formes de mobilisation citoyenne*, Odile Jacob, 2019.

case, it is the very foundation of French society that would be reconfigured and put at the service of the fight against global warming with the help of legal action: that of the Civil Code[28]. Is this not already the case in the Netherlands with the recent ruling of 26 May 2021 Milieudefensie c. Shell, which led to the sanctioning of Shell on the basis of tort liability recognised in the Dutch Civil Code?[29]

However, even if constraint could be reinforced, in certain areas, the crucial piece of the puzzle will remain an issue: the financing of the measures. Here, the State needs to be able to rely on the financial sector to redirect investments towards low-carbon activities. However, as showed in a parliamentary information report dated 30 January 2019 on public tools encouraging private investment (No. 1626),[30] investment in low-carbon activities is far from sufficient to enable France to respect the trajectory set by the Paris Agreement. While public funding must be increased, "green finance" should also be encouraged. On the one hand, this means not only strengthening the place given to extra-financial information obligations imposed on players in the financial sector, but also supporting the development of green bonds: financial securities issued by a private or public person by which the issuer undertakes to invest in climate- and environmentally friendly projects.[31] But on the other hand, this could also be done by imposing constraints: shouldn't the State more clearly prohibit investments that are harmful to the environment and impose sustainable financing? Then, with the support of a more regulated finance, it could finally succeed in meeting its climate objectives!

[28] M. Hautereau-Boutonnet, *Le Code civil, Un code pour l'environnement*, Dalloz, Le sens du droit, 2021.

[29] M. Hautereau-Boutonnet, « Première condamnation d'une entreprise pétrolière en matière de contentieux climatique ! », Billet du Blog du Club des Juriste : https://blog.leclubdesjuristes.com/premiere-condamnation-dune-entreprise-petroliere-en-matiere-de-contentieux-climatique/

[30] https://www.assemblee-nationale.fr/dyn/15/rapports/mec/l15b1626_rapport-information#_Toc256000007

[31] In particular: V. Mercier, « Finance durable », *Étude Joly Bourse*, 2017 ; « La crédibilité des green bonds nécessite un encadrement normatif du marché, *Bulletin Joly Bourse*, N° 116, 2017, p. 39 s.

China's Developmentalist Approach to Climate Governance

Mingzhe Zhu[(*)]

ABSTRACT

China has adopted a 'developmentalist approach' to climate governance. It entrusts the power of making and implementing climate policy to the governmental ministries and departments that administer industrial affairs, and allows them to achieve climate goals by using macroeconomic measures to transform the structure of industries and energies. This is reflected by the legal framework of climate governance in China. Traces of this approach can be found even at the genesis of this country's climate diplomacy and policy during the preparations for the United Nations conferences of 1988 to 1992. The developmentalism of climate governance was further consolidated between the two major institutional reforms of 1998 and 2018. In this period, the National Development and Reform Commission (NDRC) did not only manage the daily operation of the National Leading Group on Climate Change, but also, with other industrial ministries, substantially contributed to the drafting of climate-related law. The developmentalist approach gave birth to a regulatory paradigm of 'governing by planning', which is producing positive outcomes while lacking public participation, transparency, and accountability.

Introduction

On December 20, 2021, His Excellency Cui Tiankai, the former Chinese Ambassador to the United States, delivered the keynote speech to a conference organized by a thinktank affiliated to the Ministry of Foreign Affairs. He began with a remark on climate change:

> *Climate change issues, on the surface, seems to be nature's challenges. […] However, if we analyze the issues more profoundly, we shall see that they are actually about the progress of science and technology, the rise and fall of industries, and the adjustment of industrial chains. We must understand that the essence of [global] climate governance is international rivalry as the first move*

towards a new development paradigm, industrial competitiveness in the future, and the evolution of international rules and standards.[1]

As seen through the lens of development, climate governance appears to concern industrial structure, and the design of climate policy can determine the outcomes of international rivalry in development.

The longest-serving Chinese ambassador to the US has exaggerated the originality of his remark. Climate change is a matter of development. This view is regarded as common sense by the general public in China and does not require profound analysis. Though a definition of the 'developmentalist approach' is not available, the viewpoint on climate change through the lens of development has some distinctive features. It entails that climate governance is primarily a task of the state organs who are also in charge of economic and industrial development; that climate policies target industrial transformation; and that tackling climate challenges should not hinder economic growth. China's national programs and action plans are the best manifestation of this developmentalist approach. The very first national program in 2007 identified "to secure economic development" as one of its guidelines.[2] Almost every annual report on China's action and policy has emphasized industrial structure adjustment, energy system optimization, and resource conservation. This article tries to explore the significance of this developmentalist approach in climate law and policy.

At the international level, rules related to this 'common concern of humankind' are articulated in a tone that is marked by universality.[3] However, closer semantic analysis reveals that at least three distinctive perspectives coexist when countries try to address this common concern of humankind. While European countries have tended to understand it as an environmental problem, the US has tended to see it through an economic lens, and many developing countries comprehend climate politics as 'part of a larger pattern of historical and economic injustices'.[4] The perspective of a given jurisdiction

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1 崔天凯：《关于中美关系的几点思考》, [Tiankai Cui , 'Thoughts on China-US Relations'] (20 December 2021) <http://www.uscnpm.com/model_item.html?action=view&table=article&id=26797> Last visit:

2 China's National Climate Change Program (2007) 23.

3 For instance, though the Paris Agreement (2015) recognizes 'the specific needs and special circumstances of developing country Parties' (Paragraph 5, Preamble), it acknowledges that 'climate change is a common concern of humankind' (Paragraph 11, Preamble).

4 Daniel Bodansky, Jutta Brunnée and Lavanya Rajamani (eds), *International Climate Change Law* (Oxford University Press 2017) 5.

determines the framing of climate change issues, the allocation of policymaking powers, and the setting of policy goals.[5] More than this, the dominant perspective can also explain, if not predict, the evolution of legislative or regulatory texts and judicial practice, and therefore, is of interest to legal professionals.

China's mechanism of addressing climate change is an indispensable component of global climate governance, because it exceeds the US as the largest carbon dioxide emitter. Because its emissions per capita reached 7.41 metric tons in 2018,[6] but also because more than 1.4 billion of its people are exposed to droughts, floods and other adverse climatic events.[7] In July 2021, a record-breaking flood took some 300 lives in Zhengzhou, a provincial capital and economically developed city in Central China that was once self-praising for its efforts in building a 'sponge city' that could absorb flooding and alleviate water shortage.[8] Legal scholarship has paid attention to China's climate governance, as research works are available on the general normative framework,[9] predominance of the executive branch,[10] and climate change litigation;[11] but very little, if any, research has been conducted on how policymakers frame climate issues. This article is intended to offer some preliminary observations and thoughts on the perception and framing of climate change in the process of formulation and implementation, and I hope to open further discussions that can fill this research gap. For this purpose, I rely on the existing literature, but privilege publicly available archives and personal experience as a participant in the formulation of several climate policies.

On the basis of archival research, interviews with policymakers at different levels and in different departments, and participatory observation during some meetings of climate policymaking, I argue that

5 See ibid 5–10.

6 https://data.worldbank.org/indicator/EN.ATM.CO2E.PC?locations=CN. Last visit: 2021-11-15.

7 See Yong-Jian Ding and others, 'An Overview of Climate Change Impacts on the Society in China' (2021) 12 Advances in Climate Change Research 210; Geoff Mann and Joel Wainwright, *Climate Leviathan.* (Penguin Random House 2018) 48.

8 Caicai Du, Xintong Wang, 'In Depth: China's Sponge City Failings Show the 'Arduous' Task of Adapting to Climate Change' (*Caixin Global,* 9 November 2021) <https://www.caixinglobal.com/2021-11-09/in-depth-chinas-sponge-city-failings-show-the-arduous-task-of-adapting-to-climate-change-101802504.html> Last visit: 2021-11-15.

9 Alex L Wang, 'Climate Change Policy and Law in China' in Kevin R Gray, Tarasofsky Richard and Cinnamon Carlarne (eds), *The Oxford Handbook of International Climate Change Law* (Oxford University Press 2016); Xiangbai He, 'Legal and Policy Pathways of Climate Change Adaptation: Comparative Analysis of the Adaptation Practices in the United States, Australia and China' (2018) 7 Transnational Environmental Law 347.

10 Jolene Lin, 'Climate Governance in China: Using the "Iron Hand"' in Benjamin Richardson (ed), *Local Climate Change Law: Environmental Regulation in Cities and Other Localities* (Edward Elgar 2012).

11 Yue Zhao, Shuang Lyu and Zhu Wang, 'Prospects for Climate Change Litigation in China' (2019) 8 *Transnational Environmental Law* 349; Xiangbai He, 'Mitigation and Adaptation through Environmental Impact Assessment Litigation: Rethinking the Prospect of Climate Change Litigation in China' (2021) 10 *Transnational Environmental Law* 413; Mingzhe Zhu, 'The Rule of Climate Policy: How Do Chinese Judges Contribute to Climate Governance without Climate Law?' *Transnational Environmental Law*.

climate change is currently commonly framed and dealt with in China as a development problem. To substantialize this argument, this article first provides a panorama of climate-related law in China. It then turns to the origin of China's climate governance by examining the organs and discourse of the preparation phase of the UNFCCC between 1988 and 1992. The third section turns to the period between 1998 and 2018, when the developmentalist approach was consolidated by the allocation of power within the executive branch. This section also depicts the 'governing by planning' paradigm of climate governance.

1. Climate Related Law in China

Like many jurisdictions, China does not have an overall climate law. The National Administration of Energy (NAE) began to draft the *Energy Law* in 2006, publishing a new draft in 2020 with the ambition of unifying all existing legislation on energy.[12] Still, the National People's Congress (NPC) is only preparing to review the draft in 2022 "to assure national economic security and sustainable development".[13] To date, the applicable norms mainly concern industrial sectors and are scattered between the *Energy Conservation Law* (1997/2018), *Circular Economy Promotion Law* (2008), *Renewable Energy Law* (2006), *Electric Power Law* (1996/2018), *Clean Production Promotion Law* (2002/2012) and *Atmospheric Pollution Prevention and Control Law* (*APPCL*, 1987/2018). These laws define the normative framework within which the various mitigation measures can be carried out, and to a great extent determine the scope of China's climate policy.

Two significant and distinctive features of mitigation in China's industrial sector can be observed from these laws. These features prove that climate issues are only remotely related to environmental law. First, prevention of atmospheric pollution can contribute to the reduction of greenhouse gas (GHG) emissions, but GHGs will not be treated as pollutants. Article 2(2) of the *APPCL* mandates the strengthening of the mechanism that "prevents and controls the atmospheric pollution caused by coal, industries, transport, dust, and agriculture, […] and simultaneously controls atmospheric pollutants and greenhouse gases such as particles, sulfur dioxide, nitrogen oxide, volatile organic compounds, and ammonia, etc." Although public attitudes toward climate change in China are largely driven by

12 Law of Energy of the PRC 2020.

13 《法工委发言人介绍2022年立法重点项目》, ['NPC Standing Committee's Legislative Agenda for 2022 is Voted' (17 december 2021)] http://www.npc.gov.cn/npc/kgfb/202112/38831ab324674aa3841a44fbca95ac0d.shtml Last visit: 2022-01-01

concerns about air pollution, [14] the literal interpretation of the provision suggests that the law separates air pollutants and GHGs. This separation prohibits attempts to regulating the latter using applicable to the former.

Second, the effectiveness of climate governance depends on the ability and willingness of the executive branch to implement non-binding policies[15], because many of the key provisions contained in the aforementioned bills are masterpieces of ambiguity. For instance, the *APPCL* prescribes by its Article 4 that local governments shall set goals for air quality improvement, monitor the achievement of these goals, and disclose the results of these evaluations; but there is no specific provision to ensure that this will be the case. Likewise, other relevant pieces of legislation broadly delegate to the government the authority to adopt specific measures, such as technological renewal, connection of renewably-generated electricity to the grid, and equipment installation; but no sanction is prescribed in case of inaction.[16] Meanwhile, despite the considerable power to create binding regulatory tools, the central and local governments only enact a vast quantity of action plans, guidelines or roadmaps. In other words, it is very unlikely that ordinary citizens will be able to hold a governmental organ or private enterprise accountable before a court by applying the current rules.

Though it is also true that environmental legislation in China contains many similar provisions that authorize the state authority to regulate, the procedural rules guarantee access to judicial actions by various mechanisms. Despite some barriers, NGOs can sue polluters via public interest litigation.[17] Revisions of the *Civil Procedure Law* (Article 55, para.2) and *Administrative Procedure Law* (*APL*, Article 25) in 2017 granted prosecutors the power to sue wrongdoers, and to sue responsible governmental organs for inaction. The *Civil Code*, promulgated in 2021, extends environmental liability from pollution to ecological degradation (Article 1229) and introduces a mechanism of punitive compensation (Article 1232). These mechanisms are not perfect, but they do exist. In climate governance, the scenario is quite different. Despite the attempts by NGOs to hold a grid company

14 Binbin Wang and Qinnan Zhou, 'Climate Change in the Chinese Mind: An Overview of Public Perceptions at Macro and Micro Levels' (2020) 11 *WIREs Climate Change* 639; Binbin Wang, Yating Shen and Yangyang Jin, 'Measurement of Public Awareness of Climate Change in China: Based on a National Survey with 4,025 Samples' (2017) 15 *Chinese Journal of Population Resources and Environment* 285.

15 He (n 9).

16 Zhu (n 11).

17 Lei Xie and Lu Xu, 'Environmental Public Interest Litigation in China: A Critical Examination' (2021) 10 *Transnational Environmental Law* 441.

accountable for the high curtailment rate of the wind power it produced,[18] none of these channels seem to promise that the abovementioned climate law will be practically implemented.[19]

To fully grasp the force of climate law and policy in China, we should perhaps go beyond the paradigm of environmental justice and consider the possibility that climate issues are considered as something other than environmental issues. Or, perhaps it is even better to inquire about the possibility that climate law should not be considered as a sub-branch of environmental law, despite articles on climate law or climate change litigation being published mainly in environmental law journals.
But what are climate issues if they are not environmental?

2. Genesis: from Scientific Certainly to Industrial Considerations (1988-1992)

2.1. Formation of Policymaking Organ and Delegation

"I see in all things that what is perfect is that which is composed of all its parts; and, certainly, the most powerful part is the beginning."[20] So said the eminent Roman jurist Gaius. We also must go back to the genesis of China's climate governance to answer the question above. Scholars have noted that the Chinese government was preoccupied by the scientific certainty of climate change before the Second World Climate Conference (1990).[21] The most convincing evidence for this is perhaps the predominant role of the State Meteorological Administration (SMA) as the leading institution in climate governance, which will be discussed in the following paragraphs.[22] Without challenging the consensus in scholarship on China's climate diplomacy, I intend to offer an alternative interpretation: that beneath the preoccupation with scientific certainty lay anxiety about industrial development.

18 自然之友环境研究所诉国家电网宁夏公司案，甘肃省高级人民法院（2018）甘民终679号民事裁定书。[The Friends of Nature Institute v Ningxia State Grid, High Court of Gansu Province (2018)]

19 Different opinion, see He (n 11).

20 Dario Mantovani, 'Le Juriste « Historien »', *Les juristes écrivains de la Rome antique : Les œuvres des juristes comme littérature* (Les Belles Lettres 2018).

21 See Ye Qi and Tong Wu, 'The Politics of Climate Change in China' (2013) 4 *WIREs Climate Change* 301; 庄贵阳、薄凡、张靖：《中国在全球气候治理中的角色定位与战略选择》，《世界经济与政治》2018年第4期，第4-27页。[Guiyang Zhuang, Fan Bo, and Jing Zhang, 'China's Role and Strategic Choice in Global Climate Governance' (2018) 4 World Economics and Politics 4, 27.].

22 Professor Guiyang Zhang even argues that the SMA was the responsible agency in the early stage of climate governance. See 薄凡、庄贵阳：《中国气候变化政策演进及阶段性特征》，《阅江学刊》2018年第6期，第14-24页。[Fan Bo, Guiyang Zhuang, 'The Evolution and Periodic Characteristics of China's Climate Change Policies' (2018) 6 *Yuejiang Academic Journal* 14, 24.]

In the dawn of China's climate governance, relevant issues were indeed within the realm of the State Environmental Protection Commission (SEPC) of the State Council (the central executive branch). However, from 1988 to 1998, this commission was under the presidency of Song Jian (宋健), a mathematician, who was simultaneously the president of the State Science and Technology Commission (SSTC). The archives of the SEPC[23] contain reports and meeting minutes that allow us to understand how high-ranking bureaucrats framed climate change.

The first report related to climate change was submitted on March 17, 1989 by the SMA's Deputy Administrator, Luo Jibin (骆继宾), an experienced meteorologist and diplomat who attended the 1988 Geneva conference which established the IPCC.[24] Luo's report covered broad issues, such as the scientific evidence for global warming, its consequences and impacts, GHGs and the ozone layer, international concerns, the formation of the IPCC, and some policy recommendations.

Eleven months after Luo's report, the National Coordination Group on Climate Change (NCGCC) was established to coordinate the actions of different ministries.[25] Its Working Group 4 (WG 4) was entrusted with the task of preparing for the upcoming climate conferences, and would play a crucial role in the making of Chinese policy and in the climate negotiations. The composition of WG 4 represents an insight into the developmentalist approach, as it included bureaucrats from the Ministry of Foreign Affairs, the SSTC, the Ministry of Energies, the Ministry of Transport, the Ministry of Agriculture, the Bureau of Forestry, the SMA, the Bureau of Environmental Protection (BEP), and State Oceanic Administration.[26] The SMA continued to function as the leading scientific authority on climate change issues, but the establishment of the NCGCC demonstrates that the government was

23 The Secretariat of the State Environmental Protection Commission (ed) Compilation of Documents of the State Environmental Protection Commission (II) (China Environmental Science Press 1995), cited henceforth as "CDSEPC (II)". The SEPC has collected, compilated, and published its "documents" at least twice, in 1988 and 1995. These documents include reports, meeting minutes, discourses of eminent figures, various regulations, policy initiatives, explanations, and notices. The Secretariat of the SEPC explains in the preface that these documents are records of China's environmental governance. This collection is incomplete and selective, but as informative and useful as other archives.

24 骆继宾：《关于全球气候变暖问题的汇报》，国务院环境保护委员会秘书处编：《国务院环境保护委员会文件汇编（二）》，中国环境科学出版社1995年版，第59-65页。[Jibin Luo, 'Report on Global Warming' in CDSEPC (II) 59, 65.]

25 Qi and Wu (n 21).

26 国家气候变化协调小组第四工作组：《关于气候变化公约谈判准备情况的汇报》，国务院环境保护委员会秘书处编：《国务院环境保护委员会文件汇编（二）》，第256页。[Working Group 4 of the National Climate Change Coordination Group, 'Report on the Preparations for the Negotiation of the Climate Change Convention' in CDSEPC (II) 256.]

aware that climate governance is a political matter and requires coordination between the ministries that administer industrial sectors within a planned economy. Besides, in this period, the BEP was inferior to the 'industrial ministries' in the bureaucratic hierarchy, and had fewer staff. For these reasons, it could only play a marginal role within the NCGCC.

In November, 1990, Luo attended the Second World Climate Conference in Geneva. Other members of the Chinese delegation included Zou Jingmeng (邹竞蒙, President of the World Meteorological Organization), Qu Geping (曲格平, Director of the BEP) and Zhong Shukong, (钟述孔, Minister Counsellor, Ministry of Foreign Affairs). After this crucial climate diplomacy meeting, the delegation submitted a report to the State Council and urged the central authority to take preventative measures despite some scientific uncertainties. The report also stated that China would welcome the Ministerial Declaration as it was in accordance with the position of China.[27] Just one month after the submission of this report, another delegation was formed to represent China in the Intergovernmental Negotiating Committee for the Framework Convention on Climate Change. The Chief of this delegation was Sun Lin (孙林, Department of Treaty and Law, Ministry of Foreign Affairs), and its two Deputy Chiefs were Luo Jibin and Bai Xianhong (白先宏, Department of Social Development, SSTC).

Indeed, it was largely the scientists that determined the making of China's early climate policy. Even now, China's special climate envoy is Xie Zhenhua, who was trained in the late 1970s as a nuclear scientist at the Tsinghua University. The framework of climate governance that we know today is co-produced by two worlds—that of science and that of diplomacy.[28] At its early stage, China's climate diplomacy was perhaps the most extreme variation of this co-production process: the policymakers, such as Song Jian, were often scientists, while their science advisers, such as Luo Jibin, were usually directors of governmental departments. Actually, the marriage between scientific and political authorities in China is not unique to climate change issues. In the context of the late 1980s, a large

27 出席第二次世界气候大会代表团：《出席第二次世界气候大会的报告》，国务院环境保护委员会秘书处编：《国务院环境保护委员会文件汇编（二）》，第254页。[Delegation to the Second World Climate Conference, 'Report on the Second World Climate Conference', CDSEPC (II) 254.]

28 Stefan Aykut and Amy Dahan, *Gouverner le climat ? : Vingt ans de négociations internationales* (Les Presses de Sciences Po 2015).

number of high-ranking officials, known as 'red engineers', had received their academic and political training at polytechnical colleges before the outbreak of the Cultural Revolution in 1966.[29] Furthermore, vacancies left by retiring wartime heroes were now being filled by ambitious young experts who had the opportunity to attend higher education in the late 1970s. Therefore, the importance of scientists and concerns about scientific certainty only mirrored the mutual penetration between science and politics in the Chinese political context. The next section will explore the language by which these scientist-policymakers discuss climate change.

2.2. Discursive Analysis of a Decisive Meeting

The developmentalist approach is not only demonstrated by the predominance of industrial ministries in WG 4 of the NCGCC, but also by the climate-related discussions at the heart of the SEPC. To illustrate this point, we only need to read the minutes of the meeting of the SEPC on January 15, 1991.

The first report was a standard account of the World Climate Conference. The delegation urged the State Council to take climate change seriously, because China's economy and society relied on agriculture, which is supplied by land and water resources systems that are vulnerable to climate change.[30] The drafters of the report also recommended some technological pathways for emission reduction.[31] Perhaps more importantly, this report contained the golden rule that persisted through the next three decades of climate governance in China:

Without jeopardizing economic development, we shall gradually increase the shares of hydropower, nuclear power, and other renewables within the energy system, recommend and incentivize energy

29 See Joel Andreas, *Rise of the Red Engineers: The Cultural Revolution and the Origins of China's New Class* (Stanford University Press 2009). Luo was an example of this generation of technocrats.

30 出席第二次世界气候大会代表团：《出席第二次世界气候大会的报告》，国务院环境保护委员会秘书处编：《国务院环境保护委员会文件汇编（二）》，第254-255页。[Delegation to the Second World Climate Conference, 'Report on the Second World Climate Conference' in CDSEPC 254, 255.]

31 出席第二次世界气候大会代表团：《出席第二次世界气候大会的报告》，国务院环境保护委员会秘书处编：《国务院环境保护委员会文件汇编（二）》，第255页。[Delegation to the Second World Climate Conference, 'Report on the Second World Climate Conference' in CDSEPC (II) 255.]

saving, increase energy efficiencies, and promote other reduction measures that work in our country.[32]

For the drafters of the report, development would eventually solve climate change problems and, at the same time, set limits on the solutions available. In their view, the state should upgrade its energy structure wisely and avoid hindering the economic dynamics released by the Reform and Opening.

Following the climate conference, the SMA draw attention to the high winter temperature in the Northern regions during the 1980s.[33] After explaining the warm winters with meteorological data, the SMA confessed that it could not confirm the extent to which this trend was anthropogenic.[34] The third part of this report analyzed the possible positive and negative impacts of warmer winters on industrial and agricultural production.[35] This report helped to substantialize the insights of the international scientific community introduced by the climate conference delegation with local statistics and knowledge, while being more reserved in predicting the long-term adverse impacts. Even in this most scientifically-oriented document, its drafters almost naturally connected natural phenomena to the wealth of the nation.

WG 4 of the NCGCC then reported on preparations for the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change in Washington. It regarded national economic and industrial interests as the most important factors in diplomatic policy: "considering our current

32 出席第二次世界气候大会代表团：《出席第二次世界气候大会的报告》，国务院环境保护委员会秘书处编：《国务院环境保护委员会文件汇编（二）》，第256页。[Delegation to the Second World Climate Conference, 'Report on the Second World Climate Conference' in CDSEPC (II) 256.]

33 国家气象局：《近十年来我国北方冬季明显变暖》，国务院环境保护委员会秘书处编：《国务院环境保护委员会文件汇编（二）》，第279页。[China Meteorological Administration, 'Obvious Warming Winter in the Northern Regions in the Past Ten Years' in CDSEPC (II) 279.]

34 国家气象局：《近十年来我国北方冬季明显变暖》，国务院环境保护委员会秘书处编：《国务院环境保护委员会文件汇编（二）》，第281页。[China Meteorological Administration, 'Obvious Warming Winter in the Northern Regions in the Past Ten Years' in CDSEPC (II) 281.]

35 国家气象局：《近十年来我国北方冬季明显变暖》，国务院环境保护委员会秘书处编：《国务院环境保护委员会文件汇编（二）》，第283页。[China Meteorological Administration, 'Obvious Warming Winter in the Northern Regions in the Past Ten Years' in CDSEPC (II) 283.]

situation, there is no doubt that the central task is to develop, to which energy sectors are crucial."[36] WG 4 also added that "[the high percentage of coal use] is determined by our resource composition and level of economic development. There is no way for us to change the energy structure, nor to upgrade technologies and facilities."[37]

Finally, the leading politician in charge of both environmental governance and scientific progress delivered his concluding remarks after lengthy discussion. He acknowledged the robustness of the analysis of data provided by the SMA, while regretting the underdevelopment of climate change research in China.[38] Special instructions were given to two ministries. He requested that the Ministry of Agriculture assess the overall impacts of the warming weather on agricultural productivity, and that the State Maritime Administration locate exactly which parts of Chinese territory would be threatened by the rising seas.[39]

A disclaimer is needed. The genesis of China's climate policy certainly cannot be reduced to one specific event or moment. Indeed, this meeting is decisive from many perspectives, for it was at this moment that Song Jian, as the President of the SEPC, set the roadmap for mitigation and adaptation after listening to the reports. However, his roadmap cannot *determine* the evolution of climate policy in China. Instead, the purpose of using the reports and the President's instruction is to shed light on what the implications of climate change were in their minds at a given historical moment.

It is clear that in the minds of Song Jian and his fellow colleagues, they had to maintain a delicate balance between boosting the economy and addressing climate change. They counted on industrial

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36 国家气候变化协调小组第四工作组：《关于气候变化公约谈判准备情况的汇报》，国务院环境保护委员会秘书处编：《国务院环境保护委员会文件汇编（二）》，第259页。[Working Group 4 of the National Climate Change Coordination Group, 'Report on the Preparations for Negotiation of the Climate Change Convention' in CDSEPC (II) 259.]

37 国家气候变化协调小组第四工作组：《关于气候变化公约谈判准备情况的汇报》，国务院环境保护委员会秘书处编：《国务院环境保护委员会文件汇编（二）》，第259页。[Working Group 4 of the National Climate Change Coordination Group, 'Report on the Preparations for the Negotiation of the Climate Change Convention' in CDSEPC (II)259.]

38 《宋健同志在国务院环境保护委员会气候专题会议上的讲话》，国务院环境保护委员会秘书处编：《国务院环境保护委员会文件汇编（二）》，第249页。['Discourse of Song Jian at the Special Conference on Climate of the Environmental Protection Committee of the State Council' in CDSEPC (II) 249.]

39 《宋健同志在国务院环境保护委员会气候专题会议上的讲话》，国务院环境保护委员会秘书处编：《国务院环境保护委员会文件汇编（二）》，第259页。'Discourse pf Song Jian at the Special Conference on Climate of the Environmental Protection Committee of the State Council' in CDSEPC (II) 259.

modernization and economic development to produce the technological innovation and financial resources necessary to progress to a more sustainable model of development. In summary, climate change is a curse of development that can be reversed only by further development.

3. Consolidation of the Developmentalist Approach (1998-2018)

3.1. Predominance of the National Development and Reform Commission

In the last few decades, economic reforms in China have given rise to several reforms of the governance structure.[40] Among these institutional reforms at the heart of the central government, two are especially relevant to the present article: the reform of 1998 that created a new organ of climate governance, and the reform of 2018 that designated the Ministry of Ecology and Environment (MEE) as the ministry responsible for climate governance. I argue that the developmentalist approach was consolidated during this period in which climate governance was in the hands of the governmental branch that administers macroeconomics.

During the institutional reform of the State Council in 1998, the aforementioned NCGCC established in 1990 was substituted by the National Coordination Committee on Climate Change (NCCCC).[41] While the former answered to the SEPC, the latter was affiliated to the State Development Planning Commission (SDPC). In fact, this reform also established the General Agency of Environmental Protection and abolished the SEPC. Another institutional reform in 2003 re-labeled the SDPC under its current and best-known name, the National Development and Reform Commission (NDRC), and empowered the NCCCC to coordinate the actions of 15 ministries. In 2007, as China exceeded the US to become the highest emitter of GHGs, the State Council established the National Leading Group on Climate Change, Energy Conservation and Emissions Reduction. The first Chairperson of the group was the Prime Minister, and the secretariat is located at the NDRC.[42] Finally, in 2008, the Department of Climate Change was created at the heart of the NDRC, and operated until it was relocated to the

40 See Chenggang Xu, 'The Fundamental Institutions of China's Reforms and Development' (2011) 49 *Journal of Economic Literature* 1076.

41 'White Paper (2008): China's Policies and Actions for Addressing Climate Change' (31 October 2008), <https://www.fmprc.gov.cn/ce/ceun/eng/xw/t521513.htm> Last visit: 2022-01-01

42 《国务院关于成立国家应对气候变化及节能减排工作领导小组的通知》（国发[2007]18号）[Notice of the State Council on Establishing the National Leading Group for Climate Change and Energy Conservation and Emission Reduction], See

MEE in the institutional reform of 2018.[43] This department is responsible for publishing annual reports on China's policies and actions for addressing climate change.

During the period from 1998 to 2018, the NDRC were *de facto* the agency in charge of the making and implementation of climate policy. Although the Prime Minister chairs the Leading Group, it was the head of the NDRC that ensured the daily functioning of the group. Furthermore, the NDRC has always been a well-established ministry. Its creation can be dated back to the State Planning Commission created in 1952, and it administers a wide range of social and economic domains.[44] The NDRC has more staff than any other ministry, and hired 1029 civil servants in 2008. In comparison, after substantial extension of the MEE both in terms of power and size it could still only hire 478 civil servants.[45] Overall, the environmental protection agency, regardless its name, was new and had very limited power.[46] In terms of creation and implementation of specific climate goals, the environmental protection agency can hardly hope to regulate heavily emitting sectors, such as industry, building, agriculture, and transport; whereas the NDRC can, by deploying its microeconomic planning power.

Two anecdotes reported by an experienced journalist who has been covering climate diplomacy for decades help to illustrate the NDRC's predominance in climate policy and diplomacy. When a German politician met a Minister of Environmental Protection in China and asked him about CO_2 emission issues, the Minister replied: "I take care of CO. CO_2 is a matter for the NDRC."[47] Also, when a senior diplomat from the Department of Treaty and Law of the Ministry of Foreign Affairs addressed a conference entitled "The Challenge of Cancún and the Response from China", she said that "the challenge for our ministry is to deliver warm meals to the negotiators from the NDRC during the climate conference".[48]

43 The General Agency of Environmental Protection was replaced by the Ministry of Environmental Protection, which was the predecessor of the Ministry of Ecology and Environment, in 2008.

44 In fact, the NDRC is so powerful that even the state-owned media commonly refers it as the "mini State Council".

45 《生态环境部职能配置、内设机构和人员编制规定》(Regulation of the MEE's Function, Structure, and Staffing)

46 朱焱：《气候到底怎么了》，中央编译出版社2017年版，第213页。[Yan Zhu, *Change with Climate*, (Central Compilation & Translation Press 2017) 213]

47 朱焱：《气候到底怎么了》，中央编译出版社2017年版，第212页。[Yan Zhu, *Change with Climate*, (Central Compilation & Translation Press 2017) 212]

48 朱焱：《气候到底怎么了》，中央编译出版社2017年版，第219页。[Yan Zhu, *Change with Climate*, (Central Compilation & Translation Press 2017) 219]

The leading position of the NDRC is reflected in the process of preparing legislative bills related to mitigation. The first draft of the *Energy Conservation Law* was jointly prepared in 1995 by the SDPC and the Commission of Economy and Trade.[49] The Coal Law was a work of the NDRC. The Environmental Protection and Resources Conservation Committee of the NPC was in charge of preparing some other laws, but the NDRC usually had representatives in the drafting commission. The *Circular Economy Promotion Law* (2008) is an example.[50]

Admittedly, the 2018 reform relocated the Department of Climate Change, which is preparing a draft of the climate law, from the NDRC to the MEE and separated the NAE, which is in charge of drafting the *Energy Law*, as an independent agency; nevertheless, it is almost certain that the influence of the NDRC will continue. The senior members of these two departments, who have the power to set agendas, were initially recruited by and promoted within the NDRC before 2018. In other words, Chinese climate law and policy design will remain, at least in the near future, in the hands of these "developmental state bureaucrats", most of whom are currently in their 40s.[51]

The NDRC is predominant, but is far from the only developmental ministry that is involved in climate governance. Other ministries that are also indispensable in climate governance include the Ministry of Transport, the Ministry of Agriculture and Rural Affairs, the Treasury, the Ministry of Housing and Urban-Rural Development, and the Ministry of Science and Technology. In addition, the Department of Energy Conservation of the Ministry of Industry and Information Technology has enormous policy-making power in energy and industrial sectors. For example, this department can decide which technology shall be prioritized and by which policy instrument. These ministries and departments are all at the level of central government; we have not yet discussed the provincial and local governments. Many other departments or divisions can be added to this list. They form a cluster of developmental-industrial departments that largely determine climate policy.

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49 陈锦华：《关于<中华人民共和国节约能源法（草案）>的说明》，[Jinhua Chen, 'Explanation on the Draft Energy Conservation Law of the People's Republic of China' (5 May 1995)] <http://www.npc.gov.cn/wxzl/gongbao/2000-12/07/content_5003815.htm> Last visit: 2022-01-01

50 冯之浚：《关于<中华人民共和国循环经济法（草案）>的说明》，[Zhijun Feng, 'Explanation on the Draft Circular Economy Promotion Law of the People's Republic of China' (26 August 2007)] <http://www.npc.gov.cn/wxzl/gongbao/2008-12/25/content_1467419.htm> Last visit: 2022-01-01

51 Economists often use the term "developmental state" to discuss states that use economic policies to generate rapid industrialization and economic growth. For the case in China, see John B Knight, 'China as a Developmental State' (2014) 37 *The World Economy* 1335.

3.2. Governing by Planning

In another article that discusses the legal techniques employed by Chinese judges in climate litigation, I argued that China's climate governance is marked by a sharp contrast between a lack of legally binding documents on climate change and an abundance of plans.[52] The second part of this article further argues that industrial legislation that has potential value for mitigation can hardly serve as the legal ground for judicial decisions without referring to other provisions. With the exception of two provincial regulations, the executive branch has hesitated to issue restrictive or compulsive texts which have legal effects on citizens' rights and duties.[53] Rather, it has enacted a considerable number of national and local action plans, including the National Climate Change Program (2007), the Work Plan for Controlling Greenhouse Gas Emissions during the 12th Five-Year Plan Period, the Comprehensive Work Plan for Energy Conservation and Emission Reduction for the 12th Five-Year Plan Period, the 12th Five-Year Plan for Energy Conservation and Emission Reduction, the 2014–2015 Action Plan for Energy Conservation, Emission Reduction and Low-Carbon Development, and the National Plan on Climate Change (2014–2020).[54] Indeed, the Chinese government is determined to govern the climate by plans.

I think that this 'governing by planning' paradigm can be considered to be a result of the developmentalist approach. As long as a developmental state can make macroeconomic policy that directly determines the fate of an entire industry and its employees,[55] it can also use the same powers and measures to boost climate-friendly sectors or transform the energy structure of the hard-to-abate sectors. After all, Article 89 (6) of the Constitution grants the State Council the power to "direct and administer economic affairs and urban and rural development". In addition to the "plan for national economic and social development" that will be examined and approved by the NPC, as provided for by Article 62 (9) of the Constitution, other economic plans can also be decided autonomously by the State Council or its organs.

Climate governance with Chinese characteristics has produced a mixture of considerable positive outcomes and critical challenges, [56] and the developmentalist approach also has notable drawbacks in practice. At least three of these drawbacks are closely linked to the 'governing by planning' paradigm. First, this paradigm enables the central and regional governments to make independent and apparently

sound decisions, while lacking transparency. Apart from the evident legitimacy problem, this lack of transparency can also entail serious implementation problems. These plans have no binding force *vis-à-vis* citizens, but are valid as disciplinary tools within the government, which means that their implementation depends on internal bureaucratic disciplinary channels. In practice, emission reduction targets are translated into indicators that are used to assess the performance of officials. Almost every interviewee who operates at the local or provincial level told me that they take the emission reduction targets seriously, at least partly, because their 'political lives' can be put in danger if these targets are not met. When handled carefully, reduction targets can incentivize bureaucrats to prioritize climate governance over local economic growth. However, some local political leaders believe that the targets must be met at any cost if they are to save their hopes for promotion, and therefore push industrial and residential sectors to extreme limits. The most ridiculous example may be the prohibition of coal burning in impoverished rural areas in the freezing winter. The radical electricity cut that some economically advanced coastal regions experienced in the summer of 2021 is a less ridiculous example, and yet revealed the deeper structural problems of the Chinese government and industries.[57]

Second, the 'governing by planning' paradigm is subject to an accountability problem. Ordinary citizens cannot challenge these plans. In the administrative procedure, upon the plaintiff's request the court has the power to examine whether a regulatory rule inferior to ministerial regulations is in violation of a higher norm, as is provided for by Article 53 of the APL. Though the court cannot declare the rules in question invalid, it can refuse to apply them and mandate the executive to review its rules.[58] Since the existing climate plans or roadmaps set only vague and indeterminate goals and targets that have no direct effects on individual rights, it is very difficult, if not impossible, for affected citizens to claim that their rights are infringed by these policies rather than the misinterpretation or misadministration of them. A paradox emerges: even regional industrial policies can affect the

52 Zhu (n 11).

53 He (n 9).

54 See 'Enhanced Actions on Climate Change: China's Intended Nationally Determined Contributions' (*Xinhua*, 30 June 2015) <http://www.china.org.cn/environment/2015-06/30/content_35950951.htm> Last visit: 2022-01-01

55 The most famous example seems to be Japan's strategy of replacing domestically produced coal by imported oil in the 1960s. This adjustment of energy structure practically put domestic coalmines out of business and created considerable unemployment.

56 Zhu Liu and others, 'Challenges and Opportunities for Carbon Neutrality in China' [2021] *Nature Reviews Earth & Environment* 1; Kelly Sims Gallagher and others, 'Assessing the Policy Gaps for Achieving China's Climate Targets in the Paris Agreement' (2019) 10 *Nature Communications* 1256.

57 Shivani Singh and Min Zhang, 'China Power Crunch Spreads, Shutting Factories and Dimming Growth Outlook' *Reuters* (27 September 2021).

58 Zhu (n 11).

livelihoods of hundreds of thousands of people who earn their livings from certain sectors, but no one can solicit the judges to examine them.

Third, public participation is absent in the making of policy. Unlike environmental decision-making processes, in which a certain degree of public participation is always required, macroeconomic decision-making tends to be carried out within the black box of bureaucracy. In a developmental state, public participation can be absent even in the making of nuclear policy.[59] In China, climate policy is decided mainly by specialized experts trained in polytechnical universities who spend decades working as experts or technocrats in highly specialized administrations. These experts do not attend public meetings nor do they defend their stance in front of concerned groups. Moreover, it can even be said to be a bureaucratic virtue not to think out of the departmental box and interfere with other departments' business. When asked a question concerning the unemployment and social inequality that can accompany energy transitions, several macroeconomic or industrial experts from various industries reacted in almost the same way: "that's the business of the social security department, not mine". Furthermore, climate policy is always framed in abstract and specialized language that cannot always be understood by ordinary citizens. The institutional isolation and terminological barriers simply cut the general public off from climate policy.

Public participation, transparency, and accountability are pillars of modern democracy. Recently, the question of whether 'authoritarian environmentalism' can be considered to be an alternative to 'democratic environmentalism' has raised scholarly attention.[60] One argument is that an authoritarian approach is needed to take drastic measures and respond to the crisis more effectively.[61] A closer empirical survey of China's implementation of climate policy will certainly enrich a theoretical discussion that has severe, irreversible and large-scale socio-political impacts.

59 Hiro Saito, 'The Developmental State and Public Participation: The Case of Energy Policy-Making in Post–Fukushima Japan' (2021) 46 *Science, Technology, & Human Values* 139.

60 Ross Mittiga, 'Political Legitimacy, Authoritarianism, and Climate Change' [2021] *American Political Science Review* 1; Alex L Wang, 'Symbolic Legitimacy and Chinese Environmental Reform' (2018) 48 *Environmental Law* 699; Bruce Gilley, 'Authoritarian Environmentalism and China's Response to Climate Change' (2012) 21 *Environmental Politics* 287.

61 Mittiga (n 60).

Conclusion

In 2005, when the former President Hu Jintao delivered a speech to a meeting between the Group of Eight and developing countries, he said that "climate change is, at the same time, a problem of environment and of development, but ultimately a problem of development."[62] A graduate of the University of Tsinghua and who began his career as a hydropower engineer, former President Hu is himself a 'red engineer' and his opinion represents the way in which climate change is conceived by a large number of the technocrats who have been in power in China. In recent decades, China's policymakers, diplomats and political leaders have realized that they must maintain the speed of economic growth and industrial modernization despite the urgent need to address climate challenges. They believe that the apparent paradox between 'sustainability' and 'development' can be solved by careful macroeconomic management that can transform China's industries in a new era where high productivity and low fossil fuel consumption can be achieved simultaneously.

In the current political context of China, where the concept of 'eco-civilization' has been mainstreamed, the evolution of the developmentalist approach remains a subject of discussion. The 2018 institutional reform increased the importance of the environmental bureaucrats in climate governance by affiliating the Department of Climate Change, the National Maritime Administration, and the National Administration of Forestry and Grassland to the MEE. On one hand, this reform, as well as other innovations in environmental law, may have the potential to redirect the course of China's climate governance to a less industry-centric pathway. On the other hand, developmentalism may survive and continue to be the major climate governance paradigm as a result of path-dependence and inertia. We should not ignore the fact that senior politicians and diplomats are still concerned with the impact of mitigation measures on China's strategic position in international rivalries, as is demonstrated by Cui Tiankai's speech.

62 https://www.mee.gov.cn/home/ztbd/rdzl/qhbh/wgyd/200507/t20050711_68412.shtml. Last visit: 2022-01-01

Strengthening the Legal Framework to Address Climate Change in Pakistan

Umair Saleem[(*)]

Introduction

There is catastrophic evidence that greenhouse gases (GHGs) in the atmosphere are changing the global temperature and causing climate change. As a result, the climate change is increasing the frequency and intensity of extreme natural events as well as adversely affecting ozone layer, biodiversity, ecosystem, human health, food systems and infrastructure around the globe.[1] Although most countries have a system to mitigate and adapt to the effects of climate change, Pakistan is an interesting example to study for this purpose in the global south for at least two reasons. The first reason is Pakistan's vulnerability to the effects of climate change because of its unique geography and landscape. Pakistan is the 5th most populated country in the world[2] and the 7th most vulnerable country to the effects of climate change.[3] In its north, Pakistan has numerous natural resources and three mountain ranges, including the Himalayas, the Karakoram and the Hindu Kush. Accordingly, this north region of Pakistan has some of the highest mountains in the world, one of the major ice-masses outside the world poles, and more glaciers than almost anywhere in the world.[4] These glaciers are melting at an alarming rate because of the higher increase in temperature of Pakistan than the global average, and are causing massive floods and destroying habitat in its north.[5] In its south, Pakistan has five rivers and a huge coastline with its own environmental problems caused by climate change. While the coastline is threatened by rising sea levels, there have been events of extreme monsoon rains in major cities of Pakistan in the past decade. These rains have choked the water and sanitation infrastructure of these

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[1] *Special Report on Climate Change and Land*, Intergovernmental Panel on Climate Change (2020), Sections A.2 & A.5, https://www.ipcc.ch/site/assets/uploads/sites/4/2020/02/SPM_Updated-Jan20.pdf (last visited Jan. 15, 2022); *The Causes of Climate Change*, NASA, https://climate.nasa.gov/causes/ (last visited Jan. 15, 2022).

[2] Abdul Sattar & Diaa Hadid, *With Glaciers Melting and Temps Soaring, Pakistan Pursues Big Action On Climate Change*, NPR, Sept. 29, 2020, https://www.npr.org/2020/09/29/916878679/with-glaciers-melting-and-temps-soaring-pakistan-pursues-big-action-on-climate-c (last visited Jan. 15, 2022).

[3] *Id.* at 4 & 6; *see* Gracie Pearsall, *Pakistan establishes new Climate Council with real powers to drive Climate Adaptation*, ACCLIMATISE NEWS, June 28, 2017, https://www.acclimatise.uk.com/2017/06/28/pakistan-establishes-new-climate-council-with-real-powers-to-drive-climate-adaptation/ (last visited Jan. 15, 2022).

[4] Tim Craig, *Pakistan has more glaciers than almost anywhere on Earth. But they are at risk*. THE WASHINGTON POST, Aug. 12, 2016, https://www.washingtonpost.com/world/asia_pacific/pakistan-has-more-glaciers-than-almost-anywhere-on-earth-but-they-are-at-risk/2016/08/11/7a6b4cd4-4882-11e6-8dac-0c6e4accc5b1_story.html (last visited Jan. 15, 2022).

[5] *Pakistan taking steps to beat climate change*, THE NEWS, Sept. 24, 2019, https://www.thenews.com.pk/latest/531457-pakistan-taking-steps-to-beat-climate-change-says-pm-imran (last visited Jan. 15, 2022).

cities for several days and have resulted in a number of deaths.[6] Although Pakistan has floods and rains at extreme levels, there is no availability of clean water across Pakistan due to the lack of infrastructure and resources to preserve water from melting glaciers and rains. The ground water table is also dropping to a frightening scale in all the cities. These problems are decreasing the production of crops and creating food shortages in an otherwise agriculturally enriched country. Since climate change also exacerbates ground-level ozone or smog, Pakistan experiences the worst smog in Punjab each year, which has myriad health effects.[7] In addition, these direct physical climate change impacts create economic and social effects that threaten the economy, social justice and political stability of the country.[8]

The second reason is that Pakistan has adopted various unprecedented approaches to adapt and mitigate the effects of climate change. For example, the Lahore High Court constituted a judicial commission in 2015 for effective implementation of the climate change regulations in Pakistan. This Climate Change Commission provided a platform for discussion and planning among different stakeholders, authorities, NGOs and environmentalists regarding climate change and materially assisted in developing capacity to face the challenges of climate change in the country. Similarly, the superior courts in Pakistan have developed a forward-looking jurisprudence in compelling government responses to climate change as well as progressive judicial principles like urban forestry, environmental justice, climate justice, water justice and intergenerational justice for enforcement of the right to clean environment of the citizens. At government level, Pakistan has tried to address climate change concerns through a climate-change specific legislation, the Climate Change Act 2017 (the "Act"), and its tree plantation campaigns with limited resources are phenomenal and aspirational for other countries.

It is quite unfortunate that despite seriousness of the effects of climate change in Pakistan, there is scant literature available in this respect. There are, however, many news reports highlighting the vulnerability and contributions of Pakistan to combat climate change.[9] This paper provides the first in-depth analysis

[6] *Id.* at 6.

[7] Umair Saleem, *Learning from experience of United States to address air pollution in Pakistani Punjab*, LUMS Law Journal (forthcoming 2022).

[8] Michael Flitner and Johannes Herbeck, *Climate Change and Biodiversity for Food and Agriculture: Taking Systemic and Second Order Effects into Account*, FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (2009); and Gracie Pearsall, *Pakistan establishes new Climate Council with real powers to drive Climate Adaptation*, ACCLIMATISE NEWS, June 28, 2017, https://www.acclimatise.uk.com/2017/06/28/pakistan-establishes-new-climate-council-with-real-powers-to-drive-climate-adaptation/.

[9] These shall be cited throughout this paper.

of the legal framework for addressing climate change in Pakistan and examines its obligations, role and contributions in this regard. It argues that while Pakistan has passed the Act to set its national mitigation and adaptation policy, it has not been able to achieve the desired objectives of the Act and has failed to enforce its provisions effectively. By providing a detailed analysis of Pakistan's adaptation and mitigation laws, this paper identifies gaps in adaptation and mitigation policy and recommends ways to strengthen existing legal framework for addressing climate change in Pakistan. For this purpose, the paper is mainly divided into four sections. The first section shall provide an overview of the existing climate change specific laws in Pakistan and highlight some of the measures adopted by it to mitigate these effects. The second section shall analyze the powers and functions of the existing climate change institutions of Pakistan, including the Ministry of Climate Change (the "Ministry"), the Climate Change Division (the "Division"), the Climate Change Council (the "Council") and the Climate Change Authority (the "Authority"). This section shall also evaluate that whether these institutions are performing their required functions effectively to safeguard against the effects of climate change. The third section shall discuss the above-mentioned role of the superior courts in Pakistan to address climate change through its unique practice of establishing a judicial commission as well as developing numerous environmental principles. The fourth section shall identify some of the challenges being faced by Pakistan and shall suggest measures to strengthen the effectiveness and implementation of the climate change laws in Pakistan.

1. Legislative and Policy Responses to Climate Change in Pakistan

Although Pakistan has shown its commitment against climate change by signing and ratifying the United Nations Framework Convention on Climate Change (1992) ("UNFCCC"), the Kyoto Protocol to UNFCCC (1997) (the "Kyoto Protocol") and the Paris Agreement (2015) (the "Paris Agreement"), it did not have a climate-change specific legislation till 2017. If we briefly look at environmental legislation in Pakistan, the Constitution of the Islamic Republic of Pakistan, 1973 (the "Constitution") had the subject of "environmental pollution and ecology" in its Concurrent Legislative List,[10] which in theory allowed both the Federal and Provincial Governments in Pakistan to introduce legislation on the subject.[11] Therefore, Pakistan introduced its first comprehensive national environmental legislation in

[10] Constitution, Concurrent Legislative List, Item 24 (without the Constitution (Eighteenth Amendment) Act, 2010 [the "Eighteenth Amendment"]).

[11] Before the Eighteenth Amendment, there were two (2) legislative lists in the Constitution: Federal Legislative List and Concurrent Legislative List. The National Assembly had the exclusive legislative jurisdiction on matters included in the Federal

1983, the Pakistan Environmental Protection Ordinance, 1983 (the "1983 Ordinance"), to control the pollution and preserve the living environment.[12] Thereafter, Pakistan enacted a progressive Pakistan Environmental Protection Act, 1997 (the "Federal Act"), containing detailed provisions with respect to the protection, conservation, rehabilitation and improvement of the environment, for prevention and control of pollution, and for promotion of sustainable development.[13]

In 2010, the National Assembly amended the Constitution through the Constitution (Eighteenth Amendment) Act, 2010 (the "Eighteenth Amendment") and redefined the role of the Federal and Provincial Governments in Pakistan. It abolished the Concurrent Legislative List of the Constitution, which had the subject of "environmental pollution and ecology". The Constitution, however, still has the Federal Legislative List, which contains subjects within the legislative domain of the Federal Government and does not include the subject of environment.[14] As a consequence, the Provinces remain with the exclusive jurisdiction to frame laws on the subject of environment, and they have, accordingly, enacted their own environmental legislation. Punjab adopted replica of the Federal Act with necessary modifications, the Punjab Environmental Protection Act, 1997, by amending it through the Punjab Environmental Protection (Amendment) Act, 2012. Sindh legislated the Sindh Environmental Protection Act, 2014; Khyber Pakhtunkhwa passed the Khyber Pakhtunkhwa Environmental Protection Act, 2014 and Balochistan enacted the Balochistan Environmental Protection Act, 2012. All these Provincial Acts have repealed the Federal Act to the extent of its applicability to the provinces. Since Islamabad is a capital territory and not part of any province, the Federal Act continues to apply in Islamabad.

Although all the provinces of Pakistan have enacted their own environmental legislation after the Eighteenth Amendment, the Federal Government has also adopted various environmental policies from time to time. One of the few significant policy initiatives taken by the Federal Government was to address the climate change concerns, and therefore, it developed the National Climate Change Policy

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Legislative List, and in theory, both the National and Provincial Assemblies had legislative jurisdiction on matters included in the Concurrent Legislative List. However, in practice, the Federal Government mostly abstained from legislating on the subjects contained in the Concurrent Legislative List, leaving the Provinces to legislate on the subjects. *See* https://portals.iucn.org/library/sites/library/files/documents/ELC-016-1.pdf.

[12] Pakistan Environmental Protection Ordinance, 1983, Preamble.

[13] Pakistan Environment Protection Act, 1997, Preamble.

[14] Constitution, Fourth Schedule.

(2012) (the "Policy")[15] and the Framework for Implementation of the Climate Change Policy (2014-2030) (the "Framework").[16] The Policy recognized the vulnerability of Pakistan to climate change threats,[17] and set its national policy objectives to pursue sustained economic growth. It required Pakistan to focus on adaptation while promoting mitigation in a cost-effective manner, to ensure the water, food and energy security of the country, to strengthen decision making and coordination, to facilitate the use of national and international financial opportunities, to encourage public and private sector investment in adaptation measures, and to enhance awareness, skills and capacity building in the country.[18] The Supreme Court of Pakistan has recently held that the goal of the Policy is to ensure that climate change is mainstreamed in the economically and socially vulnerable sectors of the economy and to steer Pakistan towards climate resilient development.[19] In addition to this, the Framework provided sector wise adaptation and mitigation actions for Pakistan. It specified the implementation schedule in this regard for the water sector, agriculture and livestock sector, forestry sector, disaster preparedness, energy sector, transport sector, industries and urban planning.[20]

In less than a year after signing the Paris Agreement, the Federal Government passed the Act,[21] which defines the "climate change" as "*a change in the climate system which is caused by significant changes in the concentration of greenhouse gases as a direct or indirect consequence of human activities and which is in addition to natural climate change that has been observed during a considerable period*".[22] It is significant to note that, like the definition provided in UNFCCC, this definition differentiates between natural climate change and man-induced climate change, and only contemplates the changes of climate caused by the direct or indirect human activities. However, there are few countries like Philippines that do not differentiate, and define climate change to include changes in climate due to natural variability as well as a result of human activity.[23] The Schedule of the Act contains the list of the international conventions ratified by Pakistan, which include UNFCCC, the Kyoto Protocol and the

[15] National Climate Change Policy, 2012, available at http://nidm.edu.pk/Documents/Policies/National_Climate_Change_Policy_2012.pdf.

[16] Framework for Implementation of the Climate Change Policy (2014-2030), http://www.gcisc.org.pk/Framework%20for%20Implementation%20of%20CC%20Policy.pdf.

[17] *Id.* at 50, Sec. 3.

[18] *Id.* at 50, Sec. 2.

[19] D. G. Khan Cement Company Ltd vs. Government of Punjab, 2021 SCMR 834 (Supreme Court), Para 18.

[20] *Id.* at 51.

[21] Zofeen T. Ebrahim, *Pakistan passes climate change act, experts remain sceptical*, DAWN, Mar. 28, 2017, https://www.dawn.com/news/1323574.

[22] *Id*. Sec. 2(d).

[23] Philippines Climate Change Act of 2009, Sec. 3(d), http://climate.emb.gov.ph/?page_id=68.

Paris Agreement, and also leaves room for other agreements relating to climate change to which Pakistan may be signatory.[24]

The Act has been passed to serve two fundamental purposes, including to meet obligations of Pakistan under international conventions and to address the effects of climate change through comprehensive adaptation and mitigation policies, plans, programmes, projects and other measures.[25] Many environmentalists argue that having a dedicated national statute for climate change is a remarkable step in the right direction for Pakistan to ensure its obligations under the above international instruments.[26] There is no doubt that this is a significant step taken by Pakistan to pledge for its goals to contribute to holding the increase in global GHG emissions below 2°C. The Act has certainly brought legislative reforms in Pakistan and has created the high-powered Council and the Authority. This shows that Pakistan has always taken its international obligations in terms of environment very seriously, at least in its policy and legislation. However, the enforcement or implementation of these is another issue, in which Pakistan lacks capacity, that shall be discussed in later part of this paper.

On a policy level, Pakistan has submitted its first NDC under the Paris Agreement in 2016, highlighting its responses to climate change issues, future projections and abatement costs, implementation mechanism, and assessment of capacity building needs.[27] Similarly, it has held a billion-tree planting campaign in one of its provinces, Khyber Pakhtunkhwa ("KPK"), which is the most vulnerable province to climate change in Pakistan. Additionally, it plans to plant ten billion trees across the country in the near future.[28] There is no doubt that tree plantation or "carbon sinks" play a central role to mitigate climate change by limiting atmospheric GHG concentrations and to adapt to climate change by providing shade cover from extreme heat as well as reducing biodiversity loss by enhancing habitat.[29] The tree plantation in Pakistan has already increased at least 2% of the forest cover in the country, and accordingly, is contributing to mitigate climate change.[30]

[24] Pakistan Climate Change Act, 2017 (the "Act"), Schedule & Sec. 18. (explaining that the Minister-in-charge of the Federal Government may by notification in the official Gazette, amend the Schedule so as to add any entry thereto to modify or omit any entry therein).

[25] *Id.* at 56. Preamble.

[26] *Id.* at 55.

[27] *Id*. at 12.

[28] *Id.* at 8.

[29] Karin Bäckstrand and Eva Lövbrand, *Planting Trees to Mitigate Climate Change*, 6 GLOBAL ENVIRONMENTAL POLITICS 1 (2006).

[30] *Id.* at 4.

Alongside this tree planting initiative, Pakistan is taking genuine steps for fulfilling its energy needs from clean and renewable energy sources. For example, Pakistan is building one of the largest hydroelectric power projects of Pakistan, Diamer Basha Dam, which will generate 4,500 MW clean energy to meet its future needs.[31] Pakistan has built around 200 small hydropower projects, and is also adding wind and solar power to its system.[32] In addition, Pakistan has announced a new electric vehicle policy to control hazardous air pollution and reduce GHG emissions in its major cities.[33] Despite its lack of financial resources, it is committing significant funds to conserve biodiversity, generating green jobs, alleviating poverty and for other environmental purposes in the country.[34] Although many of the above problems in Pakistan are caused by the historic and current emissions of the developed countries of the global north,[35] Pakistan has contributed – and certainly is contributing – to some extent for these environmental problems. For example, Pakistan has allowed China to build energy generation plants fired by coal in Pakistan to meet its present and future energy needs, despite the availability of renewable technology and ideal locations for the same.[36] At various instances, the superior courts in Pakistan have taken account of the omissions of the government to implement provisions of the Policy, the Framework and the Act and have declared that their implementation is critical for sustainable development and for protection of fundamental rights of the citizens.[37]

2. Climate Change Institutions in Pakistan

The 1983 Ordinance established several institutions in Pakistan, including the Pakistan Environmental Protection Council (the "Federal EPC")[38] and the Pakistan Environmental Protection Agency (the

[31] Sana Jamal, Pakistan begins construction of Diamer Bhasha Dam, GULF NEWS, Jul. 15, 2020, https://gulfnews.com/world/asia/pakistan/pakistan-begins-construction-of-diamer-bhasha-dam-1.72607867.

[32] *Id.* at 4.

[33] *Id.* at 6.

[34] *Id.*

[35] Katrina Fischer Kuh, *International Climate Change Treaty Regime*, *in* CLIMATE CHANGE LAW LITERACY (Karl S. Coplan et. al., forthcoming 2021) (explaining that GHGs have mostly been contributed by the current and historic high emissions of many countries in the global north and are affecting the world as a whole at an alarming scale. These emissions have severe impacts on many countries in the global south because of their lack of organizational capacity and funding to fight these climate change impacts).

[36] *Id.* at 6.

[37] Asghar Leghari vs. Federation of Pakistan, PLD 2018 Lahore 364, Para 24

[38] *Id.* Sec. 3.

"Federal EPA")[39], with specific purposes. The Federal Act revised the role of the already established Federal EPC and the Federal EPA, which now only govern Islamabad. Each province in Pakistan has created their provincial EPCs and EPAs as well as respective environmental protection departments. These departments are generally responsible for planning and policy making in the disciplines of environment and ecology, administration of the province, administration of the relevant laws and rules, and ancillary matters. In addition to these institutions, there are at least four (4) institutions in Pakistan which specifically deal with climate change, including the Ministry, Division, Council and Authority.

The Ministry has officially formed the Council on 26 December 2018 with forty-six (46) members from the public and private sector. There are, however, no records of the Council meeting to perform its functions.[40] Interestingly, the Chairperson of the Authority is required to perform functions and exercise powers of the Council until the Council is constituted in accordance with the directions of the Federal Government from time to time.[41] However, there are no reports for establishment of the Authority as well as appointment of its Chairperson. The Ministry has asked the finance division for establishment of the Authority and to deploy its members and employees,[42] and accordingly, the finance division has decided to approve seventy-two (72) posts for this Authority in 2019.[43]

2. 1. Climate Change Ministry and Division

Pakistan created the Ministry of Environment at the Federal level in 1975, as a follow up of the Stockholm Declaration (1972), which was responsible for protecting and promoting the environmental laws and policies. After the Eighteenth Amendment, this Ministry was abolished, and at present, Pakistan has the Ministry of Climate Change and the Climate Change Division at Federal level.[44] The Ministry is structured into the Administration Wing, the Development Wing, International Cooperation Wing, Environment Wing and the Forestry Wing, and presents its reports annually with respect to

[39] *Id.* Sec. 5.
[40] Shabbir Hussain, *Climate council yet to hold first meeting: Finance division asked to set up climate change authority*, THE EXPRESS TRIBUNE, Jan. 31, 2019, https://tribune.com.pk/story/1900567/1-climate-council-yet-hold-first-meeting.
[41] Act, Sec. 11(2).
[42] Shabbir Hussain, *Climate council yet to hold first meeting: Finance division asked to set up climate change authority*, THE EXPRESS TRIBUNE, Jan. 31, 2019, https://tribune.com.pk/story/1900567/1-climate-council-yet-hold-first-meeting.
[43] Shabbir Hussain, *Finance ministry approves 72 posts in climate change authority*, THE EXPRESS TRIBUNE, May 21, 2019, https://tribune.com.pk/story/1977183/finance-ministry-approves-72-posts-climate-change-authority.
[44] *See* Federal Rules of Business, 1973, Schedule I under Rule 3(1), List of Ministries and Divisions.

working of its different wings.[45] The Federal EPA is the attached department of the Division,[46] which manages the Federal EPC, the Federal EPA, the Global Environmental Impact Study Centre and the Islamabad Wildlife Management Board. In addition, it is also responsible for other policy and programmes with regards to disaster management, including environmental protection, preservation, pollution, ecology, forestry, wildlife, biodiversity, climate change and desertification. This Division also ensures coordination, monitoring and implementation of environmental agreements with other countries, international agencies and forums, and is responsible for policy formulation, coordination and reporting of human settlements including urban water supply, sewerage and drainage.[47]

2.2 Climate Change Council

The Act has established the high-powered Council consisting of the Prime Minister, as its Chairperson, as well as members from government sector, scientists, researchers, technical experts, educators and different stakeholders. From the government sector, it has nine relevant Federal Ministers;[48] four Chief Ministers of the provinces; four Provincial Ministers in charge of the Provincial Environment Departments; Chairman of the National Disaster Management Authority; Chairman of the Authority; and Secretary of the Division. In addition, the Prime Minister is empowered to appoint maximum thirty (30) other members of the Council for a term of three (3) years[49], at least twenty (20) of which must be from the private sector.[50] The Council is required to hold meetings as and when necessary, but not less than two (2) meetings in a year,[51] and is authorized to constitute committees of its members for performing its functions and to submit recommendations for its approval.[52] The Council and its committees are also empowered to invite any technical experts or other persons with specialized knowledge on any subjects for assistance in performance of their functions.[53]

[45] Reports of the Ministry of Climate Change are available at http://www.mocc.gov.pk/Publications (last visited May 5, 2021), The report for the last year has still not been published.

[46] *Id*. at 67, Schedule III under Rule 4(4), List of Attached Departments Declared as such by the Federal Government, Entry 6.

[47] *Id*. Schedule II under Rule 3(3). Distribution of Business Among the Divisions, Entry 4.

[48] Nine (9) Federal Ministers include the Ministers for Climate Change Division, Finance Division, National Food Security and Research Division, Planning, Development and Reform Division, Petroleum Division, Science and Technology Division, Water Resources Division, Power Division, and Foreign Affair Division.

[49] Act, Sec. 3(4).

[50] *Id*. Sec. 3(1).

[51] *Id*. Sec. 3(5).

[52] *Id*. Sec. 3(6).

[53] *Id*. Sec. 3(7).

Notably, the Council is the primary authority for making adaptation and mitigation policies related to climate change and reduction of GHG emissions. It has been assigned various powers and functions with respect to coordination, supervision, monitoring and implementation under the Act to integrate its resilient ideas into development and planning activities of Pakistan.[54] In particular, the Council is required to (a) co-ordinate and supervise enforcement of the Act; (b) meet Pakistan's obligations under, and monitor implementation of, the international treaties including the Sustainable Development Goals (SDGs); (c) coordinate, supervise and guide climate change concerns into decision-making by the Federal and Provincial Governments; (d) approve and monitor implementation of comprehensive adaptation and mitigation policies, strategies and other plans of the Authority; (e) monitor implementation of the national, provincial and local adaptation plans and mitigation frameworks, and the national communications submitted to the Secretariat of UNFCCC; (f) approve guidelines for the protection and conservation of renewable and non-renewable resources, species, habitats and biodiversity; and (g) give appropriate directions on the National Climate Change Report.[55] In addition, the Council is authorized to direct any government authority in Pakistan to prepare, submit, promote or implement projects for adaptation or mitigation of the adverse effects of climate change; to promote climate-compatible, climate-resilient and sustainable development; or to undertake research in any aspect of climate change.[56]

2. 3. Climate Change Authority

The Federal Minister is required to establish the Authority,[57] comprising the Chairperson, Member Adaptation, Member Mitigation, Member Climate Finance, Member Coordination, nominees of the Provincial Ministers in charge of the Environment Protection Departments,[58] and members from the scientists, academia or professionals. However, the Act sets a very high bar to membership of the Authority in a country like Pakistan because it requires the members to have at least fifteen year of experience in fields related to climate change and the environment, with a distinguished service record.[59] These members, including the Chairperson, are appointed by the Prime Minister keeping in

[54] Gracie Pearsall, *Pakistan establishes new Climate Council with real powers to drive Climate Adaptation*, ACCLIMATISE NEWS, June 28, 2017, https://www.acclimatise.uk.com/2017/06/28/pakistan-establishes-new-climate-council-with-real-powers-to-drive-climate-adaptation/.

[55] Act, Sec. 4(1).

[56] *Id*. Sec. 4(2).

[57] *Id*. Sec. 5(1).

[58] *Id*. Sec. 6(1).

[59] *Id*. Sec. 6(3)

view their qualifications and experiences.[60] If the seat of Chairperson falls vacant for any reason, the senior-most member of the Authority is required to act as Chairperson till his successor is appointed.[61] Like the Council, the Authority may also invite representatives from public and private sectors, or technical expert or other person with specialized knowledge of any subject.[62] The Authority is empowered to engage professional and administrative staff[63] in a transparent and adequate manner.[64] The Federal Minister may also establish advisory committees for various sectors with eminent representation from the public and private sector in the Authority.[65]

The Act provides a comprehensive list of the functions of the Authority and many of its functions overlap with functions of the Council.[66] In particular, the Authority is required to prepare suitable adaptation and mitigation projects for submission to international and local institutions for funding; carry out Technology Needs Assessment and prepare Climate Change Technology Action Plan for seeking technical and financial support; formulate and coordinate implementation of low carbon and green growth strategies; and advise the governments to adopt appropriate legislative, policy and implementation measures for disaster preparedness, capacity building, institutional strengthening and awareness raising in relevant sectors affected by climate change.[67] In addition, it is required to design, establish and maintain a national registry and database on GHG emissions in accordance with international standards; to fulfill reporting and verification obligations under international conventions; to formulate national policy positions for international conferences or negotiations; to conduct research on issues of climate change, particularly Pakistan's vulnerability to it.[68]

The Authority is guided by the policy advice of the Division as well as the latest scientific knowledge and research relating to climate change and other environmental considerations, including its likely

[60] *Id*. Sec. 6(2)
[61] *Id*. Sec. 6(4)
[62] *Id*. Sec. 6(6)
[63] *Id*. Sec. 7(1)
[64] *Id*. Sec. 7(2)
[65] *Id*. Sec. 8(2)
[66] The Authority, generally, has all the powers necessary to execute its functions, and in particular, power to (a) manage, control and administer assets of the Authority, (b) enter into contracts or establish partnerships or associate with entities and organizations to support its functions, provided that agreement with foreign governments and organizations shall be entered into only with approval of the Government; (c) provide services or give guidance to public and private entities in relation to climate change matters; and (d) solicit, gather, obtain and verify any relevant information and data from any Federal or Provincial Ministry, Division or Department, or any public or private entity in connection with the performance of the functions of the Authority (*See* Sec. 10).
[67] Act, Sec. 8(1).
[68] *Id*. Sec. 8(1).

impacts on ecosystems, biodiversity, forestry and socio-economic development.[69] The Authority is required to prepare annual reports,[70] which are laid before the Parliament,[71] containing (a) a description of its activities; (b) progress of implementation of major climate change actions and their difficulties; (c) plans of the Authority for the next financial year; (d) audited accounts of the Authority, and (e) any other relevant information relating to functions of the Authority.[72]

The Act has also established the Pakistan Climate Change Fund (the "Fund"),[73] in which money from donations, endowments, grants and gifts, money raised by the Authority for the execution of its programs and projects, and money payable to the Fund under any other law, has to be paid or deposited.[74] The Fund has to be utilized in accordance with the prescribed procedure for (a) expenses of the Authority in the performance of its functions; (b) operational and administration expenses of the Fund; (c) financial assistance to suitable adaptation and mitigation projects and measures designed to combat the adverse effects of climate change, the sustainable development of resources and for research in any aspect of climate change; and (d) any other purpose which in the opinion of the Council shall help to achieve the purposes of the Act.[75] The Fund is managed by the Authority,[76] which has power to (a) sanction financial assistance for eligible projects in accordance with guidelines framed by the Council; (b) invest moneys held in the Fund in such profit-bearing Government bonds, savings schemes and securities; and (c) take such measures and exercise such powers as may be necessary for utilization of the Fund.[77] The Authority is authorized to constitute committees of its members to undertake regular monitoring of projects financed from the Fund and submit progress reports to the Authority.[78] The Authority is also required to prepare an annual report incorporating its annual audited accounts and performance evaluation based on the progress reports.[79] However, there is no prescribed procedure for utilization of the Fund and no guidelines can be issued unless the Council starts functioning.

[69] *Id*. Sec. 8(3)
[70] *Id*. Sec. 9(1)
[71] *Id*. Sec. 9(2)
[72] *Id*. Sec. 9(1)
[73] *Id*. Sec. 12(1).
[74] *Id*. Sec. 12(2)
[75] *Id*. Sec. 12(3)
[76] *Id*. Sec. 13(1)
[77] *Id*. Sec. 13(2)
[78] *Id*. Sec. 13(3)
[79] *Id*. Sec. 13(4)

3. Role of the Superior Courts in Compelling Government Responses

Pakistan does not have a specific right to environment in the Constitution of the Islamic Republic of Pakistan 1973 (the "Constitution"). The superior courts in Pakistan have, however, declared that the constitutional rights to life and dignity include the right to a healthy and clean environment.[80] When this right is read with constitutional principles of democracy, equality, social, economic and political justice, it also includes within its ambit and commitment, the international environmental principles of sustainable development, precautionary principle, environmental impact assessment, inter- and intra-generational equity and public trust doctrine.[81] The courts have certainly realized the effects of climate change and necessity of immediate implementation of climate change laws in the country. They have given this right a significant importance by declaring it as center stage of other constitutional rights and have recognized that the climatic variations are a clarion call for protection of fundamental rights of citizens, particularly the vulnerable and weak segments of the society.[82]

The superior courts in Pakistan have always taken prime interest and adopted progressive approach to deal with environment and climate change matters. One of the major reasons for this is the existence of constitutional powers of the superior courts in Pakistan to deal with violations of fundamental rights. In addition to various environmental remedies provided in different statutes, the Constitution allows the citizens to file public interest litigation before the Supreme Court and the High Courts to protect from violation of any fundamental rights of the public at large as well as to combat illegalities, injustice and social ills in the society.[83] In such cases, the courts are even empowered to interpret the principle of locus standi or aggrieved person liberally and are bound to protect the fundamental right to clean and healthy environment.[84] This ample discretionary power has allowed the Pakistani courts to develop a unique practice of establishing judicial commissions to address environmental concerns and to bring the government and other stakeholders on a single platform for discussion and planning about any environmental hazard.

[80] Sheila Zia; Asghar Leghari vs. Federation of Pakistan, PLD 2018 Lahore 364, Para 12.
[81] Asghar Leghari vs. Federation of Pakistan, PLD 2018 Lahore 364, Para 12.
[82] *Id.* Para 11 & 12.
[83] Constitution, Articles 199 and 185(3).
[84] Sheikh Asim Farooq vs. Federation of Pakistan, PLD 2019 Lahore 664, Para 22.

Justice Mansoor Ali Shah has taken the first initiative and is also playing a central and leading judicial role concerning climate change in Pakistan. While dealing with a public interest litigation highlighting the devastating impact of increase in frequency and intensity of climate extremes due to climate change, he constituted the Climate Change Commission in 2015 for effective implementation of the Policy and the Framework.[85] This was done to ensure that the concerned Ministries and Departments take charge of the matter so that Pakistan and its Province moves towards climate resilient development.[86] This commission made several recommendations with respect to the climate change co-ordination and monitoring, financial allocations, capacity building and improved infrastructure, separate ministry or commission for water, glacial melt and storage capacity, agriculture, energy, food security, public awareness, protection of ecologically sensitive habitats and species, and the required research in this regard.[87] Since these recommendations were consensus among different stakeholders, they were adopted by the Lahore High Court for implementation.

This commission has proved to be a driving force to sensitize the government and stakeholders regarding gravity and importance of climate change. This commission has materially assisted Pakistan in developing human capacity to face challenges of climate change because of able stewardship and expertise of its Chairman, Dr. Parvez Hassan, as well as passionate efforts of its other members. It rendered a remarkable public and pro bono service and successfully implemented almost 66.11% of priority actions under the Framework.[88] After dissolving this commission, a Standing Committee on Climate Change has been constituted[89] to act as a link between the Court and the Executive and to render assistance to the federal and provincial governments, the Ministry, the Council of Common Interest and the Planning and Development Department. The government functionaries have been required to engage and consider suggestions and proposals made by the Standing Committee in order to ensure that the Policy and the Framework are being implemented.[90]

[85] Asghar Leghari vs. Federation of Pakistan, PLD 2018 Lahore 364, Order dated 14 September 2015.
[86] *Id.* Para 13 & 19.
[87] Report of the Climate Change Commission dated 16 January 2016.
[88] Asghar Leghari vs. Federation of Pakistan, PLD 2018 Lahore 364
[89] The Members of the Standing Committee include: (1) Dr. Parvez Hassan, Advocate & Climate Expert as Chairperson, (2) Advocate General, Punjab, (3) Secretary Climate Change, Ministry of Climate Change, Islamabad, (4) Chairman, Planning and Development Department, Government of the Punjab, (5) Mr. Ali Tauqeer Sh., CEO and National Program Director, LEAD, Pakistan, and (6) Ms. Saima Amin Khawaja, Advocate/Environmentalist.
[90] Asghar Leghari vs. Federation of Pakistan, PLD 2018 Lahore 364, Para 25.

In addition to his above contribution, Justice Shah has also incorporated several environmental principles including the environmental justice, climate justice and intergenerational justice in his jurisprudence. In his landmark judgment, he has elaborated the environment justice to be a localized issue revolving around the national and provincial environmental laws and fundamental rights in the following words:

> 20. On a jurisprudential plane, a judge today must be conscious and alive to the beauty and magnificence of nature, the interconnectedness of life systems on this planet and the interdependence of ecosystems. From Environmental Justice, which was largely localized and limited to our own ecosystems and biodiversity, we have moved on to Climate Justice. Our environmental jurisprudence … has weaved our constitutional values and fundamental rights with the international environmental principles. The environmental issues brought to our courts were local geographical issues, be it air pollution, urban planning, water scarcity, deforestation or noise pollution. Being a local issue, evolution of environmental justice over these years revolved around the national and provincial environmental laws, fundamental rights and principles of international environmental laws. The solutions entailed penalties and shifting or stoppage of polluting industries based on a precautionary approach leading to the recognition of the Environmental Impact Assessment (EIA).

Similarly, he has described the climate justice in broader terms by creating its link with human rights, safeguarding the rights of the most vulnerable segments of the society and sharing the burden of climate change fairly and equitably. His role in moving the Pakistani jurisprudence from environmental justice to climate justice is also remarkable:

> 21. Enter Climate Change. With this the construct of Environmental Justice requires reconsideration. Climate Justice links human rights and development to achieve a human-centered approach, safeguarding the rights of the most vulnerable people and sharing the burdens and benefits of climate change and its impacts equitably and fairly. Climate justice is informed by science, responds to science and acknowledges the need for equitable stewardship of the world's resources. The instant case adds a new dimension to the rich jurisprudence on environmental justice in our country. Climate Change has moved the debate from a linear local environmental issue to a more complex global problem. In this context of climate change, the

identity of the polluter is not clearly ascertainable and by and large falls outside the national jurisdiction. ….

22. …. Climate Justice, therefore, moves beyond the construct of environmental justice. It has to embrace multiple new dimensions like Health Security, Food Security, Energy Security, Water Security, Human Displacement, Human Trafficking and Disasters Management within its fold. Climate Justice covers agriculture, health, food, building approvals, industrial licenses, technology, infrastructural work, human resource, human and climate trafficking, disaster preparedness, health, etc. While mitigation can still be addressed with environmental justice, adaptation can only be addressed through Climate Justice, where the courts help build adaptative capacity and climate resilience by engaging with multiple stakeholders.[91]

In another case concerning a notification to ban establishment and expansion of cement plants in negative areas falling within specific districts, Justice Shah has examined the notification in the larger context of climate change and declared it a climate resilient measure in line with the Policy and the Constitution.[92] He has also explained the principle of intergenerational justice in the following terms:

19. Another important dimension of climate change is intergenerational justice and the need for climate democracy. The tragedy is that tomorrow's generations aren't here to challenge this pillaging of their inheritance. The great silent majority of future generations is rendered powerless and needs a voice. This Court should be mindful that its decisions also adjudicate upon the rights of the future generations of this country. It is important to question ourselves; how will the future generations look back on us and what legacy we leave for them? This Court and the Courts around the globe have a role to play in reducing the effects of climate change for our generation and for the generations to come. Through our pen and jurisprudential fiat, we need to decolonize our future generations from the wrath of climate change, by upholding climate justice at all times. … Post climate change, democracies have to be redesigned and restructured to become more climate resilient and the fundamental principle of rule of law has

[91] *Id.* Para 21 & 22.
[92] D. G. Khan Cement Company Ltd vs. Government of Punjab, 2021 SCMR 834 (Supreme Court), Para 18.

> to recognize the urgent need to combat climate change. Robust democracies need to be climate democracies in order to save the world and our further generations from being colonized at the hands of climate change. The preambular constitutional value of democracy under our Constitution is in effect climate democracy, if we wish to actualize our Constitution and the fundamental rights guaranteed under the Constitution for ourselves and our future generations. …. We must restore and repair and care for the planetary home that will take care of our offspring. For our children, and our children's children, and all those yet to come, we must love our rivers and mountains and reconnect with the long and life-giving cycles of nature. To us there is no conflict between environmental protection and development because our answer would be sustainable development. Sustainable development means development that meets the needs of the present generation without compromising the ability of future generations to meet their needs and it is in step with our constitutional values of social and economic justice.

His example has also been followed by Justice Jawad Hassan while dealing with a public interest litigation concerning the drastic decrease in forest cover in Pakistan. Justice Hassan has developed the concept of urban forestry and directed the government authorities to protect the forest cover in Pakistan and plant trees specifically within urban areas.[93]

4. Measures to Strengthen Climate Change Legal Framework

Pakistan is living very dangerously under various environmental threats created by climate change. Although the Act helps Pakistan to present its positive image to the world, it primarily seems to be a mere exercise on paper for multiple reasons, including lack of enforcement mechanisms, establishment of institutions, capacity, support and funding. As a result, Pakistan suffers from various structural challenges to fulfil its international obligations under the international conventions. These challenges are, however, not out of its reach and Pakistan can overcome them with appropriate measures. In this regard, it needs to take multiple actions on all federal, provincial and local levels simultaneously in order to effectively perform its international obligations, including to achieve stabilization of GHG concentrations in its atmosphere and to contribute its share for holding the increase in global average temperature well below $2^{O}C$.

[93] Sheikh Asim Farooq vs. Federation of Pakistan, PLD 2019 Lahore 664

If we look at the overarching challenges to the Act, although it has been enacted to meet Pakistan's obligations under the international conventions relating to climate change and address the effects of climate change,[94] it does not serve both of these purposes. It merely constitutes the above the Council and the Authority for fulfilling their above-mentioned roles, but does not develop any substantive policy or goal and does not set any other standards concerning climate change. The Act does not have any enforcement provision or penalty mechanism for contravention of any of its provisions, like other statutes in Pakistan. If we look at examples of other countries, Australia Climate Change Act (2011) sets out certain principles that their climate change authority is bound to follow, including that its measures should be economically efficient, environmentally effective, equitable, and should support the development of an effective global response to climate change.[95] Similarly, Philippines Climate Change Act (2009) has declared the specific policy of Philippines in the Act to adapt and mitigate the effects of climate change,[96] and has otherwise required its climate change commission to prepare Framework Strategy and Program on Climate Change as well as to formulate National and Local Climate Change Action Plans within specified times.[97] In addition, the U.K. Climate Change Act (2008) is a well-thought out comprehensive statute providing specific targets, carbon budgeting, limit on use of carbon units, indicative annual ranges, proposals and policies for meeting carbon budgets, targeted GHGs, net U.K. carbon account, trading schemes, and impacts of and adaptation to climate change.[98] In contrast, Pakistan's Act does not set any policy or impose any kinds of limits to mitigate or adapt the effects of climate change.

As already explained, Pakistan also faces a significant challenge concerning implementation of the Policy, the Framework and the Act because the Council and the Authority are not functioning under the Act. The Ministry is the only functioning climate change institution in Pakistan, which is performing functions of the Council and the Authority. The Ministry has also fulfilled the NDC requirements under the Paris Agreement. As highlighted in some of its annual reports, the Ministry has

[94] Act, Preamble.
[95] Australia Climate Change Act, 2011, available at https://www.legislation.gov.au/Details/C2015C00317, Sec. 12.
[96] *Id*. Sec. 2.
[97] Philippines Climate Change Act, 2009, available at http://climate.emb.gov.ph/?page_id=68, Sec. 11, 13 & 14.
[98] U.K. Climate Change Act, 2008, available at https://www.legislation.gov.uk/ukpga/2008/27/contents.

made very insignificant contributions for achieving the objectives of the Act.[99] The annual reports show that there is no concrete plan of the Ministry to combat climate change, and even the facts provided about the climate of Pakistan in these reports lack any scientific basis and methodology. If Pakistan is really serious – as it has shown by passing the Act – it must constitute these authorities for performance of their functions and allow them to process the right information with a concrete vision. Otherwise, the Ministry alone cannot perform all the work and bring Pakistan's actions in conformity with the international standards developed under the conventions.

Another fundamental challenge to the climate change legal framework in Pakistan is that it has not framed rules and regulations for enforcing the provisions of the Act. The Federal Minister is authorized to make rules for carrying out the purposes of the Act, including rules for implementing the provisions of the international treaties relating to climate change.[100] Similarly, the Authority is empowered to make regulations, with the approval of the Federal Minister,[101] for (a) submission of periodical reports, data or information by any government authorities relating to climate change; (b) preparation of emergency contingency plans for extreme climatic events, natural disasters and calamities; and (c) appointment of its officers, advisers experts, consultants and employees.[102] However, no such rules or regulations have been framed by the Federal Minister or the Authority, which is one of the reason for lack of implementation of this Act in Pakistan.

Many jurists remain skeptical about achieving real impacts under the Act and argue the lack of competence of the Federal Government to take such action. As already stated, the subject of environment is not within legislative domain of the Federal Government in Pakistan after the Eighteenth Amendment. However, this Act has been enacted by the Federal Government, which creates significant confusion between the powers of the provincial departments created for environmental

[99] *Year Book 2018-19*, Ministry of Climate Change, available at http://www.mocc.gov.pk/SiteImage/Misc/files/Consolidated%20YEAR%20BOOK%202018-19.pdf (explaining that the Environment Wing in the Ministry has highlighted some of its activities in its annual reports, including preparing the Second National Communication on Climate Change under UNFCCC, and participation in 24th Conference of Parties of UNFCCC, 4th Session of United Nations Environment Assembly and 3rd Forum of Ministers & Environment Authorities of Asia Pacific in Singapore (Sec. 16, 17 & 21)).

[100] Act, Sec. 17.

[101] *Id*. Sec. 19(1).

[102] *Id*. Sec. 19(2).

protection and the national institutional created specifically to address climate change.[103] One of such confusion can be seen from the provisions of the KPK Act, in which the KPK EPA is empowered to address the impacts of climate change in KPK.[104] Similarly, KPK government is also empowered to make rules and regulations for implementation of all the climate change conventions.[105] In addition, there is also confusion between powers of the Ministry, the Division, the Council and the Authority themselves. If these authorities are going to work in parallel in future after their establishment, Pakistan needs to carefully design a strategy for the working of these institutions so that it does not overlap or conflict the provincial autonomy of the provinces in Pakistan. Pakistan may also consider to amend the Constitution to empower the Federal Government to legislate on the subject of environment or climate change in order to have a uniform policy of environment across Pakistan.

Although Pakistan has realized its vulnerability to climate change, it does not have proper scientific, technological and other research support to achieve the goals listed in the climate change conventions. Only the research wing of the Ministry is a dedicated research institution in Pakistan concerning climate change, but it has not been functioning because of the non-appointments of officers in different positions.[106] The Ministry has listed some of the research of Pakistani authors published in national and international journals, but all of this is individual contribution of the authors and not of the Ministry.[107] There are very few publications by Pakistani scientists adding substantive value to the literature regarding climate change. Such reports are more often published in the news, rather than any high quality international or national journal. One of the possible justifications for this purpose can be that Pakistan is a developing country that lacks the necessary funding for this purpose.

According to an estimate, Pakistan needs around USD 40 billion for mitigation measures to achieve its target of twenty percent GHG emissions reduction by 2030 and an additional USD 14 billion to adapt to the effects of climate change each year.[108] However, Pakistan has not contributed to climate change

[103] Zofeen T. Ebrahim, *Pakistan passes climate change act, experts remain sceptical*, DAWN, Mar. 28, 2017, https://www.dawn.com/news/1323574.

[104] KPK Environmental Protection Act, 2014, Sec. 6(1)(x).

[105] *Id.* Sec. 31 & 32.

[106] *Id*.

[107] *Year Book 2018-19*, Ministry of Climate Change, available at http://www.mocc.gov.pk/SiteImage/Misc/files/Consolidated%20YEAR%20BOOK%202018-19.pdf, Annex I.

[108] Gracie Pearsall, *Pakistan establishes new Climate Council with real powers to drive Climate Adaptation*, ACCLIMATISE NEWS, June 28, 2017, https://www.acclimatise.uk.com/2017/06/28/pakistan-establishes-new-climate-council-with-real-powers-to-drive-climate-adaptation/.

and its contribution to GHG emissions is even less than 1%, and even otherwise, Pakistan cannot bear the cost of climate change with its weak economic conditions. Under the principle of common but differentiated responsibilities, the developed countries must realize their obligations under the Paris Agreement and support Pakistan financially to reduce GHG emissions and in other projects of climate resilience and low-carbon growth. This support is crucial for a country like Pakistan which has the necessary legal infrastructure and no resources to bear enormous costs for implementing adaptation measures. Even if Pakistan is able to gather the required funds, how those will be utilized, shall remain another challenge because most of its problems are associated with corruption, including the poor implementation of its environmental laws.[109]

Conclusion

Pakistan is taking the lead in protection of its environment and to contribute for stabilizing the global GHG emissions with its various innovative projects. Although planting the trees will give Pakistan more tree-cover and some other environmental benefits, this will not be sufficient to address its environmental or climate change problems. It is time for Pakistan to take action and make a real difference by appointing the authorities with well-crafted powers and promoting research in climate change and by taking other bold steps for meeting its obligations under the international conventions. If climate change is held at its current trajectory, Pakistan's condition will continue to worsen with time unless it is provided with the support through required funding and transfer of scientific technology. While the legislative jurisdiction of the Federal Government of Pakistan is under question with respect to environment matters, the Act is certainly an improvement in Pakistan system because it needs to have a national approach – rather than different provincial approaches – to receive benefits and international funding from the developed nations to fight against the adverse impacts of climate change.

[109] Abdul Sattar & Diaa Hadid, *With Glaciers Melting and Temps Soaring, Pakistan Pursues Big Action On Climate Change*, NPR, Sept. 29, 2020, https://www.npr.org/2020/09/29/916878679/with-glaciers-melting-and-temps-soaring-pakistan-pursues-big-action-on-climate-c.

Facing the Age of Emergencies:

New re/actions On The Climate Change and Energy Transition in Spain

Susana Borràs-Pentinat[*)]

Introduction

While the current global health and economic crisis persist, the climate crisis continues to worsen. All of them are declared as emergencies, but unfortunately, they do not receive equal attention or sense of urgency.

Currently, Spain is one of the country's most vulnerable to climate change in Europe. Within this context, it would be expected that greenhouse gas emissions would have been significantly reduced. However, on the contrary, Spain is the European Union state in which greenhouse gas emissions grew the most between 1990 and 2017, increasing by almost 18% compared to the EU as a whole, which reduced them by 23.5%[1].

The average temperature in the country was 1.7 degrees higher in 2020 than in the pre-industrial era (the period between 1850 and 1900). However, the rate of warming has been increasing in recent decades and over the last 60 years the cumulative increase is 1.3 degrees Celsius[2]. Droughts, floods

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[1] See Secretaría Confederal de Medio Ambiente y Movilidad de Comisiones Obreras (CCOO), *Evolución de las emisiones de gases de efecto invernadero en España (1990-2017)*, 2018. In 2019, greenhouse gas emissions decreased by 5.8% compared to the previous year. After the decrease in 2018 and 2019 and the increase in 2017, emissions are 8.8% higher than in the base year 1990 and 28.8% lower than in 2005. Emissions in the base year 1990 were 289.4 million tonnes of CO2 equivalent, emissions in 2005 were 442 million tonnes of CO2 equivalent and emissions in 2019 were 314.9 million tonnes of CO2 equivalent based on preliminary data as of March 2020. In 2018, emissions were 334.25 million tonnes of CO2 equivalent. Although Spain has reduced its emissions by 5.8% in 2019, it is still insufficient, according to a report by the Sustainability Observatory, which highlights that Spain is 8.8% above 1990 greenhouse gas emissions. See Observatorio de la Sostenibilidad, Emisiones de gases de efecto invernadero en España (1990-2019). Available at: <https://www.observatoriosostenibilidad.com/documents/EVOLUCI%C3%93N%20EMISIONES%20GEI%20ESPA%C3%91A%20%281990-2019%29%20v03.pdf>, accessed 27th December 2021.

[2] Agencia Estatal de Meteorología (AEMET), *Informe sobre el estado del clima de España 2020*, Ministerio para la Transición Ecológica y el Reto Demográfico Agencia Estatal de Meteorología Madrid, 2021.

and fires are an increasingly devastating reality in Iberian Peninsula. Extreme weather events of this kind cost our country an average of almost 700 lives and 900 million euros per year[3].

Spain has been a party to the United Nations Framework Convention on Climate Change since its ratification in 1992[4], as well as to the Kyoto Protocol, since 2002[5], and to the Paris Agreement, since 2017[6].

Even so, there has been no urgent reaction to this critical situation until recently, when the European Union (hereinafter, EU) has adopted regulations for the reduction of greenhouse gas emissions by 2030, a 55% reduction of greenhouse gases compared to 1990. Through the European Green Deal, a new growth strategy is being addressed, which aims to transform the European Union into a fair and prosperous society, a modern, resource-efficient and competitive economy, aiming to be a climate-neutral continent by 2050. In order to reinforce compliance with this objective, Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality ("European Climate Law")[7], converting these commitments into obligations for all Member States. As a complement to the European Climate Law, a few days after its publication, the European Commission presented the new "Fit for 55" package of measures.

In this context and after many years of asking a climate change legislation and a long two years of development and debate for its approval, Spain now has its first Law on Climate Change and Energy Transition (Ley de cambio climático y transición energética, hereinafter, LCCTE). The LCCTE, adopted in 2021, sets out the main lines of action for the transition to a carbon neutral and sustainable economy in the coming years. Although this complex effort to pass a law on climate change, according

[3] According to the Climate Risk Index (2019), Spain is ranked 32nd, which is a considerable advance on this scale compared to 2018 (when it was ranked 38th) and 2017 (47th). In the last four months of 2019, Spain suffered a series of very severe storms, which caused significant flooding and damage. Germanwatch has recorded 24 deaths and direct damage worth $4.39 billion (€3.61 billion). See Germanwatch, *Global Climate Risk Index*, 2021.

[4] Instrument of ratification of the United Nations Framework Convention on Climate Change, done at New York on 9 May 1992. Published in: BOE no. 27, of 1 February 1994, pp. 3125 to 3136 (12 pp.).

[5] Instrument of Ratification of the Kyoto Protocol to the United Nations Framework Convention on Climate Change, done at Kyoto on 11 December 1997. Published in: BOE no. 33, of 8 February 2005, pp. 4131 to 4143 (13 pp.).

[6] Instrument of ratification of the Paris Agreement, done at Paris on 12 December 2015. Published in: BOE no. 28, of 2 February 2017, pp. 7703 to 7727 (25 pp.).

[7] Published on 9 July 2021 and entered into force on 29 July 2021, Official Journal of the European Union, L 243/1, 9.7.2021.

to the Climate Change Performance Index (2022), Spain has worsened its climate performance situation, dropping from 34th to 41st place compared to last year[8].

At the regional level[9], climate legislation was ahead of the central state, as some of Spain's 17 regions, the only ones, had already drafted their own climate legislation: Catalonia, Andalusia and the Balearic Islands[10]. Seven other have started work on it: the Basque Country, Valencia, Navarra, Castilla y León, La Rioja and the Canary Islands are in the process to approve a new climate law. For example, Andalusia is already in the process of drafting a Circular Economy Law and in the Basque Country they are seeking to ensure that industry consumes recycled raw materials to minimize landfill and promote reuse; for its part, Cantabria is considering updating the Action Strategy and drawing up the Circular Economy and Bioeconomy Strategy. Navarra is committed to a sustainable solar electricity project, La Rioja is already working with circular economy plans that are about to start public participation, and Castilla y León is seeking a zero waste culture. Castilla-La Mancha has already promoted the Circular Economy Law and the Environmental Impact Law, in addition to its commitment to sustainable economic recovery[11].

In this context, the present contribution focuses on the head and tail of Spanish responses to the declared climate emergency in the light of new climate change legislation adopted this year 2021. In this regard, the first part of this work will deal with the climate action, a critical analysis of the most relevant aspects of a new regulation in Spain on climate change. The second part will look over the climate reaction, through the first climate case law in Spain, which reflects the need to gain more ambition to address the climate emergency.

[8] Every year since 2005, the Climate Change Performance Index (CCPI) independently monitors the performance, policies and measures of 57 countries plus the European Union as a whole, reflecting on their role, their inadequacy or otherwise, and the overall climate landscape. See Jan Burck, Thea Uhlich, Christoph Bals, Niklas Höhne, Leonardo Nascimento, Ana Tamblyn and Jonas Reuther, *Climate Change Performance Index 2022*, Germanwatch, NewClimate Institute & Climate Action Network, 2022.

[9] Most Spanish environmental laws derive from the transposition of EU legislation. The local Autonomous Regions (*Comunidades Autónomas*) can develop and enforce their own environmental legislation, and local authorities have environmental protection powers. At state level, the Ministry for Ecological Transition and Demographic Challenge is the main regulatory body.

[10] Catalonia: Ley 16/2017, de 1 de agosto, del Cambio Climático (DOGC de 3 de agosto de 2017); Andalucia; Ley 8/2018, de 8 de octubre, de medidas frente al cambio climático y para la transición hacia un nuevo modelo energético en Andalucía (BOJA, n. 8 de 14 de enero 2020); Balearic Islands: Ley 10/2019, de 22 de febrero, de cambio climático y transición energética (BOIB, 2 de marzo 2019). Regarding these regional legal acts, see Aitana De La Varga Pastor «Estudio de la ley catalana 16/2017, de 1 de agosto, de cambio climático, y análisis comparativo con otras iniciativas legislativas subestatales». *Revista Catalana de Dret Ambiental*, 2018, pp. 1-56.

[11] Aitana De La Varga Pastor, *Ibid*.

1. Actions: Climate change and Energy Transition

The Law 7/2021, of May 20, 2021, on Climate Change and Energy Transition[12], approved by the Council of Ministers on 29 June 2018 and in force from 22 May 2021, is one of the nine policy levers of the Action Plan for the Implementation of the 2030 Agenda. In accordance with EU requirements, the Spanish government had to implement the 2019 Strategic Framework for Energy and Climate, which consisted of three documents for the period 2021-2030: (a) the Just Transition Strategy, which included reactivation, training and other measures in favour of sectors affected by decarbonisation, as well as urgent action plans for coal regions and plants in the process of closure; (b) the Integrated National Energy and Climate Plan, which specified the measures needed to achieve the objectives of reducing emissions, increasing renewable energies and energy efficiency; and (c) this new Climate Change and Energy Transition Law[13].

The LCCTE places climate change and the energy transition at the center of political action, requiring technological and industrial transformations, thus linking the energy transition to industrial policy and R&D and establishing mechanisms to support industry.

According to the third final provision of the LCCTE, the Spanish State used various constitutional competences[14]. The main ones are those relating to the "bases and coordination of the general planning of economic activity" (Spanish Constitution: art. 149.1.13th), to "basic legislation on environmental protection" (Spanish Constitution: art. 149.1.23rd) and to the "bases of the mining and energy regime" (Spanish Constitution: art. 149.1.25th). The three titles are of a basic nature and have their relationship with the competences of the Autonomous Communities that imply and demand an important participation of the latter in the elaboration of the corresponding instruments. However, there is hardly

[12] Ley 7/2021, de 20 de mayo, de cambio climático y transición energética, Boletín Oficial del Estado nº121, 21 de Mayo de 2021. Available at: <https://boe.es/diario_boe/txt.php?id=BOE-A-2021-8447>. For a comprehensive doctrinal analysis of this Law see: Anna Pallares Serrano, «Análisis del proyecto de Ley de cambio climático y transición energética: luces y sombras», *Revista Catalana de Dret Ambiental,* 2020, pp. 1-42.

[13] For a more comprehensive analysis Alberto Palomar Olmeda and Ramon Terol Gómez (Dir.), *Comentarios a la Ley 7/2021, de 20 de mayo, de cambio climático y transición energética,* Aranzadi, 2021.

[14] See 1978 Spanish Constitution. Passed by the Cortes Generales in Plenary sittings of the Congress and the Senate held on October 31, 1978; ratified by referendum of the Spanish people on December 7, 1978 and sanctioned by His Majesty the King before the Cortes Generales on December 27, 1978. Modified by the Cortes Generales in the Plenary sittings of the Congress held on July 22, 1992 and of the Senate held on July 30, 1992 and sanctioned by His Majesty the King on August 27, 1992.

any reference in the Law to regional participation in the drafting, much less in the approval of the numerous planning and programming instruments envisaged[15].

The LCCTE has 68 provisions: 40 articles (structured in nine titles), 9 additional provisions, 3 transitional provisions, 1 sole repealing provision, and 15 final provisions. Some of the most relevant aspects of the LCCTE are discussed below.

1.2. Guiding principles and objectives

Article 2 of the LCCTE (Title I) is based on several guiding principles such as sustainable development, decarbonisation of the economy, environmental protection, social and territorial cohesion, non-regression, polluter pays, resilience and gender equality, among others. Importantly is the principle of non-regression, which is defined as "[...] that by virtue of which the regulations, the activity of the Public Administrations and jurisdictional practice may not imply a quantitative or qualitative reduction or regression with respect to the levels of environmental protection existing at any given time [...]". In other words, the line set by the Law and the environment, in which it is framed, such as the Paris Agreement[16] or the United Nations Agenda for Sustainable Development[17], cannot be reversed.

According to its Article 1 of the LCCTE aims to ensure compliance with the objectives of the Paris Agreement, adopted on December 12, 2015, signed by Spain on April 22, 2016[18]. Thus, this Law aims to ensure the achievement of the objective of neutrality of greenhouse gas emissions in Spain before 2050 and an efficient and renewable energy system, as well as facilitating the decarbonization of the Spanish economy, facilitating a just transition to a circular model, to guarantee the rational and supportive use of resources. Also it intends to promote adaptation to the impacts of climate change and the implementation of a sustainable development model that generates quality employment and contributes to the reduction of inequalities.

The LCCTE contains the regulatory elements of the first National Integrated Energy and Climate Plan (hereinafter, PNIEC) as well as the successive ones to be submitted to the European Commission and

[15] See Fernando López Ramón, «Comentarios legislativos», *Actualidad Jurídica Ambiental*, n. 114, 2021.
[16] U.N. Doc. FCCC/CP/2015/L.9/Rev/1 (Dec. 12, 2015).
[17] A/RES/70/1 - Transforming our world: the 2030 Agenda for Sustainable Development.
[18] Cit. supra.

it responds to Spain's commitment at international and EU level. The article 3 of the Law sets up a series of minimum national targets for greenhouse gas emission reductions, renewable energy and energy efficiency. By 2030, it will be necessary:

- to reduce of at least 23% of greenhouse gas emissions compared to 1990;
- a penetration in the final energy consumption of at least 42% of renewable energies;
- at least 74% of the generation in the electrical system is of renewable energies and
- a decrease of at least 39.5% in primary energy consumption with respect to the baseline in accordance with EU regulations.

By 2050, Spain must achieve climate neutrality, in order to comply with internationally assumed commitments, and without prejudice to the competences of the autonomous regions. By then, the electricity system must be based exclusively on renewable generation sources.

These goals set are, at a glance, insufficient, since, according to the United Nations, an annual reduction of 7.6% in emissions is necessary until 2030[19], which, by that year, implies an objective of at least 55% - and not 23%, as the Law states - in order to avoid a global warming scenario of over 1.5ºC. Apparently, nor are they convinced by the idea of achieving neutral emissions by mid-century, and they are calling for the deadline to be brought forward by ten years.

1.2. Programmatic framework

To achieve these objectives, the LCCTE forms the strategic framework on energy and climate together with the National Integrated Energy and Climate Plan (PNIEC 2021-30), the Just Transition Strategy and, complementarily, the Long-Term Strategy for Decarbonization 2050 (ELP 2050) and the National Climate Adaptation Plan (PNACC).

The PNIEC is particularly important, as it constitutes a planning tool for major energy and climate policy decisions and the associated public and private investments. PNIEC covers the period 2021-2030 and outlines an ambitious horizon, taking up the objectives set out in article 3 of the Law. The

[19] UNEP, UNEP DTU Partnership, *Emissions Gap Report 2021*. Available at: <https://www.unep.org/resources/emissions-gap-report-2021>, accessed 27th December 2021.

second major climate action instrument envisaged is the Decarbonization Strategy to 2050, which will establish a path for reducing emissions and increasing removals by sinks by all economic sectors over a long-term horizon. This strategy will be reviewable every five years and will be essential for meeting the objectives set by the European Union.

Likewise, the approval of (i) National Plans for Adaptation to Climate Change aimed at mitigating and anticipating the risks derived from climate change; and, (ii) Just Transition Strategies and Agreements, are foreseen to ensure equality and solidarity between territories and people.

1.3. Specific measures and obligations

In addition to containing the programmatic framework and the principles that should guide the actions of public administrations to achieve their objectives, this law establishes specific measures and imposes obligations of great relevance to private sector actors and the rest of society. As described below, the LCCTE covers the field of renewable energy and energy efficiency, energy transition and fuels, mobility and transport, adaptation to the effects of climate change, just transition measures, domestic resources for climate change and energy transition and governance and public participation.

a) Renewable energy and energy efficiency (Title II)

Regarding to the renewable energy and energy efficiency, the LCCTE (articles 7 and 8) establishes that new concessions granted on the public hydraulic domain for the generation of electricity will have as a priority the support for the integration of renewable technologies in the electricity system. To this end, in particular, reversible hydroelectric power plants will be promoted. These measures will contribute, by the end of this decade, to 74% of electricity consumption coming from renewable energy sources. This percentage should reach 100% by 2050. To this end, in the coming months a law will be passed to reform the electricity sector, all renewable energy plants will be promoted, including biomass and reversible hydroelectric plants, and the Horizontal Property Law will be reformed to facilitate self-consumption in homes and buildings. The energy refurbishment of homes will also be promoted to improve their efficiency.

b) Energy transition and fuels (Title III)

Also noteworthy are the measures relating to cease authorizations to carry out activities related to the new exploration, research and exploitation projects for hydrocarbons and coal in all Spanish territory, including coastal areas, as well as vetoes fracking and the extraction of radioactive minerals such as uranium (article 9). However, the Law still contemplates aid for fossil fuel energy products, when it establishes that the application of these tax benefits must be "duly justified for reasons of social and economic interest or the inexistence of technological alternatives" (article 11), although it establishes that there will be a review schedule. In this sense, tax benefits or subsidies for energy products of fossil origin will be withdrawn, as long as there is a technological alternative to replace them. The use of gases and other fuels such as biogas, biomethane or hydrogen from the reuse of organic waste of animal or vegetable origin, or from raw materials and energy of renewable origin, will be promoted (article 10). In addition, targets will be set for the use of sustainable alternative fuels in air transport.

The promotion of these renewable gases (biogas, biomethane and hydrogen –article 12) in transport and the injection of these gases into natural gas networks could mean the permanence of this fossil fuel in the energy matrix and, therefore, delay decarbonisation. Furthermore, it opens the door to the use of these alternative fuels for all types of transport, when in fact they should be relegated to those such as air or heavy transport, where electrification, which is more efficient, but not viable.

c) Mobility and transport (Title IV)

The promotion of sustainable mobility is another of the key points of this law on climate change and energy transition, in particular because 29% of greenhouse gas emissions in Spain are generated by transport. This makes it the most polluting sector in the country in terms of its carbon footprint. Therefore, the LCCTE emphasizes the phasing out of diesel and petrol vehicles, although the roadmap has significant challenges (article 13). Measures will be adopted to achieve a fleet of passenger cars and light commercial vehicles with no direct CO2 emissions by 2050, as well as the installation of electric recharging points (article 15). To this end, the National Integrated Energy and Climate Plan will establish targets for 2030 for the penetration of vehicles with zero or low direct CO2 emissions in the national vehicle fleet according to their different categories.

Municipalities with more than 50,000 inhabitants and island territories must introduce mitigation measures in urban planning to reduce emissions from mobility, including, at least the establishment of low emission zones no later than 2023; facilitate walking, cycling and other active modes of transport, associating them with healthy lifestyles; improve and use of the public transport network, electrification of the public transport network and other fuels without greenhouse gas emissions, such as biomethane; encourage the use of private electric means of transport, including recharging points and promote shared electric mobility.

d) Adaptation to the effects of climate change (Title V)

The National Plan for Adaptation to Climate Change (hereinafter, PNACC) is the basic planning instrument to promote coordinated and coherent action against the effects of climate change in Spain. For the first time, the PNACC will establish strategic objectives and the definition of a system of indicators of impacts and adaptation to climate change, as well as the preparation of risk reports. The Law also provides for the integration of climate change risks into sectoral policy planning and management. Every five years, a national climate change adaptation plan will have to be approved that will address different sectors described in articles 17 to 26: Water planning and management. (Article 19); Maritime-terrestrial public domain (Article 20); Territorial and urban planning and management, interventions in the urban environment, building and transport infrastructures. (Article 21 and transitional provision no. 3); Food safety and diet (Article 22); Public health (Article 23); Protection of biodiversity (Article 24); Rural development: agricultural policy, forestry policy and renewable energy (Article 25) and Enhancement of the absorption capacity of carbon sinks. (Article 26). In addition, the law will force successive governments to follow a strategy for the conservation and restoration of ecosystems and the protection of particularly sensitive species.

e) Just transition measures (Title VI)

The LCCTE establishes that a Just Transition Strategy will be published every five years, including measures to ensure that the climate change actions and, in particular, the energy transition do not generate inequalities and social injustices. This is the state-level instrument aimed at optimizing opportunities in activity and employment in the transition to a low greenhouse gas emission economy. Its implementation will be articulated around the "Just Transition Agreements" (article 28), instruments

developed with the participation of the Autonomous Regions, local entities and social and economic agents to define specific actions for a territory or group. In addition, there will be a cessation of domestic coal production. The granting of operating authorizations, permits, concessions, extensions or transfers of the coal resources of the production units included in the Spain's Closure Plan for Non-Competitive Coal Mining in the framework of Decision 2010/787/EU will be subject to the repayment of the aid granted under the aforementioned decision, corresponding to the entire period covered by the closure plan.

a) Domestic resources for climate change and energy transition (Title VII)

The Law stipulates, with the exceptions established therein, that at least a percentage of the General State Budget must have a positive impact on climate change. In addition to other measures such as: the use of revenues from the auctioning of greenhouse gas emission rights, or the inclusion in contracting specifications of award criteria linked to the fight against climate change and specific technical requirements that establish the necessary reduction of emissions and carbon footprint (article 31).

The percentage of the General State Budget that must contribute to the objectives set for climate change and the energy transition will be the equivalent of the percentage agreed in the European Union's Multiannual Financial Framework. This percentage will be revised upwards in 2025.

Revenues from the auctioning of greenhouse gas emission allowances will be used to meet climate change and energy transition targets, and up to 30% of the total revenues may be used for measures with a social impact to alleviate situations caused by the transition to a decarbonized economy, or related to vulnerability to the impacts of climate change. The percentage of these revenues will be set each year through the General State Budget.

Moreover, measures are established to integrate climate change in public procurement procedures.

Financial institutions will publish specific decarbonisation targets for their lending and investment portfolio aligned with the Paris Agreement from 2023 (Article 32). These institutions have to elaborate an annual report assessing the financial impact on society of the risks associated with climate change generated by the exposure of its activity to climate change, including the risks of the transition to a sustainable economy and the measures adopted to address these risks.

The shortcoming of this section is that it does not include an obligation for large Spanish public companies to prepare climate action plans with their climate action commitments.

b) Education, Research and Innovation (Title VIII)

Article 35 is dedicated to education and training in the face of climate change. Curricula will be adapted and the National Catalogue of Professional Qualifications will be updated, as well as the catalogue of training offers in the field of Vocational Training that provide training in professional profiles specific to environmental sustainability and climate change and energy transition.

Article 36 is for research, development and innovation. It will be one of the priorities of the Spanish Science, Technology, and Innovation Strategies and in the State Plans for Scientific and Technical Research and Innovation, in which independent experts must be involved. Additional Disposition 8ª foresees the use of nationally available testing facilities for this research.

c) Governance and Public participation (Title IX)

Particularly important is that the LCCTE provides for the creation of an independent Committee of Experts on Climate Change and Energy Transition, responsible for evaluating and making recommendations on energy and climate change policies and measures, including regulations. It will draw up an annual report that will be submitted to the Congress of Deputies for debate, with the participation of the Government.

The plans, programs, strategies, instruments and general provisions adopted in the fight against climate change and the energy transition towards a low-carbon economy will be carried out under open formulas that guarantee the participation of interested social and economic agents and the public in general. In this sense, Article 39 of the Climate Change Law includes the creation of a Citizens' Climate Change Assembly at the national level, and the recommendation that regional and municipal assemblies be established. The aim of this Assembly is to strengthen the mechanisms for citizen participation in the decision-making process on climate change.

Finally, the additional provisions of the Law include other measures, such as the adoption of an international climate finance strategy, the promotion of the circular economy through a draft Law on Waste and Contaminating Soils and the development of three-year plans within the framework of the Spanish Circular Economy Strategy, the constitution of a group of experts to evaluate a tax reform that will assess green taxation, the promotion of research, development and innovation in renewable energies and a plan to reduce the energy consumption of the General State Administration.

2. Re-Actions to the insufficient action: The first climate case law against the Spanish government for non-compliance with its climate obligations

Climate litigation has multiplied in recent years around the world and Spain has been no exception. Before to pass the new Law on Climate Change and Energy Transition in May 2021, on 15 September 2020, Greenpeace, Ecologistas en Acción and Oxfam Intermón initiated the first climate litigation in Spain, along with Fridays For Future and the Coordinadora de Organizaciones para el Desarrollo, as co-complainants[20]. On 30 September 2020, the Third Chamber of the Supreme Court admitted the administrative appeal filed against the Spanish government for climate inactivity and required the Ministry of the Presidency to present its administrative file within 20 days. After having the governmental file, plaintiffs considered it incomplete and requested to Court to order an expanded file. The Court rejected this application, and plaintiffs appealed.

All these organizations have denounced that the late and inadequate response of Spanish Government to the climate emergency puts the country at risk and exposes people and the environment to increasingly catastrophic consequences of climate change. According to the plaintiffs, the Government has fulfilled with much delay the obligation imposed by the European Union to approve a PNIEC containing the emissions reduction roadmap for 2030. In addition, there is a lack of ambition and a failure to meet the Plan's emission reduction targets, according to international commitment made by Spain in the Paris Agreement and the best available science. The Plan establishes a 23% emissions reduction target for 2030, when the scientific recommendation is that emissions should be reduced by at least 55% (7.6% per year in the current decade), in order to have the possibility of not exceeding the

[20] Read the petition at: <https://es.greenpeace.org/es/wp-content/uploads/sites/3/2020/12/DDA-INACTIVIDAD-CLIMATIVA-GP-EA-OI.pdf> accessed 27th December 2021.

temperature by more than 1.5º Celsius. While the EU has increased its global emissions reduction target for 2030 from 40% to 55%, the Spanish government proposes only 23% for the same period.

In particular, the lawsuit focuses on the fact that the Executive had failed to comply with the obligation set out in Regulation (EU) 2018/1999, on the governance of the Energy Union and Climate Action, which established the approval of an Integrated National Energy and Climate Plan (PNIEC) and a Long Term Strategy (ELP). After passing the LCCTE, while the government submitted a brief requesting dismissal of the case for lack of subject matter jurisdiction, the plaintiffs filed an additional case challenging the National Energy and Climate Plan. Mainly because both the National Integrated Climate and Energy Plan (PNIEC) and the LCCTE establish a 23% reduction in emissions by 2030 compared to 1990, far from the 55% that the country should assume in order to contribute, in accordance with its historical capacity and responsibility, to limit global warming to 1.5º and avoid the worst effects of climate change.

Among the data and arguments put forward in the lawsuit, it is worth noting that the Spanish government predicts that in 2030 the country will still be dependent on fossil fuels for more than 64% of its energy consumption. An energy model based on fossil fuels, in addition to being responsible for climate change, seriously pollutes the air, which, according to reports by the European Environment Agency, causes more than 30,000 premature deaths in Spain each year[21]. The organizations point out that the abandonment of fossil fuels is essential not only to avoid the worst impacts of climate change, but also to improve air quality.

On 14 June 2021, the Supreme Court rejected the defendants' motion, considering that the approval of the National Energy and Climate Plan did not exhaust plaintiffs' claims. The Court ordered to align the Plan with the Paris Agreement objectives. The case is still pending, after the government appeal submitted on June 30[22].

[21] EEA Report No 9/2020, Luxembourg: Publications Office of the European Union, 2020.

[22] Greenpeace et al v. Spain II. See all documents of the case at: Grantham Research Institute, Climate Change Laws of the World, <https://climate-laws.org/geographies/spain/litigation_cases/greenpeace-et-al-v-spain> and <http://climatecasechart.com/climate-change-litigation/non-us-case/greenpeace-v-spain-ii/>, accessed 27th December 2021.

Thus, this court case in Spain remains open to see how it will be its contribution to the list of climate litigation cases filed around the world in recent years. Anyway, this case offers a window of opportunity to improve the climate action in Spain.

Conclusion

Spain is one of the country's most vulnerable to climate change in Europe, although it has increased its emissions between 1990 and 2017. These facts oblige Spain to increase its efforts to reduce emissions, so that future generations can enjoy an environment that allows them to live in dignity.

In this line is the new regulatory framework based on the new LCCTE that is the first law in Spain to address climate change from a fairly comprehensive and ambitious perspective, covering most of the issues on which to strengthen the climate legislation. This is important, since climate neutrality, that climate change demands, requires the establishment of a low-carbon economy, which as the LCCTE's Preamble states will only be achieved through "a profound change in growth and development patterns".

Despite being the first, but late, specific regulation to address mitigation and adaptation to the climate crisis, the LCCTE has important contributions, but also some limitations. Main contributions are first, the imposition of the climate approach in all types of public actions and decisions and second its transversality, since it is applied to all public policies that have some kind of climate impact or that are affected by the adverse effects of climate change. Other positive aspects include: the end to new fossil and nuclear exploitation; the need to adapt to climate change, through the planning and management of the public maritime land domain; the establishment of low-emission zones in urban areas; the need for companies, financial institutions and insurers to integrate climate risk into their decisions; disinvestment in fossil energy products by the General State Administration; reduction of emissions and carbon footprint in public procurement; energy refurbishment and self-consumption.

Although such important contributions, the LCCTE is not sufficient and present some limitations. First and most important limitation, which compromises its effectiveness, is the insufficient ambition of the greenhouse gas emissions reduction target. This target is not in line with what science recommends in order not to exceed the 1.5ºC global temperature rise threshold, as the Law itself acknowledges in the Preamble, which literally states "Further measures are still needed to reduce global GHG emissions by

7.6% per year, as recommended by the United Nations Environment Programme (UNEP)". Second limitation is that the LCCTE is addressed to the Administration, and does not include obligations for individuals and companies. Therefore, it is noteworthy that it does not include a sanctioning regime that could be applied in the event of non-compliance. Other limitations are the aid for energy products of fossil origin is envisaged and the promotion of renewable gases (biogas, biomethane and hydrogen) in transport, injected into natural gas networks. Furthermore, it neglects key sectors for decarbonisation, such as aviation, agriculture and industry and includes "insufficient" targets. Finally, its articles contain numerous references to future developments, which will have to take place in the medium and long term, clearly delaying the urgent climate action.

In the face of these shortcomings, reactions have emerged in expectation of more responsible government climate action. While climate litigation may not be the most appropriate tool to address climate change, the Spanish climate case, as with other cases around the world, may contribute to pursuing further improvements in the urgency of climate action, either in the Spanish jurisdiction or, where appropriate, in higher jurisdictions. All in the hope of addressing one of the emergencies facing humanity in this age of emergencies.

Emerging Climate Law and Governance Measures in South Africa: A Clash Between Policy and Practice?

Melanie Murcott[(*)]

Introduction

South Africa is reportedly the highest emitter of greenhouse gases (GHGs) on the African continent.[1] It is also one of the most unequal countries in the world, as millions live in conditions of poverty.[2] As such, the country faces significant climate change mitigation and adaptation challenges with grave social, environmental and climate justice implications.[3] Activists for social, environmental and climate justice might therefore be encouraged by emerging climate law and governance measures. At least three significant developments occurred in 2021: the publication of an updated *Nationally Determined Contribution* (NDC),[4] the introduction of the *Climate Change Bill*, 2018 in Parliament,[5] and positive action by the Presidential Climate Commission (PCC) established in December 2020.[6] These developments are discussed in the first part of this paper.

The second part of this paper engages with climate litigation in the South African courts in 2021 that exposes a sharp contrast between policy and practice. I briefly discuss what is known as the ongoing

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[1] Africa Check, 'South Africa the 12th biggest source of greenhouse gases? Yes, but that's not the only measure that matters' 19 April 2021 <https://www.polity.org.za/article/south-africa-the-12th-biggest-source-of-greenhouse-gases-yes-but-thats-not-the-only-measure-that-matters-2021-04-19> accessed 25 January 2022, referring to Global Carbon Atlas 2019 data.

[2] The World Bank, 'The World Bank in South Africa, Context' 5 October 2021 <https://www.worldbank.org/en/country/southafrica/overview#1> accessed 30 January 2022.

[3] See for instance: Mike Holland, 'Health impacts of coal fired power plants in South Africa' 31 March 2017 <https://cer.org.za/wp-content/uploads/2017/04/Annexure-Health-impacts-of-coal-fired-generation-in-South-Africa-310317.pdf> accessed 18 January 2018 and Anél Du Plessis and Louis J Kotzé, 'The Heat is On: Local Government and Climate Governance in South Africa' 2014 58(1) *Journal of African Law* 145-174.

[4] Department of Forestry, Fisheries and the Environment, 'South Africa's First Nationally Determined Contribution Under the Paris Agreement: Updated in 2021' 30 March 2021 <https://www.dffe.gov.za/sites/default/files/reports/draftnationalydeterminedcontributions_2021updated.pdf> accessed 1 July 2021.

[5] Notice of Introduction of National Climate Change Bill in National Assembly and Publication of Explanatory Summary *GG* 45299 of 11 October 2021.

[6] Presidential Climate Commission, About Us <https://www.climatecommission.org.za/about-3> accessed 30 October 2021.

#deadlyair and #cancelcoal litigation.[7] I then turn to consider, in more detail, a judgment handed down on 28 December 2021 which prevented Shell Exploration and Production South Africa BV (Shell), a subsidiary of Royal Dutch Shell PLC, from engaging in seismic surveys to determine whether there may be hydrocarbon reserves below the sea floor in South Africa's Wild Coast: *Sustaining The Wild Coast NPC v Minister of Mineral Resources and Energy* (*The Wild Coast* judgment).[8] Litigation in 2021 suggests that the government is intent on cementing South Africa's reliance on fossil fuel driven energy without due regard to the social, environmental and climate injustices caused thereby and despite emerging climate law and governance.

1. Climate change law and governance responses to COP26

An important catalyst for climate law and governance reform in 2021 was the 26th Conference of the Parties (COP26) to the *United Nations Convention on Climate Change*, 1998 (UNFCCC). In preparation for COP26, in March 2021 the South African government prepared and circulated for public comment its draft updated NDC aimed at giving effect to its commitments in terms of the *Paris Agreement*, 2015.[9] COP26 also created impetus for the government to make progress on finalising the *Climate Change Bill*. The *Climate Change Bill* was originally published for public comment in 2018, but then seemed to disappear into obscurity until late in 2021, just before COP26, when it was approved by Cabinet and tabled in Parliament. In this part of the paper I discuss key features of the updated NDC and *Climate Change Bill*, which represent the potential for enhanced climate law and governance in South Africa. I also outline the role of the PCC envisaged by the *Climate Change Bill*, whose mandate currently emanates from a Presidential Jobs Summit held in 2018. The PCC took strides towards developing a Just Transition Plan in 2021 in line with its duty to 'facilitate a common vision for a net-zero and climate resilient economy and society by 2050, and map out a detailed pathway to get there'.[10]

[7] Centre for Environmental Rights, 'The struggle to breathe clean air in Mpumalanga goes to court' 17 May 2021 <https://cer.org.za/news/the-struggle-to-breathe-clean-air-in-mpumalanga-goes-to-court> accessed 15 December 2021; Centre for Environmental Rights, 'Challenges of decisions in relation to coal-fired independent power producers (IPPS)' undated <https://cer.org.za/programmes/pollution-climate-change/litigation> accessed 15 December 2021.

[8] *Sustaining The Wild Coast NPC v Minister of Mineral Resources and Energy* unreported case number [2021] ZAECGHC 118 of 28 December 2021.

[9] See Department of Forestry, Fisheries and the Environment, Republic of South Africa, 'South Africa's updated draft National Determined Contribution (NDC) launched' (2021) <https://www.dffe.gov.za/mediarelease/creecy_indc2021draftlaunch_climatechangecop26> accessed 7 December 2021 (the updated NDC).

[10] Presidential Climate Commission, 'About Us' 2021 <https://www.climatecommission.org.za/about-3> accessed 24 January 2022.

1.1. South Africa's updated NDC

South Africa's intended NDC took effect in November 2016 when the country ratified the Paris Agreement. It proposed a peak, plateau and decline GHG emissions trajectory, with 'emissions to peak between 2020 and 2025, plateau for approximately a decade, and decline in absolute terms thereafter'.[11] In addition, major investment in the country's energy sector was envisaged to mitigate GHG emissions through renewable energy.[12] The commitments in the intended NDC were highly criticised and generally viewed as inadequate.[13]

Prompted by COP26, the updated NDC represents a shift towards more ambitious climate action. It states that 'long-term decarbonisation of the South African economy' will initially, during the 2020s, focus on the electricity sector, with a deeper transition in the electricity sector to take place in the 2030s. Like the first NDC, the updated NDC envisages a peak, plateau and decline GHG trajectory range, but its mitigation targets are more ambitious.[14] The updated NDC's mitigation targets are expressed in GHG emission terms rather than in terms of policy goals, and there is little detail as to how the targets will be achieved. A positive is that at the core of the updated NDC is the concept of a just transition, aimed at shifting the country's 'development pathway to increased sustainability, fostering climate resilient and low greenhouse gas emissions development, while providing a better life to all'.[15] In pursuit of a just transition, the updated NDC commits to 'workforce reskilling and job absorption, social protection and livelihood creation, incentivising new green sectors of our economy, diversifying coal dependent regional economies, and developing labour and social plans as and when ageing coal-fired power plants and associated coal production infrastructure are decommissioned'.[16] The PCC has begun advancing the updated NDC's commitment through stakeholder engagements, research and recommendations to the President.[17]

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[11] UNFCCC, 'South Africa's Intended Nationally Determined Contribution' (2015) <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/South%20Africa%20First/South%20Africa.pdf> accessed 7 December 2021 (South Africa's Intended NDC).

[12] South Africa's first NDC. See also Tracy-Lynn Field, 'A Just Energy Transition and Functional Federalism: The Case of South Africa', (2021) 10:2 Transnational Environmental Law 237, 254-256.

[13] Guy Cunliffe, Christian Holz, Kennedy Mbeva, Pieter Pauw, and Harald Winkler, 'Comparative Analysis of the NDCs of Canada, the European Union, Kenya and South Africa from an Equity Perspective', Energy Research Centre, University of Cape Town, Cape Town, 2019, 35-36.

[14] Updated NDC (n 4), 3 and 13-14.

[15] Updated NDC (n 4), 3-5.

[16] Updated NDC (n 4), 4.

[17] Presidential Climate Commission, 'Recommendations on South Africa's Draft Updated National Determined Contribution (NDC)' 2021 <https://www.climatecommission.org.za/ndc> accessed 27 January 2022.

Much like its predecessor, the updated NDC has been widely criticised as not sufficiently ambitious.[18] Whilst the updated NDC speaks to channeling investment to renewables, it does so without addressing social protection or restoration in any detail. Other than clear, and more ambitious mitigation targets, it is generally somewhat abstract and vague. Nonetheless, the updated NDC's policy commitment to a just transition is a positive step that ought to precipitate a shift away from South Africa's dependence on fossil fuel driven energy. A 'Just Transition Plan' contemplated by the updated NDC will hopefully flesh out some of the commitments.[19]

1.2. South Africa's Climate Change Bill and the Presidential Climate Commission

An update to South Africa's *Climate Change Bill* was approved by Cabinet in September 2021 and tabled before Parliament in October 2021. The importance of the finalisation and enactment of the Bill is recognised in the updated NDC,[20] but at the time of writing there remains uncertainty as to when the Bill will become law. The Bill seeks to 'enable the development of an effective climate change response and a long term, just transition to a climate resilient and low carbon economy and society for South Africa in the context of sustainable development'.[21] A just transition is defined in the Bill as 'a shift towards a low carbon, climate resilient economy and society and ecologically sustainable economies and societies which contribute toward the creation of decent work for all, social inclusion and the eradication of poverty'.[22] In addition to pursuing a just transition, the Bill is a measure aimed at giving effect to the environmental right provided for in section 24 of the Constitution of the Republic of South Africa, 1996, the updated NDC, and more generally South Africa's international commitments and obligations under the *Paris Agreement*. The Bill is also responsive to long-standing climate policy, the *National Climate Change Response White Paper*, 2011.

[18] Centre for Environmental Rights, 'SA's revised climate plans are not ambitious enough' 2021 <https://cer.org.za/news/sas-revised-climate-plans-are-not-ambitious-enough> accessed 15 December 2021; Sibusiso Mazomba, Gabriel Klaasen, Sarah Robyn Farrell, 'South Africa's nationally determined contribution plan for climate change must be more ambitious, say nation's youth' (2021) *Mail & Guardian* <https://mg.co.za/opinion/2021-06-04-south-africas-nationally-determined-contribution-plan-for-climate-change-must-be-more-ambitious-say-nations-youth/> accessed 6 December 2021; Climate Action Tracker 'South Africa Country Summary' (2021) <https://climateactiontracker.org/countries/south-africa/> accessed 7 December 2021.

[19] Updated NDC (n 4), 5.

[20] Updated NDC (n 4), 7.

[21] Climate Change Bill (n 5), preamble and section 2(d).

[22] Climate Change Bill (n 5), section 1.

The Bill acknowledges that 'anthropogenic climate change represents an urgent threat to human societies and the planet, and requires an effective, progressive and incremental response', and will undermine South Africa's capacity to achieve its development goals.[23] It recognises that climate variability, including extreme weather events, will affect the realisation of a range of human rights, including access to food and water.[24] The Bill thus aims to put in place 'a nationally driven, coordinated and cooperative legal and administrative response to climate change that acknowledges the significant role of the provincial and municipal spheres'.[25] Further, the Bill aims to strengthen resilience and reduce vulnerability to climate change,[26] whilst making a fair contribution to the global effort to stabilise GHG concentrations in the atmosphere at a level that avoids dangerous anthropogenic interference with climate systems.[27]

Section 3 of the Bill lists a number of principles intended to guide the interpretation and application of its provisions, once enacted. The idea of a just transition is a key principle for the interpretation and application of the Bill.[28] Well-established principles of good environmental governance such as environmental justice, the preventive principle, precautionary principle, and the polluter pays principle, already provided for in South African environmental legislation (though without explicit reference to climate change), are incorporated by reference.[29] In addition, these principles are supplemented with reference to the need to protect the climate system for the benefit of present and future generations, particularly for those most vulnerable, and in a risk averse way.[30] The prevention of climate change harms and the need for those responsible for climate change to pay the costs of mitigation and responding to impacts are also included.[31] One of the Bill's principles adopts a promising socio-ecological systems perspective by recognising that:

[23] Climate Change Bill (n 5), preamble.
[24] Climate Change Bill (n 5), preamble.
[25] Climate Change Bill (n 5), preamble.
[26] Climate Change Bill (n 5), section 2(b).
[27] Climate Change Bill (n 5), section 2(c).
[28] Climate Change Bill (n 5), section 3(d).
[29] Climate Change Bill (n 5), section 3(a) incorporates the principles provided for in section 2(4) of the *National Environmental Management Act* 107 of 1998 (NEMA), South Africa's framework environmental legislation.
[30] Climate Change Bill (n 5), sections 3(b), (f), and (g).
[31] Climate Change Bill (n 5), sections 3(i) and (j).

'a robust and sustainable economy and a healthy society depends on the services that well-functioning ecosystems provide, and that enhancing the sustainability of the economic, social and ecological services is an integral component of an effective and efficient climate change response.'[32]

Section 7(1) of the Bill requires that organs of state whose functions will be affected by climate change, or relate to the achievement, promotion and protection of a sustainable environment must review, revise, amend, coordinate and harmonise their policies, measures, programmes and decisions in response to climate change impacts and vulnerabilities as well as the principles in the Bill. Section 7(2) envisages an active role on the part of organised labour, civil society, and business in the pursuit of a just transition in South Africa.

The establishment of various government forums at the national, provincial and municipal spheres of government is envisaged.[33] South Africa's municipal sphere of government will be required, once the Bill is enacted, to undertake climate change needs and response assessments within their areas of jurisdiction and develop and publish plans accordingly.[34] Key powers and/or duties conferred on South Africa's national sphere of government include: (i) determining national adaptation objectives and performance indicators and timelines in respect thereof; (ii) developing adaptation scenarios; (ii) developing a climate change adaptation strategy and plan; (iv) developing sectoral adaptation strategies and plans; determine a national GHG emissions trajectory;[35] (v) publishing a list of GHG emitting sectors and sub-sectors subject to sectoral emissions targets; (vi) setting and publishing emissions targets for the relevant sectors aligned with the national GHG emissions trajectory; (vii) developing and publishing a list of GHGs and emitting activities; and (viii) allocating carbon budgets to persons that conducts emitting activities.[36] Persons to whom a carbon budget has been allocated are required to

[32] Climate Change Bill (n 5), section 3(l). On socio-ecological systems thinking see Joern Fischer and others, 'Advancing sustainability through mainstreaming a social-ecological systems perspective' (2015) 14 *Current Opinion in Environmental Sustainability* 144, 144-148.

[33] Climate Change Bill (n 5), sections 8 to 14.

[34] Climate Change Bill (n 5), section 15.

[35] A transitional GHG emissions trajectory is provided for in Schedule 3 of the Climate Change Bill (n 5), which aligns with the updated NDC mitigation targets, in that it envisages that emissions will: (a) peak in the period 2020 to 2025 in a range with a lower limit of 398 Megatonnes (109kg) (Mt) CO2-eq and upper limits of 583 Mt CO2-eq and 614 Mt CO2-eq for 2020 and 2025, respectively; (b) plateau for up to 10 years after the peak within the range with a lower limit of 398 Mt CO2-eq and upper limit of 614 Mt CO2-eq.; and (c) from 2036 onwards, decline in absolute terms to a range with lower limit of 212 Mt CO2-eq and upper limit of 428 Mt CO2-eq by 2050.

[36] Climate Change Bill (n 5), sections 16, 17, 18, 19, 21, 22, 23 and 24.

prepare, submit to the Minister a GHG mitigation plan.[37] It is an offence to fail to submit such a plan.[38] Persons to whom a carbon budget has been allocated are further required to implement their mitigation plan once approved, and monitor, evaluate and report on their progress annually.[39] If a person's GHG emissions exceed their allocated carbon budget they may be subjected to a higher carbon tax rate on emissions above the carbon budget as provided for by the *Carbon Tax Act* 15 of 2019.[40] This is an innovative penalty that contrasts with the purely criminal sanctions to be imposed under the 2018 iteration of the Bill. The tax penalty is likely to be more easily enforced than a criminal sanction, given that the South African Revenue Service functions more efficiently and effectively than the criminal justice system. Whether the threat of higher taxes will amount to a sufficient incentive for major polluters to comply with their carbon budgets remains to be seen.

To support the development of South Africa's climate change response, the Minister of Fisheries, Forestry and Environment is empowered to appoint experts to provide necessary data, information, documents, samples, or materials, which the Minister must then collate, compile and synthesise.[41] In addition, section 26 requires institutional arrangements to create and report on a 'National Greenhouse Gas Inventory'. Section 25 imposes a duty on the Minister to develop a plan to phase down or phase out synthetic GHGs. Given the range of measures provided for in the Bill, once enacted, South Africa's *Climate Change Act* will represent a powerful legal instrument in pursuit of climate action and will facilitate the fulfilment of the updated NDC.

Although the government is yet to finalise and enact the Bill, one of the forums provided for, the PCC empowered by sections 10 to 14 of the Bill, appears already to have been created in December 2020 pursuant to a decision at a Presidential Jobs Summit held in 2018. The PCC is comprised of commissioners from various civil society organisations, business, and government officials, including President Cyril Ramaphosa, the Minister of Fisheries, Forestry and Environment and the Minister of

[37] Climate Change Bill (n 5), section 24(5).
[38] Climate Change Bill (n 5), sections 32(1) and (3). Such offence attracts a penalty in terms of section 49B(2) of NEMA: a fine not exceeding R5 million and/or imprisonment for a period not exceeding five years, and in the case of a second or subsequent conviction, a fine not exceeding R10 million and/or imprisonment for a period not exceeding 10 years.
[39] Climate Change Bill (n 5), section 24(7).
[40] Climate Change Bill (n 5), sections 32(2), (4) and (5).
[41] Climate Change Bill (n 5), section 20.

Mineral Resources and Energy.[42] It is in the process of developing a 'Just Transition Framework' for the country[43] The purpose of the Just Transition Framework is to:

> '*act as a practical guide for all affected stakeholders in South Africa, ensuring that the transition to a low-emissions economy is well-managed, just, and equitable, with particular focus on the poorest and most vulnerable.*'[44]

As a first step towards preparing the Just Transition Framework the PCC published a report in September 2021 which includes a 'guiding vision' for South Africa's transition. The guiding vision envisages, among other things: 'putting people, especially those living in poverty and the vulnerable at the forefront'; completing transition to a net-zero CO_2 economy by 2050; emphasis on 'urgent action on climate change and social justice'; a 'high value…on healthy ecosystems, land, water, and air underpins our future, and ensures a better and healthier life for all who live in South Africa, and contributes to the creation of goals of decent work for all, social inclusion and the eradication of poverty'.[45] The vision emerging from the PCC's first report represents a positive step towards the attainment of social, environmental and climate justice in South Africa.

2. Litigation exposing a gap between policy and practice

Recent litigation addressing climate change mitigation and adaptation concerns reveals that a Climate Change Act (arising from the enactment of the Bill) is much needed. Despite the policy articulated in the NDC, and action by the PCC, the government continues to take decisions that are exacerbating social, environmental and climate injustice. Legislation could facilitate greater accountability. Meanwhile, as part of broader social movements and activism amongst civil society, public interest litigation has the potential to be an important accountability-enhancing mechanism, building on existing momentum.[46] As discussed next, novel public interest litigation in pursuit of social, environmental and climate justice was advanced in the courts in 2021.

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[42] Presidential Climate Commission, the Presidency of South Africa, 'The Team of Commissioners' 2021 <https://www.climatecommission.org.za/commissioners> accessed 15 December 2021.

[43] Presidential Climate Commission, the Presidency of South Africa, 'About Us' 2021 <https://www.climatecommission.org.za/about-3> accessed 15 December 2021.

[44] Presidential Climate Commission, the Presidency of South Africa, 'Just Transition Framework' 2021 <https://www.climatecommission.org.za/jt-framework3> accessed 15 December 2021.

[45] M Patel, 'Towards a Just Transition: A Review of Local and International Policy Debates' Pretoria: Presidential Climate Commission, 13. <https://www.climatecommission.org.za/_files/ugd/1eb85a_74b5dedc930b48d2b074acc1432ba94c.pdf> accessed 24 January 2022.

[46] Momentum gained through *Earthlife Africa Johannesburg v Minister of Environmental Affairs* [2017] 2 All SA 519 (GP), and then *Philippi Horticultural Area Food & Farming Campaign v MEC for Local Government, Environmental Affairs and Development Planning: Western Cape* 2020 (3) SA 486 (WCC), among other cases.

In June 2019, what is known as the #deadlyair litigation was instituted against the Minister of Forestry, Fisheries and Environment. The matter was argued before the High Court in May 2021.[47] The applicants, groundWork and Vukani Environmental Justice Movement in Action, demand that the Minister take steps, particularly through introducing regulations, to address polluted air in Mpumalanga primarily due to South Africa's reliance on coal-fired power, causing thousands of premature deaths each year.[48] The #deadlyair litigation does not explicitly reference climate change mitigation, and instead focuses on the grassroots struggles of the applicants for clean ambient air given that emissions from coal-fired power stations in the area are causing premature deaths, chronic respiratory and other illnesses.[49] However, the #deadlyair litigation indirectly addresses climate change mitigation in that it seeks action by the government in response to the deadly impacts of burning fossil fuels. In her answering papers in the #deadlyair litigation the Minister argues that she is not required to introduce regulations. Suggesting that the poor must sacrifice clean air so that the country can have electricity generated from fossil fuels, and diminishing the fact that vulnerable people exposed to environments polluted by coal-fired power are dying prematurely and suffering from severe illnesses, the Minister states:

> '*In a developing country such as South Africa …human dignity and equality can only be achieved through sustainable development, which inevitably will have an impact on the environment. In general, no development (and any human activity) is possible without some impact on the environment.*'[50]

Whilst the Minister acknowledges that a just transition is a key policy goal, quite apart from engaging with whether the regulations demanded to manage harmful air pollution should form part of such a transition she simply states: 'reality dictates that such a transition will take time and cannot be implemented overnight'.[51] Judgment in the #deadlyair litigation has not yet been delivered.[52] Regardless of the outcome, the Minister's refusal to introduce appropriate measures to reduce harmful emissions raises questions about her commitment to achieving the climate change mitigation targets

[47] 'The struggle to breathe clean air' (n 7).
[48] 'The struggle to breathe clean air' (n 7).
[49] 'The struggle to breathe clean air' (n 7).
[50] 'The struggle to breathe clean air' (n 7).
[51] 'The struggle to breathe clean air' (n 7).
[52] 'The struggle to breathe clean air' (n 7).

included in the updated NDC or a just transition as envisaged by the PCC, the updated NDC and the *Climate Change Bill*.

A constitutional challenge against government's plans to develop 1500 megawatts of new coal-fired electricity generation was instituted in November 2021 in what is known as the #cancelcoal litigation.[53] In September 2020 the Minister of Mineral Resources and Energy and the National Energy Regulatory of South Africa approved provision of 1500 MW of new coal-fired power.[54] The #cancelcoal litigation, brought by the African Climate Alliance, the Vukani Environmental Justice Movement in Action and groundWork, demands that these decisions (and the policy authorising them) be declared invalid on the basis that they are inconsistent with the environmental right enshrined in section 24 of the Constitution, as well as children's rights and rights to life, dignity and equality.[55] In addition, the applicants argue that plans to develop 1500 megawatts of new coal-fired electricity stand at odds with global calls for climate action and ignore South Africa's vulnerability to climate change impacts.[56] The #cancelcoal litigation is explicitly responsive to 'an impending climate crisis' and is founded on the fact that '[c]oal-fired power is the single most significant contributor to global warming, with coal combustion accounting for at least a third of global temperature increases experienced to date'.[57] Issues of climate injustice are explicitly raised in that the applicants claim that human rights violations 'will disproportionately impact the poor and vulnerable, including women, children and young people'.[58] A group of youth activists have confirmed their support of the application given the impact of climate change on young people.[59] The application is also supported by experts in climate science.[60] The applicants assert that the approved new coal-fired power 'will set back global efforts to achieve the Paris Agreement goal of limiting temperature increases to 1.5ºC – the minimum temperature target necessary to avert a global climate crisis'.[61] The government's answering papers in response to the application have not yet been published. However, government's approval of new coal-fired power as

[53] 'Challenges in relation to coal-fired power producers' (n 7).
[54] 'Challenges in relation to coal-fired power producers' (n 7).
[55] 'Challenges in relation to coal-fired power producers' (n 7).
[56] 'Challenges in relation to coal-fired power producers' (n 7).
[57] 'Challenges in relation to coal-fired power producers' (n 7).
[58] 'Challenges in relation to coal-fired power producers' (n 7).
[59] 'Challenges in relation to coal-fired power producers' (n 7).
[60] 'Challenges in relation to coal-fired power producers' (n 7).
[61] 'Challenges in relation to coal-fired power producers' (n 7).

illustrated by the #cancelcoal litigation raises serious questions about whether the updated NDC, the *Climate Change Bill* and the work of the PCC are anything more than empty gestures.

In December 2021, people across South Africa mobilised against an imminent seismic survey commissioned by Shell to take place over a four to five-month period off the East coast of the country (in an area known as 'the Wild Coast').[62] The seismic survey would be one of many environmentally harmful steps set to follow the Minister of Mineral Resources' decision to grant an exploration right to Shell in 2013 in pursuit of a massive new fossil fuel development to extract oil and gas from the Wild Coast.[63] Legitimate concerns about the significant socio-ecological impacts of the seismic survey and other activities arising from the exercise of an exploration right resulted in widespread opposition to Shell's proposed development, particularly among coastal communities.[64] In response to legitimate concerns, including of indigenous communities, the Minister of Minerals and Energy (despite sitting on the PCC, which has a mandate to pursue a just transition) stated that he viewed 'objections to these developments as apartheid and colonialism of a special type, masqueraded as a great interest for environmental protection' that is 'oppressing' South Africa's economic development.[65] The Minister's statements represent a flagrant disregard for the vision of a just transition reflected in the work of the PCC, the *Climate Change Bill*, and promised by the updated NDC.

Litigation instituted to halt the seismic survey[66] culminated in *The Wild Coast* judgment, in which the applicants (non-profit organisations and indigenous communities) succeeded in interdicting Shell from

[62] Centre for Environmental Rights, 'Challenges to Shell's seismic blasting on South Africa's Wild Coast (December 2021)' 6 December 2021 <https://cer.org.za/virtual-library/case-watch/challenges-to-shells-seismic-blasting-on-south-africas-wild-coast-december-2021> accessed 12 December 2021.

[63] On the harms see the expert views of George Branch and others, 'An open letter to the South African President Cyril Ramaphosa, Ministser Gwede Mantashe – Minister of Mineral Resources and Energy, and Minister Barbra Creecy – Minister of Forestry, Fisheries and the Environment, regarding the seismic surveys off the South African coastline' 2 December 2021 <https://cer.org.za/wp-content/uploads/2021/12/open-letter-sa-marine-experts-final-2-dec-2021.pdf> accessed 14 December 2021.

[64] See for example, Nicola Daniels, 'Shell protests continue across South Africa' in *IOL News* 6 December 2021 <https://www.iol.co.za/capetimes/news/shell-protests-continue-across-south-africa-b937e08d-8685-4bdd-8184-be44d5c8c870> accessed 14 December 2021; Sheree Bega, 'Urgent interdict filed to block Shell's Wild Coast seismic survey' in *Mail & Guardian* 30 November 2021 <https://mg.co.za/environment/2021-11-30-urgent-interdict-filed-to-block-shells-wild-coast-seismic-survey/> accessed 15 December 2021.

[65] Minister Gwede Mantashe, 'Media statement on the developments in the upstream petroleum industry' 9 December 2021 <https://www.gov.za/speeches/media-statement-developments-upstream-petroleum-industry-9-dec-2021-0000> accessed 15 December 2021.

[66] Mike Loewe, 'Amadiba Crisis Committee takes on its next Goliath' in *Dispatch Live* 8 December 2021 <https://www.dispatchlive.co.za/news/2021-12-08-amadiba-crisis-committee-takes-on-its-next-goliath/> accessed 15 December 2021. The founding affidavit of Reinford Sinegugu Zukulu, a representative of the Amadiba Crisis Committee that is taking the government and Shell to court, is available at <https://cer.org.za/wp-content/uploads/2021/12/FA-Signed.pdf> accessed 13 December 2021. The litigation follows an earlier unsuccessful attempt by the Border Deep Sea Angling Association, the Kei Mouth Ski Boat Club, Natural

conducting the seismic survey on an interim basis. The interim interdict takes effect pending the outcome of an application for a final interdict prohibiting Shell from proceeding with a seismic survey without an environmental authorization under the *National Environmental Management Act* 107 of 1998.[67] In order to obtain an interim interdict in South Africa it is necessary to establish the existence of a *prima facie* right that requires the protection of an interdict, that there is a reasonable apprehension of harm to the *prima facie* right if the interdict is not granted, that the balance of convenience favours the granting of the interdict, and that there is no satisfactory alternative remedy besides an interim interdict. The court found that the applicants had satisfied these requirements in a judgment that vindicated the claims of grassroots social, environmental and climate justice activists resisting new fossil fuel developments in South Africa.

In assessing whether the applicants had established that the applicants had a *prima facie* right that required protection the court recognised the concerns of indigenous people (members of the Amadiba traditional community and others) that a seismic survey would upset their ancestors and impact on their cultural and spiritual relationship with the sea, as well as impact the climate, causing, among other things, rising sea levels.[68] The Amadiba traditional community and others argued that they had a *prima facie* right to interdict Shell's seismic survey given that had not been meaningfully consulted by Shell about their concerns. The Amadiba traditional community further indicated that they 'feel responsible for conserving the planet for themselves and humanity'.[69] The court agreed that the consultation process carried out by Shell was inadequate, including because: (i) notification was not given in isiZulu or isiXhosa, the languages spoken in the communities; (ii) consultation did not take place in locations that were accessible to the communities; and (iii) traditional leaders were consulted to the exclusion of the broader community, such that consultation occurred in a top-down manner, rather than a consensus-seeking manner and was not 'meaningful'.[70]

Justice and Greenpeace Africa to halt Shell's activities. See Tania Broughton 'Shell seismic survey: new court hearing on Friday' in *GroundUP* 13 December 2021 <https://www.groundup.org.za/article/shell-seismic-survey-new-court-hearing-friday/> accessed 15 December 2021.

[67] *The Wild Coast* judgment (n 8) paras 1 and 82.
[68] *The Wild Coast* judgment (n 8) paras 14 and 15.
[69] *The Wild Coast* judgment (n 8) para 15.
[70] *The Wild Coast* judgment (n 8) paras 22 to 31 and 34.

The applicants satisfied the court that irreparable harm would be caused were they not granted the interdict because indigenous communities would suffer cultural and spiritual harm, marine life would be threatened, and the livelihoods of small-scale fishers would be negatively impacted due to the harm suffered by marine life.[71] Shell did not dispute that indigenous communities would suffer cultural and spiritual harm.[72] Further, threats to marine life were supported by extensive expert evidence presented by the applicants, which the court found compelling, particularly since Shell did not adduce any expert to the contrary.[73]

The court found that the balance of convenience favoured the applicants given the real apprehension of harm to marine life, and Shell's failure to meaningfully consult with communities, which represented an infringement of the applicants' constitutional rights.[74] The court remarked:

> '*The financial loss that Shell and Impact Africa are likely to suffer cannot be weighed against the infringement of the constitutional rights in question. Put differently, the anticipated financial loss to Shell and Impact Africa cannot justify the infringement of the applicants' constitutional rights. The breach of those constitutional rights threaten the livelihoods and well-being of the applicant communities as well as their cultural practices and spiritual beliefs. Where constitutional rights are in issue, the balance of convenience favours the protection of those rights.*'[75]

In finding that there was no alternative remedy available to the applicants, the court noted that the Minister of Mineral Resources and Energy had delivered an answering affidavit illustrating firm support for Shell (i.e. that he had made up his mind in favour of Shell's fossil fuel development), and making it clear that reliance on an internal statutory process to challenge the Minister's decision, without recourse to court, would be 'a waste of time'.[76]

The court's approach in *The Wild Coast* judgment illustrates an important recognition of the dignity and social, environmental and climate justice claims of indigenous communities negatively impacted by fossil fuel developments of multi-national corporations. At the same time, the Minister's staunch

[71] *The Wild Coast* judgment (n 8) paras 38 and 44 to 65
[72] *The Wild Coast* judgment (n 8) para 39.
[73] *The Wild Coast* judgment (n 8) paras 44 to 65. The expert evidence presented to support the applicants' case in *The Wild Coast* judgment distinguished the matter from a previous attempt to interdict the seismic survey.
[74] *The Wild Coast* judgment (n 8) paras 68 to 69.
[75] *The Wild Coast* judgment (n 8) para 68.
[76] *The Wild Coast* judgment (n 8) para 76.

support of Shell's activities and public condemnation of activists who resist fossil fuel extraction stands in stark contrast with emerging climate change law and governance measures.

Conclusion

This paper has illustrated that innovative climate change law and governance measures are beginning to emerge in South Africa, centered around the notion of a just transition. However, the litigation discussed in this paper exposes a gap between emerging climate law and governance on paper and practice and suggests that progressive climate policy is at risk of becoming meaningless unless government begins to take its commitments on paper seriously. *The Wild Coast* judgment, as well as the #deadlyair litigation and the #cancelcoal litigation are undoubtedly important means to ensure accountability and climate action on the part of government. However, such litigation requires vast civil society resources and places pressure on the courts to advance climate action. Hopefully the government will embrace emerging climate change law and governance measures and so advance social, environmental and climate justice in South Africa.

Part 2. Teaching Section

Youth Activists, Climate Conscious Lawyering and Environmental Policy: Parliamentary Inquiry Submissions in Legal Education

Andrew Ray, Annika Reynolds and Heather Roberts[*]

Abstract

As legal practice adapts to the changing expectations lawyers face, law schools must also adapt to ensure they continue to engage their student populations. How law schools can teach the wider "climate-conscious" advocacy skills that future legal generations will require remains an underexplored area. In this article, we propose one novel approach law schools might take, namely, creating and implementing a parliamentary inquiry submission student writing program. We argue that such an approach can help students develop unique skills, further hone their interest in environmental legal issues and empower students to have a practical and real impact on the policy process.

Introduction

In recent decades the conception of the role of a lawyer has shifted from providing strict "black letter law" advice towards a more holistic approach.[1] This shift has led to calls for lawyers to adopt a climate conscious approach to practice,[2] tailoring their advice to consider financial, social, environmental and ethical consequences in addition to the legal outcomes.[3] Indeed, climate conscious lawyering is drawing increased attention as the legal profession continues to acknowledge the threat posed by climate change, and the unique capacity of law reform to facilitate systems-level responses.[4] Simultaneously, we have witnessed a rapid growth in climate-driven litigation, with successful lawsuits globally establishing that companies and governments need to consider environmental impacts when making decisions.[5] Many of these lawsuits have been driven by school age children,[6] who have increasingly begun to exercise their political voices, including in Australia.[7] As this generation of students graduate high school it seems likely that they will continue this advocacy work into their careers. While Australian law school teaching models have shifted away from a pure focus on black letter law, it is not clear whether the traditional assessment model (which focuses on problem-based exams and essays) is geared towards developing the *policy* advocacy skills that these future lawyers

will need to pursue such a career. This article proposes one approach that law schools can take to enable students to develop these skills (alongside traditional legal research and writing skills) by enabling and supporting students to write submissions to parliamentary inquiries as part of their academic studies. In taking this approach, we argue that law schools will provide students with the skills to have a direct impact on policy during and after their studies, while providing them with a portfolio of work that they can rely on in future applications and job interviews.

This article proceeds in three parts. First, it analyses the parliamentary inquiry process, as well as the role and importance of placing academic evidence before political decision-makers especially in an environmental context. Second, it analyses the skills that law students can develop through the submission-writing process and demonstrates how these can complement the skills needed by legal practitioners. The final section of the article discusses how law schools can develop and implement a program to encourage student-authored submissions, including how assessment items can be leveraged towards this end goal. The article concludes that in developing a submission-writing program law schools can help students develop policy analysis and research and writing skills, while having a measurable impact on the policy process. We argue that such an approach can better enable universities, and law schools specifically, to impact policy processes, with the added benefit that this approach does not impose an additional burden on academic researchers – who (rightly or wrongly) face significant pressure to publish peer-reviewed journal articles over other forms of research output.

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[1] Driven in part by law firms beginning to operate under a more corporate advisory approach and adjusting to the growth in legal technology. See, eg, Salvatore Caserta, 'Digitalization of the Legal Field and the Future of Large Law Firms' (2020) 9(2) *Laws* 14.

[2] Brian J Preston, 'Climate Conscious Lawyering' (2021) 95(1) *Australian Law Journal* 51.

[3] Jennifer Ramos, 'Shifting the mindset of commercial lawyers to rewire contracts, to mitigate climate change more effectively in practice: The Chancery Lane Project' (2021) 23(1) *Environmental Law Review* 3.

[4] Preston (n 2) 54–5;

[5] In an Australian context see, eg, Jacqueline Peel, Hari Osofsky and Anita Foerster, 'Shaping the 'Next Generation' of Climate Change Litigation in Australia' (2017) 41(2) *Melbourne University Law Review* 793. See further *Bushfire Survivors for Climate Action Incorporated v Environment Protection Authority* [2021] NSWLEC 92; *Sharma by her litigation representative Sister Marie Brigid Arthur v Minister for the Environment* [2021] FCA 560; *Sharma by her litigation representative Sister Marie Brigid Arthur v Minister for the Environment (No 2)* [2021] FCA 774. In an overseas context, see, eg, *Milieudefensie et al. vs. Royal Dutch Shell* (Hague District Court, 26 May 2021). Australia has the second highest number of climate cases behind the United States: United Nations Environment Program, 'Global Climate Litigation Report 2020 Status Review' (Report, 2020) 13 <https://wedocs.unep.org/bitstream/handle/20.500.11822/34818/GCLR.pdf?sequence=1&isAllowed=y>.

[6] Michael Slezak and Penny Timms, 'Australian teenagers' climate change class action case opens 'big crack in the wall', expert says', *ABC News* (online, 27 May 2021) <https://www.abc.net.au/news/2021-05-27/climate-class-action-teenagers-vickery-coal-mine-legal-precedent/100169398>.

[7] Ibid.

1. Parliamentary Inquiry Processes and the Importance of Submission Writing

1.1. Background on Parliamentary Committee Processes

The ways in which individuals can have an impact on government policy remains an underexplored area in academic research. One challenge is assessing *how* people can impact the policy space, and *how* methods, both objective and quantitative, to measure this impact can be devised. For example, there remain limited opportunities for the general public to "directly" participate in daily political processes. Beyond voting, engaging at town halls and contacting their local representative to highlight concerns stand out as two clear ways to impact policy (methods that are not conducive to academic study) there is generally little direct engagement between politicians and their constituents. One area that remains underutilised by academics and researchers, however, is the parliamentary inquiry processes which enable individuals to comment directly to politicians, bureaucratic departments and other decision-makers on policy issues.[8] This area is in turn easier to analyse due to the public nature of the submission and inquiry process, when compared to other methods of direct engagement which are not consistently reported on by government.

Inquiries can cover a range of subject matter, from looking into historic conduct[9] to reports analysing current legislation pending before parliament.[10] This article focuses on the policy aspect of parliamentary committees and looks at how universities can encourage students to engage in this process. Submissions made to inquiries are (usually) published, and if published by the committee generally attract parliamentary privilege.[11] This can provide an avenue for researchers to communicate their work to government, and, as will be discussed further, provides students with unique opportunities to develop advocacy and policy skills. In addition to requesting submissions, committees also have broad powers in relation to requesting submissions, compelling attendance, and holding public or

[8] For discussion see: Andrew Ray, Arabella Young and Will Grant, 'Analysing use of evidence by Australian federal parliamentary committees' (2021) *Australian Journal of Public Administration* 1 (advance).

[9] See, eg, New South Wales Government, 'Special Commission of Inquiry into the Ruby Princess' (Web Page, 2021) <https://www.rubyprincessinquiry.nsw.gov.au/>.

[10] See, eg, Parliament of Australia, 'Environment Protection and Biodiversity Conservation Amendment (Climate Trigger) Bill 2020' (Web Page, 2021) <https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/ClimateTrigger>.

[11] See generally Parliament of Australia, 'Making a Submission to a Committee Inquiry' (Web Page, 2021) <https://www.aph.gov.au/Parliamentary_Business/Committees/House/Making_a_submission>.

private hearings, and will often request that several submitters attend public hearings.[12] This article will touch on appearing before committees, but will otherwise not assess the compellable committee powers. Instead, it will focus on the voluntary submission-writing aspect of Australian federal parliamentary committees, although its analysis and conclusions would be transferable to other jurisdictions which have similar committee processes.[13]

In an environmental context, parliamentary inquiries provide an opportunity for non-government organisations, business groups, think tanks, political parties, academic researchers and students as well as members of the general public to ensure that their voices (and expertise) can be heard. Public involvement accords with the notion that environmental concerns are *public* concerns, a principle embedded in several international environmental treaties Australia has ratified. Indeed, the *Convention on Biological Diversity* emphasises that State parties should facilitate 'public participation' in environmental impact assessment processes and policymaking.[14] In Australia, parliamentary inquiries play a key role in encouraging public participation, including on environmental issues which often receive significant attention. For example, the recent EPBC Act Review received over 3000 unique submissions and around 26,000 template contributions.[15] But, there are still opportunities to improve participation. The less publicised Climate Trigger Inquiry, for example, only received 17 submissions.[16] There are of course many reasons why organisations (and academics) may choose to focus their efforts on different inquiries, and the precise cause for varying submission numbers is a matter for future research. However, as the data indicates, the number of submissions received by parliamentary inquiries varies significantly, with a corresponding impact on the level of substantive public involvement in environmental decision-making processes.

1.2. The Importance of "Academic" Submissions

[12] House of Representatives Practice 7th ed <https://www.aph.gov.au/About_Parliament/House_of_Representatives/Powers_practice_and_procedure/Practice7/HTML/Chapter18/Powers_of_committees>.

[13] For example, much of this work would readily apply to state governments and other western liberal democracies.

[14] Convention on Biological Diversity, opened for signature 5 June 1992, 1760 UNTS 79 (entered into force 29 December 1993) Art 14.

[15] EPBC Act Review (Web Page, 2021) <https://epbcactreview.environment.gov.au/submissions>.

[16] Environment Protection and Biodiversity Conservation Amendment (Climate Trigger) Bill 2020 Submissions (Web Page, 2021) <https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/ClimateTrigger/Submissions>.

The varying levels of public participation in environmental inquiries should provide an impetus for increased academic involvement. Indeed, in environmental law, impacting policy is critical for three reasons. First, other legal avenues to affect environmental policy are fraught. Despite the increased global attention, most Australian climate litigation cases are unsuccessful.[17] For the cases that do succeed, their practical impact is often limited: first, the remedies available in judicial review proceedings and second, because the litigant's focus is on resolving a *single* legal dispute, climate litigation alone is incapable of addressing broader issues such as Australia's overall emissions reduction strategy. Additionally, despite significant recent successes before Australian courts,[18] notably the establishment of a common law duty of care to avert climate impacts,[19] it remains possible for governments to legislate their way around court-imposed protections. While this has not been seen recently in the environmental space, the Federal Government has historically shown a willingness to legislate to limit or remove protections imposed by courts in migration and employment matters, while concurrently appealing such decisions to the High Court.[20] Of course, the essence of parliamentary supremacy permits Parliament to decide it does not like a particular judicial decision and take steps to address it. However, this highlights that legal (and environmental) advocates must consider the *political* elements to legal problems, and consider adopting broader advocacy strategies to ensure success in a courtroom translates into substantive policy reform.

Second, academics have specialist knowledge which can assist parliamentary committees to make better informed policy recommendations to government. In a legal context, academics (and students in many cases) will have a better grasp of the legal aspects of a problem than many parliamentarians (who come from a wide array of backgrounds and experience), as well as relevant knowledge of legal regimes in other countries, and their submission can therefore add "value" to the committee process. The same can be said for many other areas, particularly in science where researchers may have cutting-edge research (including as yet unpublished research) that can inform a committee's decision. The entire basis underpinning parliamentary committees is that the committees can draw on specialist

[17] For empirical reviews of public interest litigation under federal environmental legislation see: Annika Reynolds, Andrew Ray and Shelby O'Connor, 'Green Lawfare: Does the Evidence Match the Allegations – An Empirical Evaluation of Public Interest Litigation under the EPBC Act from 2009 to 2019' (2020) 37 *Environmental and Planning Law Journal* 497; Andrew Macintosh, Heather Roberts and Amy Constable, 'An Empirical Evaluation of Environmental Citizen Suits under the Environment Protection and Biodiversity Conservation Act 1999 (Cth)' (2017) 39 *Sydney Law Review* 85.

[18] *Sharma by her litigation representative Sister Marie Brigid Arthur v Minister for the Environment* [2021] FCA 560.

[19] *Sharma by her litigation representative Sister Marie Brigid Arthur v Minister for the Environment* [2021] FCA 560. The case has been appealed to the Full Court of the Federal Court of Australia, but at the time of writing the appeal had not been heard.

[20] See, eg, *Migration Amendment (Clarifying International Obligations for Removal) Act 2021* (Cth); *Commonwealth of Australia v AJL20* [2021] HCA 21.

knowledge in the Australian community, and can gain insight into the differing policy options available when considering a particular problem. The need for such insight is compounded in environmental inquiries, given the wide array of legal "specialisations" that the law will cover. For example, environmental policy may cover constitutional law, international law and property law and raise complex questions regarding the federal balance and the interaction between federal and state legislative schemes. Such issues are best addressed by expert voices, including academic commentators.

Third, in an environmental context there is a clear need to be engaging in policy processes given the scale of the threat posed by climate change and the need to take decisive action in the coming decade. The latest IPCC Report in August 2021 indicates 'immediate, rapid and large-scale reductions in greenhouse gas emissions' is needed to limit warming to between 1.5 and 2 degrees Celsius.[21] Such a reduction will require a concerted push by government and business communities to decrease dramatically the reliance on fossil fuels across the economy, drive increased investment in renewable energy and electric vehicles, and implement other mechanisms to reduce emissions across other sectors of the economy.[22] The policy framework to drive such a change, and to encourage investment into other emissions reduction technologies will be critical, and will require input from a wide array of stakeholders and experts. It is therefore critical that environmental matters are raised before policymakers, especially in "novel" areas. For example, environmental concerns would be extremely relevant to reviews into blockchain technology, given the energy consumption of certain cryptocurrencies.[23]

Translating an interest in policy to an "impact" on policy is complex. As discussed above, there are many ways that politicians interact with their constituents, with many of these pathways being unclear and untestable. However, one method of impacting policy that has been analysed in Australian academic literature is the parliamentary committee process. Studies have shown that Australian federal parliamentary committees are unlikely to cite (and by proxy engage with) peer reviewed journal

[21] Intergovernmental Panel on Climate Change, 'Climate change widespread, rapid and intensifying – IPCC' (Press Release, 9 August 2021) <https://www.ipcc.ch/site/assets/uploads/2021/08/IPCC_WGI-AR6-Press-Release_en.pdf>.

[22] For discussion see, eg, Matthew J Burke and Jennie C Stephens, 'Political power and renewable energy futures: A critical review' (2018) 35 *Energy Research & Social Science* 78; Dolf Gielen et al, 'The role of renewable energy in the global energy transformation' (2019) 24 *Energy Strategies Reviews* 38.

[23] Noting of course that energy consumption does not indicate carbon intensity of that energy: Nic Carter, 'How Much Energy Does Bitcoin Actually Consume?', *Harvard Business Review* (online, 5 May 2021) <https://hbr.org/2021/05/how-much-energy-does-bitcoin-actually-consume>.

articles.[24] Instead, committees will generally cite submissions or testimony from individuals who have appeared before them. While a recent study did not determine why this trend occurs, it has been suggested that the most likely explanation of this trend is the contextualisation and direct applicability of the submissions/testimony to the subject matter the committee is investigating.[25] In any event, the reason for the focus on submissions and testimony is less important than the implications for academic researchers, namely that the submission-writing process provides a clear opportunity for researchers to engage with government and to have an impact on policy. One question that needs to be considered however is how likely academics are to engage with this process and whether university systems and processes reward (and therefore encourage) this type of work.

1.3. Measuring Academic Impact and Prioritised Academic Outputs

Impact is a fraught term within academic circles, with the term synonymous with unclear targets and connotations with the "publish or perish" academic model.[26] While we are sympathetic with calls for review, the present reality is that university administrators,[27] and government decision-makers assessing grant applications[28] are increasingly concerned with the "impact" of an academic's work. Traditionally impact is measured through some combination of a citation metrics, download count and an assessment of the tier of academic journal that an author publishes in.[29] In a large part this approach is taken due to the complexity in assessing impact of research on society more broadly.[30]

While the potential for the focus on journal tier and citation count to alter an academic's focus has been discussed,[31] it has not been directly analysed in the context of law reform efforts. In an Australian context however, commentators have noted that the way that impact is measured has driven a shift in focus by early and mid-career researchers towards "traditional" academic outputs such as journal articles, which are valued more highly due to their relatively short production time and likelihood of

[24] Ray, Young and Grant (n 8).
[25] Ibid 16.
[26] Seema Rawat and Sanjay Meena, 'Publish or perish: Where are we heading?' (2014) 19(2) *Journal of Research in Medical Sciences* 87.
[27] For further discussion, see, eg, Teresa Penfield et al, 'Assessment, evaluations, and definitions of research impact: A review' (2013) 23(1) *Research Evaluation* 21.
[28] See for example policy changes requiring grant applicants to demonstrate that their work is in the 'national interest': Bianca Nogrady, 'Australia plans 'national-interest' test for research grants', *Nature* (online, 31 October 2018) <https://www.nature.com/articles/d41586-018-07255-7>.
[29] See, eg, Kai A. Olsen and Alessio Malizia, 'Counting research - directing research. The hazard of using simple metrics to evaluate scientific contributions. An EU experience' (2017) 20(1) *Journal of Electronic Publishing* 1 <https://quod.lib.umich.edu/j/jep/3336451.0020.102?view=text;rgn=main>.
[30] Ibid.
[31] Ibid.

citation.[32] This has, in turn, led to an explosion in the number of academic journals, especially within science disciplines.[33]

This focus on journal article outputs in effect de-incentivises academic researchers from engaging in parliamentary committee processes (or law reform efforts more generally) as such work will not be as "valued" as a peer-reviewed journal article. In turn, this means that parliamentary committees are less able to draw on the specialist knowledge that can be offered by the academic community when making their policy recommendations. In the legal space, this concern is amplified by the limits placed on lawyers by employers on their ability to engage in committee processes, with many government and private sector lawyers bound by codes of conduct or in-house policies which limit their ability to take on "external" work or to comment publicly on policy matters.[34] Meanwhile, advocacy organisations such as the Environmental Defenders Office have limited resources, and must balance their policy advocacy work against other commitments, including appearing in environmental matters.

One solution to help combat this disincentive is for universities to support students under the supervision of academic staff to make submissions to parliamentary inquiries. This work will enable important legal points to be raised before committees, empowering students and providing academics an opportunity to directly engage with law reform processes without negatively impacting their career trajectory. As we will go on to discuss further, this approach will also support students to develop skills and a portfolio of work that will support them into their careers as they graduate from university.

2. Benefits to Students from Submission Writing

Submission writing offers broad benefits to committees and to the general community by enabling policymakers to draw on specialist knowledge (in this context specialist *legal* knowledge). There are, however, more direct benefits for participating students. These include the skills students can develop through engaging in the parliamentary committee process, building a portfolio of work, and their increased capacity to influence environmental decision-making processes. This skills development *and* empowerment is critical for the next generation of lawyers who are interested in careers with a broader impact and increasingly perceive the law as a tool for reform.

[32] Margaret K. Merga and Shannon Mason, Perspectives on institutional valuing and support for academic and translational outputs in Japan and Australia (2020) 34(3) *Learned Publishing* 305.

[33] Evidence is however mixed on whether this is diluting the quality of content: Tenghao Zhang, 'Will the increase in publication volumes "dilute" prestigious journals' impact factors? A trend analysis of the FT50 journals' (2021) 126 *Scientometrics* 863.

[34] Although there are some submissions made by law firms or representative bodies these often need to be approved by management or members, diluting the strength of the message they can project.

2.1. Skills

Australian universities have increased their focus on graduate employment outcomes, as the Federal Government shifts its funding focus towards employability and transferability of skills developed at university.[35] In particular, universities are increasingly competing to achieve higher ranks on QS Rankings and the Times Higher Education rankings in efforts to attract greater numbers of domestic students (largely due to the impact of the COVID-19 pandemic on international student numbers).[36] This shift in focus however has also been driven by employers, including in the legal sector – with students competing with increasing graduate cohorts for a shrinking number of positions. While many news articles[37] on the subject are largely overhyped (including by flawed metrics of counting student numbers[38]), there is some truth behind the claims of a compressed legal graduate market. In particular, as the legal industry adapts due to changing technology and (in Australia) a shift towards legal consulting instead of pure legal practice, graduates are required to possess a wider array of skills and experience in order to be competitive.[39]

These skills cannot be developed purely in a classroom environment, with traditional legal assessment items (essays and problem scenarios) poorly equipped for students to practically demonstrate[40] the teamwork skills, broader communications skills and "commercial awareness"[41] that firms are increasingly seeking. In contrast, these skills are more easily acquired (and, importantly, demonstrated) through extracurricular activities, work experience and volunteering. It is in this context that some law schools have begun to shift their focus, with universities offering subjects dedicated to what was historically considered an extracurricular activity.[42]

In the context of this shift, writing submissions to, and testifying before, parliamentary inquiries can offer students a unique opportunity to develop critical skills while also focusing on an area of law that they enjoy. Indeed, the array of inquiry topics available can help students focus on an area of law that they want to work on in the future; an opportunity that may not otherwise be available to them at university. For example, some elective subjects are only offered in certain years, or may not be offered at all to undergraduate students. In contrast, the wide array of available inquiry topics (including in environmental matters) can enable students to focus on their *particular* interest (within the field of environmental law).[43] This can then better enable them to showcase that *specific* interest in a job interview.

Further, working in groups to write submissions or appear before a committee can help students develop key skills that are sought by their future employers and recognised by Australian law schools through the Teaching and Learning Outcomes.[44] Submissions are often written in groups, meaning that students can gain critical teamwork and organisational skills as they work together towards a shared deadline. These skills are commonly sought by prospective employers, and can be hard to build into university assessment due to perceptions of the competitive nature of law students and the challenges in designing a "fair" group assessment task.[45] The submission process enables students not simply to develop these skills but also to have a clear and defined illustration of past success to draw on in the recruitment process. One solution to this challenge will be discussed in more detail in Part IV.

In addition to these teamwork skills, submissions to government inquiries must be written for a generalist non-legal audience, helping students develop their writing and communication skills. Communicating with non-technical experts is an essential skill in modern workplaces, and the easiest way to develop this skill is for law students to write for non-legal audiences. This approach accords with the Australian Council of Law Deans TLO5 which requires law graduates to be able to communicate clearly and effectively to both legal and non-legal audiences.[46] By engaging in the submission writing process, students are forced to develop legal arguments and communicate them to

[35] See, eg, changes to HDR funding: Department of Education, Skills and Employment, 'Growing industry internships for research PhD students through the Research Training Program' (Implementation Paper, July 2021).

[36] QS Graduate Employability Rankings (web page, 2020) <https://www.topuniversities.com/university-rankings/employability-rankings/2020>; Graduate employability: top universities in Australia ranked by employers 2020, (web page, 2020) <https://www.timeshighereducation.com/student/best-universities/graduate-employability-top-universities-australia-ranked-employers>.

[37] See, eg, Edmund Tadros and Katie Walsh, 'Too many law graduates and not enough jobs', *Australian Financial Review* (online, 22 October 2015) <https://www.afr.com/companies/professional-services/too-many-law-graduates-and-not-enough-jobs-20151020-gkdbyx>.

[38] Council of Australian Law Deans, '2018 Data Regarding Law School Graduate Numbers and Outcomes' (Report, 2019) <https://cald.asn.au/wp-content/uploads/2019/07/Updated-Factsheet-Law_Students_in_Australia-20-04-2019.pdf>.

[39] See generally Heather Roberts and Andrew Henderson, 'Designing Law School Assessment to Meet New Forms of Legal Practice: A Model from Australia' (2022) *US Clinical Law Review* (forthcoming).

[40] By demonstrate we consider here the ability for students to showcase these skills during job interviews, as while possessing the skills is critical – so is the ability to clearly convey those skills to an interviewer in a 30-60 minute interview.

[41] For discussion of the term see generally Oluwabunmi Adaramola, 'Why is Commercial Awareness Very Important in the Legal Sector?' (Blog Post, 16 March 2020) <https://thestudentlawyer.com/2020/03/16/why-is-commercial-awareness-very-important-in-the-legal-sector/>.

[42] See, eg, Monash University, 'Mooting and advocacy competition' (web page, 2021) <https://handbook.monash.edu/current/units/LAW4805>.

[43] For example, an inquiry into renewable energy could be selected by students with an interest in energy law, in contrast students interested in the operation of the EPBC Act could choose to make a submission to an inquiry into the act, or on proposed amendments to that particular act.

[44] See Australian Law and Teaching Council, 'Learning and Teaching Academic Standards Statement December 2010' (Report, December 2010) <https://cald.asn.au/wp-content/uploads/2017/11/KiftetalLTASStandardsStatement2010.pdf>. The TLOs have been approved by the Australian Council of Law Deans and adopted at all Australian universities. For general discussion see, eg, Roberts and Henderson (n 39).

[45] For discussion see Janet Weinstein et al, 'Teaching Teamwork to Law Students' (2013) 63(1) *Journal of Legal Education* 36.

[46] Australian Law and Teaching Council (n 43) 10.

both politicians and their advisors, but also the general public. If invited to testify, students also have to communicate their points verbally, and will be able to track in real-time the impact of their arguments on the questioning process.

Critically, parliamentary inquiry submissions require students to further develop their legal research and writing skills. Although the style of a submission is different to other types of writing, being more in the form of advocacy than a traditional 'balanced' essay style assessment, it requires students develop necessary legal analysis skills. For example, submissions on a particular bill before parliament can provide students with a unique opportunity to apply statutory interpretation principles to make arguments in relation to the likely approach a court would take in interpreting the legislation. Such arguments could be supported by similar case precedents, or a review of similar legislative provisions from other Australian (or international) jurisdictions. In this way submission writing can support students to develop traditional legal research and writing skills, while honing additional teamwork, communication, and advocacy skills.

2.2. Portfolio of Work

In addition to developing a range of skills, students can also develop a portfolio of work by writing parliamentary inquiry submissions. As we have already discussed, this work can be drawn on in a job interview.[47] More broadly, however, this work can be developed into a portfolio of work in an area the student is particularly interested in. In turn, this portfolio can be leveraged outside of a job interview context, with the ability for the work to be relied on for example in future scholarship applications which may have a required publication or "impact" component.

Additionally, working on parliamentary submissions can offer further opportunities. For example, the ideas and work underpinning a submission could be turned into an additional piece of work, such as a blog post, news piece or journal article. In this way students can increase the impact of their work and leverage the knowledge they have gained to produce additional outputs. Further, students may be able to see additional value from seeing their work published and (hopefully) engaged with by the parliamentary committee, with many committees citing submissions and testimony.[48]

[47] Publishing work also provides secondary benefits to the wider program, including by ensuring that more students (and academic staff) are aware of the submission-writing program.

[48] Ray, Young and Grant (n 8). In contrast, there is very little chance of journal articles or book chapters being cited.

2.3. Building Impact

Although difficult to quantify, it is also critical for law schools to recognise the "empowerment" factor gained by enabling students to participate in parliamentary submission writing. Students have an increased capacity to influence real-world policy through parliamentary submissions, including an opportunity to be cited by or testify before a parliamentary committee. However, even for student submissions that are not cited, the benefits flowing from participating in Australia's democratic process and engaging with policymakers should not be discounted.

The skills and portfolio of work generated by submission writing assists students to engage in advocacy work. Whilst future generations are often the subject of climate change discourse, too often their voices are reduced to emotional soundbites to evoke empathy, or to be dismissed as "alarmist" by conservative policymakers.[49] Yet, paradoxically, the next generation are also 'positioned as the next generation of leaders' who are expected to 'overcome the legacies of climate and environmental inaction'.[50]

Engaging in the parliamentary inquiry process enables student to develop their expertise in environmental law issues, facilitating styles of youth advocacy that are solution-oriented.[51] The knowledge and skills from parliamentary submissions can be re-articulated in other research outputs, media articles and youth-led campaigns increasing the potential policy impact. This empowerment is critical for the incoming generation of law students that are both deeply concerned about climate change and motivated by the opportunities of climate action.

3. Developing and Supporting a Submission-Writing Program

This article has argued that there are significant benefits to students, universities and academics from developing a student submission-writing program (either as an extracurricular offering or as an assessment item within an elective course). However, designing and then implementing such a program can be complicated, and add to the already heavy workload academics face. This latter issue is significant, especially given that academic stress (and as such academic burnout) has increased in

[49] See, eg, Paul Karp, 'Coalition MPs want more school chaplains to help children suffering mentally due to 'alarmist' climate activism' (News Article, 31 August 2021) <https://www.theguardian.com/australia-news/2021/aug/31/coalition-mps-want-more-school-chaplains-to-help-children-suffering-mentally-due-to-climate-activism>.

[50] Amy Cutter-Mackenzie and David Rousell, 'Education for what? Shaping the field of climate change education with children and young people as co-researchers' (2019) 17(1) *Children's Geographies* 90, 90.

[51] See Lynne Zummo, Emma Gargoetzi and Antero Garcia, 'Youth voice on climate change: using factor analysis to understand the intersection of science, politics, and emotion' (2020) 26(8) *Environmental Education Research* 1207.

Australia in recent decades.[52] Academic burden therefore needs to be considered in program development to ensure that the workload is either spread across multiple academics, or minimised generally. This could include, for example, relying on students to fill leadership roles within an extracurricular program. Simultaneously, the program should be designed to maximise the learning opportunities for students, provide them with autonomy in terms of selection of topic and group members, and be designed to ensure that they can access academic support while developing their teamwork and advocacy skills. These last criteria are (in our view) the most important, as the key focus of the program should be on providing the best possible opportunity for students, however the drain on academics (and by extension universities) must be considered. In the longer term, policy shifts at universities to better account for academic contribution to extracurricular programs and encourage direct academic involvement in the parliamentary committee process could help further address this imbalance, by ensuring that the time academics contribute to extracurricular programs is considered in promotion rounds.

This section assesses[53] how academic staff can develop and then implement a submission-writing program and considers two approaches: first, the development of a standalone extracurricular program and second, incorporating submission-writing into an existing program or course as an assessment item. This section has drawn on our experience, as students and an academic, in participating in extracurricular programs at the ANU College of Law as part of GreenLaw and the ANU Law Reform and Social Justice Program.[54]

3.1. Selecting the Appropriate Model

Choosing between an extracurricular or assessment-based approach requires the balancing of several considerations. In our view deciding which of the two approaches to adopt will depend on the university, the academics involved, and whether there are any existing courses where an inquiry submission assessment item can be trialled. In particular, without existing assessment structures geared

[52] See Megan Lee et al, 'Occupational stress in University academics in Australia and New Zealand' (2021) *Journal of Higher Education Policy and Management* (advance).

[53] Here we address a number of identified challenges and opportunities with the two approaches, the section is not however designed to provide an exhaustive list of factors to consider in designing a submission-writing program as these will vary significantly by university.

[54] For further detail on the two programs see: 'GreenLaw' (Web Page, 2021) <https://greenlawnetwork.org/>; 'ANU Law Reform and Social Justice' (Web Page, 2020) <https://law.anu.edu.au/about-us/lrsj>.

towards a larger research task the time and effort involved in shifting the assessment model (i.e. the time needed to seek necessary approvals to create new courses) may not justify the end result.

However, we note that bringing submission-writing *into* a university subject as an assessment item is, arguably, more time efficient for both academics and students. This is because the time spent developing and implementing the program can count towards an academic's teaching load and the time students spend working on the submission is counted towards their university studies. In this way, the second approach may enable a greater number of students to take part, including those who have existing extensive work or extracurricular commitments, and provide more equitable access to submission-writing programs.[55]

Balanced against these efficiencies is the fact that extracurricular offerings allow for more flexibility in terms of inquiry selection, and the selection of the student group. For example, extracurricular submissions can include input from non-law students, enabling the program to incorporate a cross-disciplinary focus.[56] This will be particularly valuable for environmental law topics, where (by way of example) scientific and legal analysis could be included in a single submission on renewable energy. This could be achieved by having both legal and scientific academics involved in overseeing the submission, and drawing group members from both law and science disciplines (or students with that particular double degree combination).[57]

Further, an extracurricular program allows for greater engagement with other universities, something that is demonstrated by submissions written by university academics which often draw on expertise from multiple universities.[58] Having multiple universities involved in a single submission can, in turn, enable the academic oversight work to be shared more widely, and encourage greater inter-university collaboration – in turn providing greater networking opportunities for students. A broader, inter-university approach can also enable students at a university without a particular academic specialist to engage in a wider array of inquiries.

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[55] Similar benefits have been discussed in terms of bringing mooting into assessment programs: see, eg, Andrew Ray and Dilan Thampapillai, 'Accessibility, Equity and e-Mooting: Law Schools need to adapt to thrive' (2021) 2(2) *ANU Journal of Law and Technology* (forthcoming).

[56] We note that cross-accreditation for courses is possible, but requires, by definition, approval from more than one faculty, increasing the administrative burden on staff.

[57] Such an approach could theoretically also be done through assessment items given enough collaboration, particular if a university has a science communication program which is uniquely suited towards a parliamentary inquiry submission as an assessment item.

[58] For example, the University of Canberra and the ANU have partnered on submissions to parliamentary inquiries to distribute the required workload and to encompass a wider area of specialisation: News and Media Centre University of Canberra and the Virtual Observatory for the Study of Online Networks Australian National University, Submission No 8 to Senate Select Committee on Foreign Interference through Social Media, Parliament of Australia, *Foreign Interference through Social Media* (2020) 3.

3.2. Balancing Academic Support against Academic Workload

Once the model of the program is selected the key challenge based on our experience will be in appropriately balancing academic support against academic workload, for both supervising academics and students. In particular, submissions are published online and will (if written through an extracurricular program) be at least in some way attributable to the university and the academics involved in supporting the program.

Publishing in such an environment can be daunting for students, and it is critical that the program is designed to provide students with enough support to be able to feel confident in their final output. One potential solution which we have used is for academics to supervise each submission. In doing so an academic could speak to the student group about the submission, review their draft, and provide comments on alternate avenues the students could take or additional sources they could draw into the work. If the submission is being written as an assessment item, this approach can be completed as part of the feedback process. With (in effect) the marked submission being a "draft" of the final product to be submitted to the inquiry. Depending on the amount of academic involvement it may be appropriate for the supervising academic to be listed as an author or contributor on the submission directly.

This also has added benefits in that each submission can be supervised by a different academic (or group of academics) with skills and experience in the area. This can better enable the workload to be divided among multiple academic staff, and ensure that the students can access advice in terms of their overall structure and content. As the students are still the ones to actually write the submission, the academic workload is minimised, and as students write a greater number of submissions, they will likely feel confident enough to rely on less and less oversight.

In terms of balancing student workload, this article has (almost) assumed that submissions will be written by a group of students. This approach is preferred as it enables students to develop teamwork and communication skills. Further, in the context of parliamentary inquiry submissions which can range to up to 5000-6000 words, dividing the work between multiple authors can better ensure that a quality submission can be written within the short time periods generally allowed by parliamentary inquiries. For example, many inquiries are only open for submissions for a period of a few weeks to a month,[59] and trying to write a comprehensive submission in such a short time may be challenging for

[59] This can raise challenges for assessment design, so inquiry topics will need to be selected appropriately. Often committees are also happy to accept submissions after the deadline if given advance notice.

a single student. Indeed, the tight timeframe is likely to be a factor in the lower number of academic submissions, and also explain academic authors of submissions often writing them in a larger group, with each academic contributing to a particular area based on their strengths and interests.

As the aim of the program is to equip students with the policy advocacy skills in *their* particular interest area (in this case environmental law) having students work in groups can enable them to sub-divide their focus to what they are interested in. Environmental policy reform (as discussed above) often raises property, constitutional or international legal issues, alongside questions relating to planning, conservation, and biodiversity. Additionally, as we identified above there are advantages form combining a legal submission with scientific evidence especially for environmental law inquiries.

Group writing does, however, pose challenges in an assessment context, although these issues can be solved, and there is some evidence that productive group work can lead to improvements in student wellbeing.[60] The general challenge posed by such tasks is ensuring that student contributions are fairly accounted for. In the authors' view this challenge can be easily solved in the submission-writing context by having each student write a set amount (depending on the weighting of the task) dedicated to the points or issues that they wish to focus on. This means that while the overall submission (including brainstorming) is a "group task" each student can be marked individually, and the final group's submission edited to incorporate any academic feedback, combined and then submitted to an inquiry (if desirable).

3.3. Maximising Impact

The final point we wish to raise in this article is how best to measure (and maximise) the "impact" of a student submission. We have already discussed how measuring impact can be fraught in academic circles,[61] and we do not propose to provide a single way to track impact of submissions. While in some contexts citations or invitations to testify may show a greater "impact" on the final committee report,[62] such an approach may not be desirable for student-authored submissions.

[60] Olivia Rundle, 'Creating a Healthy Group Work Learning Environment in Law Classes' (2014) 14(1) *QUT Law Review* 63.
[61] For discussion see above Part II(C).
[62] See, eg, Ray, Young and Grant (n 8).

Instead, measuring the skills and utility of those skills developed by students, as well as their general enjoyment and willingness to continue with the submission-writing program are likely more useful metrics which can then be combined with a standard "impact" assessment to assess the overall desirability of a student-submission program. Beyond writing the submission, students should also be encouraged to leverage the submission into additional work outputs, for example an opinion piece, blog post, or journal article depending on the calibre of the research.

However, in our experience, student submissions can be designed at the outset with "impact" in mind in order to maximise the likelihood that it will be cited by the committee. In broad summary, the following characteristics may assist in the overall impact of the submissions:

1. Clear structuring, including a short Executive Summary and Summary of Recommendations at the beginning of the submission to focus the reader's attention.
2. Drafting recommendations to provide direct and practical reform options, including, where appropriate, recommendations about the language of the legislation. This includes ensuring that any proposed reform options are implementable, with a clear understanding of the cost of any proposed measures.
3. Focusing on discrete legal issues, enabling law students to utilise their legal research skills and increase the chance the submission will provide a novel perspective.
4. Engaging directly with other submissions made to the committee to either support or refute positions taken by other submitters.

Conclusion

As the role of legal graduates shifts, and the importance of policy advocacy skills increases within environmental law (and the broader profession), it is important that law schools adapt to provide their students with these necessary skills. Simultaneously, there is the perception that legal academics can gain little from themselves engaging in parliamentary and policy processes, and can in fact be disadvantaged compared to their peers by engaging in such work. While wider reform is beyond the scope of this article, we have argued that law schools can consider developing student-submission writing programs either as part of an assessment item or as an extracurricular offering. Such a program we argue can enable students and academics to engage in the policy process, while enabling students to develop necessary "job-ready" skills while learning more about their particular interests.

Youth Climate Courts, Amplifying an Intergenerational Voice and Participation for Climate Justice

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Abstract

The concept of Youth Climate Courts developed out of four participatory international human rights tribunals held in the United States and Australia in May 2018 to investigate human rights violations caused by fracking and climate change. The tribunals were held leading up to the week-long plenary session of the international Permanent Peoples' Tribunal held also in 2018.Youth Climate Courts can inspire intergenerational climate action undertaken by young people and can be used as an educational tool to encourage public and corporate accountability for climate misfeasance and nonfeasance. Youth Climate Courts have the potential to be utilized effectively in tertiary education in a humanities and science context to provide valuable and practical assessment exercises through participation, research or reflective practice.

The first Youth Climate Court in Australia was held in the Land and Environment Court of New South Wales (NSW) in December 2020 focussing on the way in which decisionmakers were regulating impacts of climate change on the Ramsar-listed Gwydir wetlands in New South Wales. The hearing of this matter is used as a case study in this article to demonstrate how initiatives like Youth Climate Courts may be used in a didactic setting such as an assessable task for academic credit. Youth Climate Courts can also complement and empower young people to raise their voice, contribute meaningfully to climate change solutions and assume control of the narrative and direction of their future and that of the planet.

1.0 Introduction

Like a prima ballerina en pointe, the world teeters precariously on global tipping points in the 21st century. An international-based group of eminent scientists have collaborated to produce another alarming article centring on the global collapse of ecosystems. This report documented several dramatic declines in ecosystems and concluded that there is "evidence of collapse of 19 ecosystems (both terrestrial and marine) extending from northern Australia to coastal Antarctica, from deserts to mountains to rainforests, to freshwater and marine biomes, all of which have equivalents elsewhere in the world."[1] This article documents that, in Australia, a number of pressure points will continue to cause severe adverse impacts on the environment and its human and non-human inhabitants. Pressure points producing heatwaves, droughts, floods and fire have become "more severe, widespread and more frequent".[2] Further, these catastrophic changes reflect "detrimental major structural and functional change…occurring synchronously elsewhere in the world."[3]

The authors propose a three-part approach for solutions to adverse impacts of climate change on the environment and its human and non-human inhabitants through awareness, anticipation and action. Awareness focuses on the acknowledgment of the importance of biodiversity and the recognition that biodiversity needs urgent protection.[4] The second part focuses on the identification of the pressures which are impacting ecosystems and on recognizing the risk point for potential ecosystem collapse.[5] The third part centres on the action required to intervene at all levels to lessen the impact of these pressures on ecosystems.[6] The authors note the urgency of action needed for change, warning that "[society] cannot wait for perfect qualitative evidence to characterise fully the trajectories of collapse…If [society] chooses not to act, [society] must accept loss and a myriad of often unforeseen consequences".[7]

[1] Dana M Bergstrom et al, "Combatting ecosystem collapse from the tropics to the Antarctic" (2021) 27 Global Change Biology 1692, 1693
[2] Bergstrom, n1, 1694
[3] Bergstrom, n1, 1696
[4] Bergstrom, n1, 1697
[5] Bergstrom, n1, 1697
[6] Bergstrom, n1, 1697
[7] Bergstrom, n1, 1698

This article considers a new human rights-based initiative called Youth Climate Courts which may be included as part of everyday activism currently empowering present and emerging generations to combat climate change and to take positive action to create improved outcomes for climate justice. The initiative also has scope for positive learning and behavioural outcomes which can be embedded into educational curricula at secondary and tertiary levels. Each part of the conception, organisation and undertaking of the Youth Climate Court hearings can be part of participatory learning and assessment with the support of experienced educators and legal practitioners for environmental and climate justice outcomes.

An overview is provided of the circumstances which led the world to this climate tipping point and considers the injustice of the burden of young people are shouldering now and later as future Earth inheritors. The article also examines the development of youth activism around climate changes issues. An examination is made of how Youth Climate Courts can support climate accountability in global and domestic governance and reform in climate law, policy and practice to amplify the voices of young people to resolve climate injustice.

1.1 The sixth mass extinction

Biodiversity extinction and ecosystem collapse are part of a number of issues ravaging our world. It has been described as the Sixth Mass Extinction.[8] Mirchandani writes that "we cannot escape the cumulative effects of generations of unchecked activity or ever afford to return to our pre-pandemic emission trajectory".[9] From the 1960s, multiple generations have raised the alarm about the state of the world This happened most notably in 1962, with the publication of *Silent Spring* by Rachel Carson.[10] More recently, young people have been articulately and passionately engaging in debate and activism on the change needed for a response to global issues particularly climate change.

One seminal moment occurred in 1992, when 12-year-old Savern Cullis-Suzuki addressed the United Nations Earth Summit not only as representative of the Environmental Children's Organisation (ECO)

[8] Rajesh Mirchandani, "Five Global Issues To Watch in 2021" https://unfoundation.org/blog/post/five-global-issues-to-watch-in-2021/
[9] Mirchandani n 8.
[10] Rachel Carson *Silent Spring* Houghton Mifflin Company, 1962

of Canada, but more broadly as a representative of her generation. She warned the adult audience in the meeting room and across the globe "I'm fighting for my future as my future is not like losing an election or a few points in the stock market. I am here for all generations yet to come…I am only a child yet I know we are all part of a family five billion strong- in fact, thirty million species strong. And borders and governments will never change that. I'm only a child, yet I know we are all in this together and should act as one single world towards one simple goal."[11]

Cullis-Suzuki rightly questioned the priorities of leaders in the room and adults in the world. She revealed the sorrow and disappointment at the apparent lack of love and leadership adults displayed in their disregard for the environmental trajectory our earth was on at that time. Currently this trajectory has become faster and more irreversible.[12] Thirty years later in 2018, a 15-year-old secondary school student from Sweden, Greta Thunberg, demanded immediate improvements to adult leadership and action on climate change arguing "Don't listen to me. This is not about me. Listen to the scientists. Unite behind the science." She angrily observed, "How dare you continue to look away and come here saying that you're doing enough when the politics and solutions needed are still nowhere in sight."[13]

Commenting upon the impact of Thunberg's speech, Cullis-Suzuki notes that young people possess the ultimate moral authority to react and demand action for what human (adults) are doing not only to the earth, but to future generations. She observes that older generations continue to justify defensive and obstructive attitudes and actions to combat the adverse impacts of climate change on the basis of outcomes such as stimulating economic systems, employment and profits. Young people led by articulate spokespersons such as Thunberg argue that young people have a powerful claim to actively and effectively participate in decision-making on how the climate change response will be articulated throughout global and domestic laws, policies and governance frameworks.

Prior to the Conference of the Parties (COP) 21[14], climate youth leaders from around the world organised the 11th Annual Conference of Youth (COY11) in Paris before COP 21. In preparatory

[11] Savern Cullis-Suzuki, "Telling the UN Earth Summit How It Is In 1992" https://www.coolaustralia.org/severn-suzuki-telling-the-un-earth-summit-how-it-is-in-1992-secondary/

[12] Will Steffen et al "Trajectories of the Earth System in the Anthropocene" PNAS (online 14 August 2018) https://www.pnas.org/content/115/33/8252

[13] "30 years before Greta Thunberg: The girl that moved the UN" (onlinehttps://www.youtube.com/watch?v=ZOp5ATk_rlM

[14] "The twenty-first session of the Conference of the Parties (COP) and the eleventh session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP) took place from 30 November to 11 December 2015, in Paris, France."

activities held before the COY 11, Thew, Middlemiss and Paavola observe that youth participants saw climate change as particularly unjust for young people and future generations as the adverse impacts on the environment would inequitably affect their futures.[15]

At COY 11, the young organizers live-streamed events and ran an online consultation, creating a manifesto to present to the French presidency of COP21, welcoming contributions from anyone under 30 years old…asserting repeatedly that youth are the future and framing themselves as representatives of future generations….A key theme was "youth inclusion", a demand for recognition emphasising that "the resounding position of youth from around the globe is that any decisions that affect the current reality and the future of youth must be made in consultation with youth. The youth will inherit the Earth from older generations and we are therefore more motivated to make decisions that are better for our future. Youth must be at the heart of all decision-making and have a seat at every table. The youth have unique perspectives and motives and, as they make up 1.2 billion of the world population must be seen for what they are – an essential asset to any country!""[16]

Thunberg's impact continues to be a positive and powerful model for the world's young people concerned about climate change and how it impacts on their future. She is amongst heady company with other committed youth climate justice leaders from many parts of the world.[17] She has been inspired by the support in the form of Australian climate -based school strikes, assisted by social media.[18] Cullis-Suzuki and Thunberg agree that the Earth and its human inhabitants cannot afford to wait any longer for urgent action. Youth climate strikes have had, up until 2019, a groundswell of over 11 million young people. School strikes[19] are a part of a number of what Trott describes as

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(Webpage) https://unfccc.int/process-and-meetings/conferences/past-conferences/paris-climate-change-conference-november-2015/cop-21

[15] Harriet Thew, Lucie Middlemiss and Jounie Paavola (2020) *Global Environmental Change, 61* "Youth is not a political position": Exploring justice claims-making in the UN Climate Change Negotiations. *Global Environmental Change* 102036,102046

[16] COY 11. 2016. Conference of Youth (COY11) Manifesto [Web page]. Paris, France. Available: https://conference-of-youth.org/en/coy11/ in Thew, Middlemiss and Paavola n14,102048

[17] Mark Fischetti "Youth Leaders for Climate Justice Say, 'We Are Ready to Work" Scientific American (Web page 15 April 2021) https://www.scientificamerican.com/article/youth-leaders-for-climate-justice-say-we-are-ready-to-work/, "CLIMATE ACTION 19 YOUTH CLIMATE ACTIVISTS YOU SHOULD BE FOLLOWING ON SOCIAL MEDIA" (Webpage 14 June 2019) https://www.earthday.org/19-youth-climate-activists-you-should-follow-on-social-media/

[18] "Greta Thunberg on whether she'd meet with the President" interview of Ms Greta Thunberg by Ellen DeGeneres (Web page) https://www.ellentube.com/video/greta-thunberg-on-whether-shed-meet-with-the-president.html

[19] Mostafa Rachwani "School strike for climate: thousands take to streets around Australia" The Guardian (Web page 21 May 2021)- https://www.theguardian.com/environment/2021/may/21/school-strike-for-climate-thousands-take-to-streets-around-australia,

transformative everyday activism. Trott describes "everyday activism [as] *culture shifting*, changing the social landscape upon which non-sustainable practices take root, flourish or wilt- with direct and indirect consequences for the climate crisis."[20]In the current global pandemic conditions, young climate activists have had to be creative in methods to draw attention to the issues and the way a response can be developed.[21]

2.0 Youth participation in environmental democracy

Young people including children have the right to participate in decision-making processes[22] relevant to their lives and to influence decisions that impact them. International law confirms that children are persons who have the right to express their views in all matters affecting them and to demand those views be heard and be properly taken into account.[23] Checkoway considers that youth participation in public life "recognizes the potential of children [and young people] to share perspectives and to participate as citizens and actors of change.

This right is related to the right that children [and young people] should have the necessary information about options that exist and the consequences of such options so that they can make informed and free decisions. Providing information enables children [and young people] to gain skills, confidence and maturity in expressing views and influencing decisions."[24]

Young people have the right to create and join organisations, gather in groups legally to express political opinions, engage in political processes and participate in decision-making. All these types of public participation are critical to the development of a democracy, reinforcing the rule of law and need for the participation of young people in the realization of their rights.[25]Rights of protest by young

[20] Carlie D Trott, "What difference does it make? Exploring the transformative potential of climate crisis activism by children and youth" [2021] Children's Geographies 1-9, 3
[21] Elena Morresi and Nikhita Chulani "Protest in a pandemic: voices of young climate activists – video" The Guardian (Web page 24 May 2021) https://www.theguardian.com/environment/video/2021/apr/23/voices-of-young-climate-activists-how-the-pandemic-changed-the-way-we-protest-video

[22] UN Commission on Human Rights, *Convention on the Rights of the Child.*, 7 March 1990, E/CN.4/RES/1990/74, (Web page) https://www.refworld.org/docid/3b00f03d30.html , Article 12
[23] Barry Checkoway "What is youth participation?" (2011) 33 (2)Children and Youth Services Review 340-345,345
[24] Checkoway n23,345
[25] Checkoway n23, 345

people and children as a part of participation in democratic governance is protected by international legal principles.[26] "Protest is one of the few ways that young people can participate as citizens in a democratic system given that the majority do not have the right to vote."[27]

Youth Climate Courts can be seen as firmly entrenched in a suite of initiatives which are part of climate justice within everyday activism. They provide a platform for young people to express their concerns and participate in decision-making related to regulating impacts of climate change on the future of the world and them in particular.[28] The next section focuses on Youth Climate Courts and their impact.

2.1 Youth Climate Courts

Youth Climate Courts are a human rights initiative, developed through the inspiration of the Permanent People's Tribunal on Human Rights, Fracking and Climate Change[29] and the powerful advisory opinion the Tribunal issued several months later. This opinion recommended a worldwide ban on hydraulic fracturing or fracking.[30] This mining process for extracting gas from geological strata, is conducted in a way that causes detrimental, long-term and in many cases irreversible environmental impacts.[31]This can lead to a violation of several human rights, including the right to life or water and the rights to full information and participation, especially by vulnerable groups in the community including environmental and human rights defenders as well as women and youth.

2.2 Architecture of Youth Climate Courts

[26] Article 15 of the UN Convention on the Rights of the Child (UN Commission on Human Rights, *Convention on the Rights of the Child.*, 7 March 1990, E/CN.4/RES/1990/74)
[27] Rhian Barrance, "The right to protest: a children's rights perspective on the school climate strikes" https://www.bera.ac.uk/blog/the-right-to-protest-a-childrens-rights-perspective-on-the-school-climate-strikes
[28] Danny Noonan "Imagining Different Futures through the Courts: A Social Movement Assessment of Existing and Potential New Approaches to Climate Change Litigation in Australia" (2018) 37(2) The University of Tasmania Law Review 25-69, 46
[29] THE PERMANENT PEOPLES' TRIBUNAL on Human Rights, Fracking and Climate Change (Web page) https://www.tribunalonfracking.org/
[30] Permanent People's Tribunal Session on Human rights, Fracking and Climate Change, 14-18 May 2018 Advisory Opinion 12 April 2019 (Web page) http://permanentpeoplestribunal.org/wp-content/uploads/2019/04/AO-final-12-APRIL-2019.pdf)
[31] Todd Pitock "In Arid South African Lands, Fracking Controversy Emerges" Yale Environment 360(online 4 August 2011) https://e360.yale.edu/features/in_arid_south_african_lands_fracking_controversy_emerges

Youth Climate Courts were developed by Professor Tom Kerns[32] in the United States as a tool to encourage young people to organise themselves to establish court-like structures to review the principles concerning the impact of climate change on human rights and action of local governments[33] in responding to climate change impacts. Professor Kerns has developed a website providing detailed information and guidelines for conducting an effective Youth Climate Court together with case studies.[34]

The objective of Youth Climate Courts is to support youth leaders to call upon their public officials to account for their actions or inactions in responding to climate change which may have resulted in breaches of environmental protection statutes, national constitutions and/or human rights laws. Youth leaders organise a trial and summon members of the relevant government to attend and explain themselves in open proceedings "against charges that government is failing to adequately protect the basic human and constitutional rights of its citizens, especially of the children [and young people], in the face of climate change."[35]

There are a number of international conventions such as the Universal Declaration of Human Rights[36] protecting people's right to freedom, justice and peace as well soft law implicitly recognising the right to a healthy environment, such as the Stockholm Declaration 1992.[37]These rights are being implemented by being embedded in national constitutions and other statutes, such as in the constitutions of Ecuador[38] and Bolivia.[39] Australia has a number of environmental laws such as the Environmental Planning and Assessment Act 1979 (NSW), the Biodiversity Conservation Act 2016

[32] Professor Tom Kerns is the Director of Environment and Human Rights Advisory and professor emeritus of Philosophy at North Seattle College, USA
[33] Youth Climate Courts can extend to climate action or inaction of national or sub-national governments as well.
[34] Youth Climate Courts "How You Can Host a Human Rights Trial for People and Planet"(Web page) https://www.youthclimatecourts.org/). See also Thomas A. Kerns "Youth Climate Courts: How You Can Host a Human Rights Trial for People and Planet" Routledge, 2021(due for release)
[35] Tom Kerns *The Little Book of Youth Climate Courts: How You Can Host a Human Rights Trial for People and Planet* (Draft Working Copy) 2020, 3
[36] *International Covenant on Civil and Political Rights,* opened for signature 16 December 1966, 999 UNTS 171 (entered into force 23 March 1976).
[37] Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972A_CONF.48_14_Rev.1-EN
[38] Republic of Ecuador *Constitution of 2008*
[39] Bolivia (Plurinational State of)'s Constitution of 2009 Oxford University Press, 2021

(NSW) and the Environment Protection and Biodiversity Conservation Act 1999 (Cth), which may directly or indirectly protect, to varying degrees, a safe and healthy environment for humans.[40]

As noted above, the creator of the concept of Youth Climate Courts, Professor Tom Kerns, has drafted a handbook which gives step-by-step guidance for conducting a Youth Climate Court.[41] This includes, developing an idea and question to place before the court and mobilising a group of committed youth members to be responsible for key tasks. Deciding which government agency or department to summon for failing to adequately protect the community's human rights by undertake policies and programs to implement climate justice would be a primary task Other important jobs are appointing young people to key roles such as judge, jury, legal representatives for the parties as well as media and court recordings. Adult mentors for each group of participants could be approached by the youth organisers for support and guidance.[42]

2.3 Benefits of Youth Climate Courts

Organising and undertaking a Youth Climate Court is a creative and engaging way for young people to express their concerns about the climate crisis to relevant decisionmakers, and analyse and evaluate present governmental responses. This forum can gather evidence, create new ideas and ways to combat climate injustice. It can provide an impetus for youth to demand effective responses to the threats of adverse climate change impacts on environmental and human rights. The Youth Climate Court provides a platform for young people to speak honestly and passionately. The proceedings are established and carried out by the young people themselves, drawing upon and requesting sources of support which they consider are necessary. Another advantage is that the Youth Climate Court is controlled by the young people themselves and can be implemented within the formal setting of a court or tribunal. It is a practical way to understand and learn about governance, legal procedure and the operation of the environmental rule of law.[43] Young people learn important life skills covering team building, oral and written communication as well as advocacy.

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[40] Revel Pointon and Justine Bell-James "The right to a healthy environment in Australia" (2019) (7)2 Griffith Journal of Law and Dignity 76-94
[41] Kerns, n 35, 25-26
[42] Kerns, n 35,12-16, 26
[43] IUCN World Commission on Environmental Law "IUCN World Declaration on the Environmental Rule of Law" (Web page 2016) https://www.iucn.org/sites/dev/files/content/documents/english_world_declaration_on_the_environmental_rule_of_law_final.pdf

These attributes of Youth Climate Courts mean that it will be difficult for public officials to ignore its operation and impact even in circumstances where the local authorities are disengaged. The Youth Climate Court process and procedure are based in human rights standards and environmental law, both of which aim to encourage governments at all levels to respect and enforce the human rights and environmental protection required for a safe and healthy environment.

2.4 Youth climate court -a case study in Australia

In December 2020, a Youth Climate Court was held in the Land and Environment Court of NSW. Youth advocates represented different stakeholders including the Federal, State and local government departments responsible for water regulation and representative bodies for the local Aboriginal community and the Gwydir wetlands.[44] The proceedings concerned the climate impacts of water use and regulation in the Murray Darling River Basin (MDB), particularly affecting the Gwydir Wetlands, a Ramsar-listed wetland.[45] The question before the Youth Climate Court was originally drafted for a workshop as part of a conference about regulation and management of freshwater resources in Moree in north west NSW in early December 2020.[46]

The Youth Climate Court was convened in the Land and Environment Court of NSW before Justice Brian Preston[47] on 16 December 2020. The focus was on whether public authorities regulating freshwater resources which included the Gwydir wetlands within the MDB [48] had properly considered climate impacts in their decision-making and action. The MDB has been altered dramatically by intensive agriculture including the development of a large area of irrigated crops, such as cotton, citrus

[44] The parties included the Department of Agriculture, Water and the Environment (Cth), the NSW Department of Planning, Industry and Environment, the Murray Darling Basin Authority, the local communities including farming, fishing and tourism, the local government body: Moree Plains Local Council, the Moree Local Aboriginal Land Council, the Gwydir Wetlands and the Murray Darling Basin irrigators.

[45] Ramsar Sites Information Service "Gwydir Wetlands: Gingham and Lower Gwydir Watercourses" (Web page) https://rsis.ramsar.org/ris/993?language=en

[46] Australian Freshwater Sciences Society Conference 2020-(Web page December 2020) https://www.auswatersoc.org/conferences/conference-2020

[47] Justice Brian Preston is the Chief Judge of the Land and Environment Court of the NSW (LEC), the world's first specialist planning and environment court. The LEC is a superior court of record. Justice Preston was appointed as Chief Judge in 2005.

[48] The Murray Darling Basin covers land the size of a small country in Africa such as Egypt, with the majority of land in New South Wales, Victoria and the Australian Capital Territory, as well as parts of Queensland and South Australia.

and almonds, requiring high extractions of water. Sensitive river wetlands and river red gum forests have been left under stress from lack of water and increased salinity.[49]Wetlands such as the Gwydir Wetlands are of "key importance for regional biodiversity as they serve as habitat sanctuaries for aquatic and terrestrial biota in areas with very few resources."[50] Sandi et al note that climate change will have adverse impacts on wetlands but there is some capacity for adaptation and resilience.[51] The Gwydir wetlands are listed as ecologically significant and listed under the Ramsar Convention[52] and " is one of the largest inland wetlands in New South Wales and home to half a million nesting and breeding waterbirds".[53] The designated area is entirely privately-owned and forms part of a much larger wetland system in the Murray-Darling drainage system.

There are a number of parties who benefit from the MDB including its wetlands and a number of stakeholders were selected to make submissions to the Youth Climate Court reflect varying interests and concerns. Stakeholders included the Federal and State water authorities, the local council, representative bodies for fishing, agriculture and tourism, human representatives for the natural environment of the Murray River and the Gwydir Wetlands as well as Indigenous water custodians through the Moree Aboriginal Land Council. Each young participant in the Youth Climate Court undertook advocacy representing a particular stakeholder.

The application by the local community and the Gwydir wetlands [was pursuant to] s336(1) and (2) of the Water Management Act 2000 (NSW) that the 'approach taken by the NSW departments responsible for water sharing (NSW Water, DPIE) in relation to aspects of the operation of the WMA was influenced or informed by an incorrect understanding of the Act's objects, principles and duty. In turn, that gave rise at times to an improper exercise of official power or functions by state public officials, which had the effect of operating to the advantage of the irrigation sector to the disadvantage of the environment which is in breach of s5(2) Water Management Act 2000."

[49]The Guardian "Murray Darling when the river runs dry" (Web page 5 April 2018) https://www.theguardian.com/environment/ng-interactive/2018/apr/05/murray-darling-when-the-river-runs-dry
[50] Steven G. Sandi *et al.* "Resilience to drought of dryland wetlands threatened by climate change." (2020)10(1) Science Reports. 13232,13232 (Web page 8 August 2020) https://www.nature.com/articles/s41598-020-70087-x
[51] Sandi et al, n 50
[52] Convention on Wetlands of International Importance especially as Waterfowl Habitat (known as the Ramsar Convention) 11 l.L.M. 969 (1972) entered into force 21 December 1975
[53] Gwydir Wetlands: Gingham and Lower Gwydir Watercourses (website)-https://rsis.ramsar.org/ris/993

An independent digital classroom was set up by the author[54] with the question and resources to assist the young participants to focus on reliable research materials. The materials arising out of the proceedings including written submissions, video recordings of the proceedings have been uploaded onto the archive section of the International Coalition of Youth Climate Courts section of the Youth Climate Courts website.[55]

The participants were asked to provide feedback on a number of matters following the hearing. Firstly, an evaluation of the value of the YCC process for improving environmental protection and secondly whether the Youth Climate Court is an effective way for Australian youth to amplify their voices on environmental issues and adequacy of regulation. Finally, participants were asked to contribute suggestions for improvement. The feedback provided by the participants remarked positively on the opportunity they had been given to raise their voices about important environmental and human rights issues.

Ms Georgia Cam observed "This initiative helps solve a stigma that is prominent in younger generations - that we don't have a voice when it comes to recommending amendments to climate change governance and law. If youths are too young to vote, or don't feel like their vote is sufficient in having their opinions heard, they need to feel empowered to be able to effect change in other ways."[56] Ms Jessica Pereira also noted "I definitely think this is a useful tool in effecting climate change governance and law. I believe [Youth Climate Courts] will give young people a more legitimate platform to have their voices heard and will encourage more substantial and targeted research, as opposed to a general view on the topic. For example, (not to diminish the effectiveness of public assembly), but such a forum could incite real change, as opposed to a protest or other advocacy gathering."[57] Ms Pereira felt that the Youth Climate Court was an important opportunity to grapple with the application of current scientific data to the issues before the Court.[58] Dr Geetanjali Ganguly wondered if there was "a way for such initiatives to become a sub-set of larger global climate change conferences (so for example,

[54] Easyclass.com (website)https://www.easyclass.com/ If the Youth Climate Court is conducted through within a secondary or tertiary educational institution, then existing learning platforms such as iLearn, Moodle could be used.
[55] Gwydir Wetlands Case Sydney, Australia (Web page))https://www.youthclimatecourts.org/archives/gwydir-wetlands/
[56] Gwydir Wetlands Case, n 55
[57] Gwydir Wetlands Case, n 55

[58] Gwydir Wetlands case, n 55

the [United Nations Convention on Climate Change] COPs as well as the Davos economic forum etc.). This could be done through civil society leadership in these areas by NGOs like Our Children's Trust, which is coordinating youth-driven climate litigation around the world." [59]

The Youth Climate Court has the potential to engage with important environmental and human rights issues and positively contribute in combatting feelings of despair and disempowerment.[60] The Youth Climate Court can be a practical and engaging assessment task for secondary and tertiary students to apply their learning in an empirical context and devise practical solutions and applications to problems posed by the impacts of climate change. Students can reflect on the experience of the Youth Climate Court as part of the assessment regime and undertake further research about and with proponents of future Youth Climate courts in other countries. Youth Climate Courts can be seen as a raft of "current trends in climate change education…which invite children [and youth] to think about, consent to, and act on climate change in a personal way."[61]

2. 5 Youth Climate Courts-Educational and Environmental Benefits

The experience of organizing and undertaking a Youth Climate Court trial have benefits for the young people including contributing to a local and global impact initiative, understanding the way in which courts and local governments work and realizing the power and potential of legal remedies based on human rights and climate law. Participants will also gain skills in advocacy and developing an inclusive team-based creative project.[62]These participatory methods of engagement can be science or arts-based. Traditionally sciences have "dominated youth engagement frameworks…and [can] offer an important anchor point around which to conceive of the problem and its multifaceted solutions."[63] However, humanities such as law and the visual arts such as film[64] and artworks can encourage creative

[59] Gwydir Wetlands Case, n 55
[60] Matthew Taylor and Jessica Murray, "Overwhelming and terrifying: The rise of climate anxiety", The Guardian, (Web page 10 February 2020) https://www.theguardian.com/environment/2020/feb/10/overwhelming-and-terrifying-impact-of-climate-crisis-on-mental-health
[61] David Rousell and Amy Cutter-McKenzie-Knowles, 'A Systematic Review of Climate Change education Giving Children and Young People a 'Voice' and a 'Hand' in Redressing Climate Change" (2020) 18(2) Children's Geographies 191-208
[62]Kerns n1, 4
[63] Trott, n 20, 5
[64] Youth Unstoppable Campaign "Youth Unstoppable" (Web page) https://www.youthunstoppable.com/campaign

expression and critical reflection to promote powerful alternative solutions for better and more hopeful futures.[65]

A parallel example is school-based youth courts which dispense justice for students who have committed and admitted responsibility for minor disciplinary infractions as one way of reducing school suspensions. Like the Youth Climate Courts, these are peer-based courts where youth serve in all court roles, while adults play a supportive and guiding role.[66]The youth courts were embedded into social sciences and civics subjects in the school curriculum.[67] In addition to the social justice benefits, a detailed study of the youth courts undertaken in Pennsylvania USA in 2013, noted the personal, social and community advantages "associated with stronger academic performance among volunteers and respondents. Youth courts are settings in which noncognitive factors related to school success – academic behaviors, positive mindsets, and social skills – are developed."[68] Youth Courts were able to support the development of skills for academic and social success such as improved attendance in class and active participation in academic activities. Norton, Gold and Peralta observe that: "the volunteers "are learning to speak on their feet. They are learning to speak publicly in front of others, and they are learning to follow complex fact patterns.""[69]

Youth Climate Courts have the potential for similar positive academic benefits and social and environmental justice outcomes for secondary and tertiary students in several disciplines including law, natural and social sciences. Assessment tasks can be developed around organising and undertaking the Youth Climate Courts hearing. A range of activities may be assessed individually or as part of broader learning and participation including researching the questions to be heard before the Court, drafting the arguments that each of the parties will make, preparing documents and taking evidence. Reflections based on the conception, organisation and undertaking of the hearing as well as feedback from the participants could be prepared during and after the hearing. Research papers on the process and court

[65] Youth Climate Lab "Moving the Needle Virtual Gallery" (Web page) https://www.youthclimatelab.org/virtual-gallery
[66] Michael H. Norton, Eva Gold and Renata Peralta "Youth Courts and their Educational Value:
An Examination of Youth Courts in Chester, Pennsylvania" Research For Action, 2013 (Web page)
https://files.eric.ed.gov/fulltext/ED553139.pdf
[67] Norton, Gold and Peralta n 66,8
[68] Norton, Gold and Peralta, n 66,23
[69] Norton, Gold and Peralta n 66,16

procedures as well as on global climate litigation cases particularly those that are youth-led[70], could supplement the learning experience and form part of the assessment regime. Engaging with experienced legal practitioners, experts and judges[71] to support the learning of the youth participants would enhance the whole experience.

3.0 Conclusion

There are increasing numbers of climate litigation suits by youth plaintiffs [72] which can result in positive changes to the law and powerful and articulate precedents.[73] Climate litigation has resulted in important changes to strengthen legal frameworks, which insist on visiting duties and responsibilities on governments and corporations to change their behaviours under international and national environmental and human rights laws. [74] However, these adversarial dispute resolution approaches can be risky, expensive and stressful. Tools like Youth Climate Courts can complement and empower young people to raise their voice, contribute meaningfully to climate change solutions and help to direct the narrative of their future on the planet. This initiative has the potential to produce positive benefits for learning and behavioural change for the participants as well as improvements to climate governance and accountability. Youth Climate Courts may encourage local authorities to reflect on their policies, and effect change to existing regulations and programs to include youth in decision-making processes. Young people can be an active part in developing local climate justice solutions. This initiative can lead to climate law and policy reform at local and global levels as well as a voice at the democratic table for children and young people.

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[70] Nathan Levy "JULIANA AND THE POLITICAL GENERATIVITY OF CLIMATE LITIGATION" (2019)43 Harvard Environmental Law Review 479-505.See also Nathalie J. Chalifour, Jessica Earle, and Laura Macintyre "Coming of Age in a Warming World: The Charter's Section 15(1) Equality Guarantee and Youth-Led Climate Litigation" (2021)17(1) Special Issue on Climate Change and Intergenerational Equality, 1-105

[71] Volunteer legal practitioners, non-legal experts and judges may be sourced from the school and university alumni or local community.

[72] Our Children's Trust in the US have brought many cases using youth plaintiffs, of which Juliana v United States is the best known. A recent example of youth climate litigation in Australia is Sharma and others v Minister for the Environment [2021] FCA 560

[73] Adam Morton "Australian court finds government has duty to protect young people from climate crisis" The Guardian (Web page 27 May 2021) https://www.theguardian.com/australia-news/2021/may/27/australian-court-finds-government-has-duty-to-protect-young-people-from-climate-crisis

[74] Chloe Farand, "Six Portuguese youth file unprecedented climate lawsuit against 33 countries" Six Portuguese youth file 'unprecedented' climate lawsuit against 33 countries (climatechangenews.com) and Michael Slezak and Penny Timms, 'Australian teenagers' climate change class action opens a 'big crack in the wall', expert says" (Web page 27 May 2021) https://www.abc.net.au/news/2021-05-27/climate-class-action-teenagers-vickery-coal-mine-legal-precedent/100169398

Self Reflection on Presentation Skills and on the Law in Environmental Law Teaching: an Australian Example

Jennifer McKay, Abhinava Barthakur and Srecko Joksimovic[(*)]

By three methods we may learn wisdom: first, by reflection, which is noblest; second, by imitation, which is easiest; and third by experience, which is the bitterest.
Confucius

Reflection is a critical pedagogical element, fostering students' learning and promoting lifelong learning. Reflective practices allow students to engage in purposeful consideration of their prior understandings and experiences to gather deeper insights and transfer their knowledge to practice.[1] Integrated within formal and informal educational curricula, reflection has been reported to support students' self-regulated learning, enhance learning outcomes, and prepare for professional practice. The implications of reflection and reflective practices on students are multiple folds and hence, extensively studied in the existing literature.[2]

Reflection is central to the legal education process.[3] Being rooted in the experiential learning paradigm, legal education commonly involves a circular sequence of experience, reflection, theory, and practice.[4] In that sense, reflection and reflective practices are often used to assess students in legal programs. Susler and Babacan[5] (2021) further argue that reflection needs to be structured as a meaningful and essential part of the learning process, allowing enough time and resources for students to elicit critical thinking. Proposing various approaches to support critical reflection, Susler and Babacan (2021) specifically highlight the importance of developing a supporting environment that ensures

[1] Donald Schön, *The Reflective Practitioner: How Professionals Think In Action*, vol 5126 (Basic Books 1983).
[2] Schön (n 1); David Boud, Rosemary Keogh and David Walker, *Reflection: Turning Experience into Learning* (Routledge 1985); Jack Mezirow, *Transformative Dimensions of Adult Learning* (Jossey-Bass 1991).
[3] Ozlem Susler and Alpheran Babacan Embedding Critical Reflection in Legal Education. LiC [Internet]. 2021Sep.1 [cited 2022Jan.12], 37(3). Available from: https://journals.latrobe.edu.au/index.php/law-in-context/article/view/154 [http://press-files.anu.edu.au/downloads/press/n2366/pdf/ch07.pdf] viewed 6 Jan 2021.
[4] *Ibid.* at 15.
[5] *Ibid.*

confidentiality, non-judgement, and openness. Nevertheless, the evaluation of student reflective practices is costly and time-consuming process. Therefore, several attempts have been made to automate the assessment of student reflective writing.

This paper is the outcome of three years of collecting evidence of reflections (via written diary notes) from environmental law students on a legal research presentation task which was a presentation on a topic area of environmental law. [6] The topics were provided to the students with an option to propose to the Course coordinator a different topic. This was done to ensure the scope was manageable and students were given supporting materials in the eReadings and narrated presentations. Over the three years, 152 students reflected on their own presentation skills in three different questions. This was done in order to see if deeper learning was promoted by this assessment and they could derive lessons to improve future performance in research and presentation. A final reflection question was added which was derived from the curiosity of the first author and the desire to improve teaching to future cohorts. This question was - *Write about your personal experience with your topic-were you shocked and surprised about the area of law you have identified?*. This short paper looks at reflection in the context of law teaching. The paper applies an analysis method to the answers to these questions called a vertical reflection framework using machine learning text classifier. The results indicated that the environmental law students did deeply reflect on the law and were indeed shocked and surprised. The areas of law covered were environmental reporting in companies, anti-Strategic Litigation Against Public Participation (Anti SLAPPS)s suits laws, water laws, *Environmental Protection Act SA* and *Environmental Protection and Biodiversity Conservation Act (Cth).*

1. Australian Law Teaching

Commentators say that current Australian undergraduate pedagogical models used in legal education have not kept up with educational theories and are stuck in behaviorism.[7] Lawyers need to be taught what to do rather than being taught outdated notions of what lawyers need to know.[8]

[6] Terry Hutchinson, 'Developing Legal Research Skills: Expanding the Paradigm' [2008] MelbULawRw 33; (2008) 32(3) Melbourne University Law Review 1065.

[7] Terry Hutchinson and Natalie Cuffe, 'Legal Research Project Management: Skills Extension for Upper Level Law Students' (2004) 38 Law Teacher 159, 162–3.

[8] Australian Law Reform Commission, Managing Justice: A Review of the Federal Civil Justice System, Report No 89 (1999) 148. The outcome would be less doctrinal learning at undergraduate level and a tiered approach with strengthened post graduate training for those intending to practice. The Productivity Commission also recommended limited licences rather than full LLBs are needed to provide in family law, consumer credit housing and elder care. Productivity Commission, Access to Justice Arrangements (Inquiry Report No 72, 5 September 2014) 7.4.

In the US and Canada, more work has been undertaken on legal teaching[9]. The Carnegie report in 2007, advocated a *Cognitive Apprenticeship* as a better educational framework than the Socratic Method or 'case dialogue teaching'.[10] In the UK, reflection have been worked on since 2002 at the Centre for legal education.[11] An excellent report by Hinett details several reflective processes deeply embedded in UK law schools and presents several experiences of law academics. In the UK, however, law teaching has been reported as being beset by issues of lack of engagement and low attendances with online lectures.[12]

In Australia, the current regulatory model for entry level competency for legal practitioners has been under review and is likely to morph in the near future to require a mix of competencies to be assessed in the undergraduate course and post admission.[13] Undergraduate teaching presently requires the 11 courses to be completed known as the Priestley 11 and there have been difficult discussions over many years about adding and subtracting siloed topic areas and in including more experiential learning and reflective practice capability. A current proposition is to reduce these and create a more generalist degree, where more specialization occurs post admission. The outcome would be less doctrinal learning at undergraduate level and a tiered approach with strengthened post graduate training for those intending to practice. A real issue in Australia has been how to teach research skills.

The standard legal research texts in Australia and the common law jurisdictions are evidence of an old paradigm. They have been written on the basis that there is only one legal research methodology — the doctrinal method — and that this methodology requires no explanation or description. For these texts, all that is required is an explanation of how to use legal research reference books and research sources.[14] This is termed a 'bibliographic approach' to teaching the doctrinal legal research methodology.

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[9] http://www.slaw.ca/2014/05/21/what-is-the-carnegie-report-and-why-does-it-matter/ viewed 1 Jan 2022.

[10] William M Sullivan et al, Educating Lawyers: Preparation for the Profession of Law (2007) 76, 194–7.

[11] Developing Reflective practice in Legal Education (Centre for Legal Education University of Warwick Karen Hinett 2002)https://law2.wlu.edu/deptimages/Externship%20Program/developingreflectivepractice.pdf viewed 1 Jan 2022.

[12] Simon Brooman Enhancing student engagement by building upon tectonic plates of legal education Liverpool Law review (2011) vol 32 no 2 p 109-112.

[13] Sandford D Clark, 'Regulating Admissions: Are We There Yet?' in Kevin Lindgren, Françoís Kunc and Michael Coper, The Future of Australian Legal Education (Thomson Reuters, 2018) 69, 94-5.

[14] See Terry Hutchinson, "Developing Legal Research Skills: Expanding the Paradigm" [2008] MelbULawRw 33; (2008) 32(3) Melbourne University Law Review 1065 http://www5.austlii.edu.au/au/journals/MelbULawRw/2008/33.html#fn78 viewed 1 Jan 2022

The better approach to teaching legal research is by asking the student to track and reflect on their 'research process'. This more recent approach builds on the ideas put forward in the US by Christopher Wren and Jill Wren,[15] but very much applies to the Australian tertiary context. Wren and Wren proposed an instructional method that focuses on the legal research process …gathering and analyzing facts, identifying and organizing legal issues, finding legal authorities, reading and synthesizing authorities, and determining whether the law is still valid).[16]

They explained that through process-oriented instruction, students acquire not a narrow conception of how to use law books, but a broad understanding of how to draw creatively and comprehensively on various law books in developing a problem-solving strategy. In doing this, they highlighted the importance of identifying a research methodology and process rather than simply focusing on an ability to use the legal research sources.

Biggs suggested that 'good teaching is getting most students to use the higher cognitive level processes that the more academic students use spontaneously',[17] and particularly encouraged the use of reflective practice to address this issue. These views are consistent with suggestions that educators develop an environment which emphasises the student's role in the ongoing learning process and enables students to take a deeper approach to learning. Behaviourist theory, social cognition and experiential learning have all been recognized as having a role in developing more effective legal research training units.[18] Reflection in this case involved a dialogue between the student and the instructor as to how they made sense of the research. The instructor gave feedback on the reflections and in the spirit of Kolb's Learning cycle,[19] this was aimed at improving their learning and taking responsibility for learning. The nature of environmental law is political, polarizing, and emotional. This reflection was aimed at outing the law as it is personally experienced felt and how it will become part of their professional lives.[20]

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[15] Christopher G Wren and Jill Robinson Wren, 'The Teaching of Legal Research' (1988) 80 Law Library Journal 7; Christopher G Wren and Jill Robinson Wren, 'Reviving Legal Research: A Reply to Berring and Vanden Heuvel' (1990) 82 Law Library Journal 463.

[16] *Ibid*. at 466.

[17] John Biggs and Catherine Tang, Teaching for Quality Learning at University (Society for research into higher education, 4th ed, 2011)

[18] Peter Clinch, Teaching Legal Research (2006) 23–6.

[19] David A Kolb D (1984) Experiential learning: experience as the source of learning and development (1984 London: Kogan Page).

[20] James R Elkins J 'Rites of passage: law students "telling their lives"' Journal of Legal Education(1985) 35 27-55 at 33.

2. Environmental and Natural Resources Management law at UniSA 2019-2021

In this study, the first author has for three years been the Co-ordinator for *Environment and Natural Resources Law* course, delivered at the University of South Australia, a large public Australian University. The first author set up the questions and marked the presentation and reflections. The second author is a PhD student of the third author, for whom the first author did an assessment on this topic for a course in the Graduate certificate of Education Online learning. We obtained ethics approval to use these data.[21]

This is a core course in the law degree and is designed to teach skills for being a modern lawyer when dealing with ubiquitous and political environmental law problems. The course is offered to second and third year students. The course was run in intense mode in these three years for 10 days over three weeks. Environmental law is complex and dense in legislation and covers many other areas of law such as tort, contract, corporations law criminal administrative law.[22] The Law council of Australia[23] accepts the scientific evidence on climate change and this development it sees as imposing a refreshed duty in advising on mitigation to limit net Greenhouse gas emissions (GHG), and adaptation, which aims to minimize the harm caused by climate change. It sees that lawyers will need to advise a broad spectrum of Australian individuals, businesses, community sector organizations and government agencies who face new risks, liabilities and challenges in light of the physical and transition risks of climate change. The course has two compulsory topics dealing with international obligations and the principles of international environmental law and the domestic application of these. It then covers all the issues above and pays particular attention to climate change litigation and public participation in environmental decision making and human rights aspects such as environmental protests.

The course topics have two components – online lectures and face to face and Zoom workshops. The lecture sessions are provided through short slide presentations narrated with Panapto recordings. Some topics have up to 6 lectures. These two compulsory topics comprised of four short lectures, two

[21] Ethics protocol "Automated analysis of reflective writing in Environment and Natural Resources Law courses" (Application ID: 2042160 Approval 31/08/202

[22] Laura King, 'Narrative, Nuisance, and Environmental Law' (2014) 29 Journal of Environmental Law and Litigation 331, 352; Eloise Scotford, 'Legislation and the Stress of Environmental Problems' (2021) Current Legal Problems, cuab010.

[23] Law Council of Australia climate change policy, https://www.lawcouncil.asn.au/publicassets/4cc8f2e4-375d-ec11-9445-005056be13b5/2021%2011%2027%20-%20P%20-%20Climate%20Change%20Policy.pdf viewed 20 December 2021.

readings, and two cases[24]. The remaining eight topics had 29 short video lectures [25] and some additional resources to support exploration and assessment tasks. All topics were arranged in tabs and included compulsory and optional eReadings which introduced students to concepts and principles underpinning environmental law at both local and international levels.

The class time was devoted to active learning[26] which concerned discussion of topics, class presentations.[27] The workshops did include discussion for the learners with peers to promote connections between the class and networked learning.[28] The discussions also focused on research methods and the guidance given, the compulsory readings and problem type questions in the waste topic. The main aspect was the delivery of research presentation and linked discussion of the lecture materials and readings. The course took a law reform approach, and one assessment was a draft proposal to reform some SA legislation. Students were given an example of a reform proposal.

3. Reflection in Educational Curriculum

In the education curriculum, the role of self-reflection and reflective practices in fostering learning processes and higher-order cognitive skills is well recognized.[29] Reflection in the context of learning include "intellectual and affective activities in which individuals engage to explore their experience in order to lead to new understandings and appreciations".[30] While there are various means of expressing

[24] These could be read onscreen or downloaded and as Sarah Delozier and Matthew Rhodes suggest, the learning outcomes are the same regardless of the video format. Students in law need to read large volumes and most generally still buy books. Once case study suggests that differences in comprehension are diminishing but this study did not refer to law students. Yiren Kong, Young Sik Seo, Ling Zhai,(2018)
Comparison of reading performance on screen and on paper: A meta-analysis, Computers & Education,123, 138-149, https://doi.org/10.1016/j.compedu.2018.05.005

[25] Short lectures to enhance use and using a styling of the words and photos to keep it easy to follow. See James Baker, Alan Goodboy, Nick Bowman,., and Alyssa A Wright, (2018). Does teaching with PowerPoint increase students' learning? A meta-analysis. Computers & Education, 126, 376–387. https://doi.org/10.1016/j.compedu.2018.08.003 The style and use of PowerPoint is critical see Baker above, and when presenting law, the exact words must be used so sometimes there are more words on the slides but Law students in my experience demand the full section. I think there could be some research on this topic.

[26] See Sarah Delozier and Matthew Rhodes. (2017). Flipped classrooms: a review of Key Ideas and Recommendations for Practice, *Educ. Psychol. Review*, 29, 141-151

[27] These are discussed in Delozier above as exemplars of active learning.

[28] Jones, C. Networked learning: an educational paradigm for the age of digital networks,2015. Springer,Peter Goodyear, ,Sheena Banks, Vivien Hodgson, and David McConnell, (Eds.). (2004). Advances in research on networked learning. Dordrecht: Kluwer Academic Publishers and G Siemens Connectivism: a learning theory for the digital age. International Journal of Instructional Technology and Distance Learning,2005, 2(1). http://www.itdl.org/Journal/Jan_05/article01.htm
ISSN: 1550-6908

[29]Vitomir Kovanović, , Srecko Joksimovic, .,Negin Mirriahi, ,Ellen Blaine, , Dragan Gasevic, , George Siemens, G., and Shane Dawson, (2018). Understand Students' Self-Reflections through Learning Analytics, Proceedings of the 8th International Conference on Learning Analytics and Knowledge (ACM 2018) https://dl.acm.org/doi/10.1145/3170358.3170374.

[30] Boud, Keogh and Walker (n 2).

reflection, verbal and written forms are commonly administered in educational settings.[31] Given the contribution of reflection in promoting self-regulation and critical thinking among learners, several attempts at assessing student reflection, and particularly written artifacts, have been made in the past. A wide range of theoretical frameworks, investigating the broad themes[32] and depth[33] of student's reflection, have been established. Although most of these studies have employed manual content analysis processes to investigate student reflection,[34] this is time consuming and labour-intensive,[35] and requires consistency across multiple human coders. The advancement in technology and content analysis has paved the way for various automated assessments systems to overcome some of these challenges and evaluate reflective writing at scale.[36] This work utilizes a similar automated assessment system to evaluate reflective writings on environmental law.

4. Reflection on the presentation and reflection on environmental law

Another important component of this course is the assessments that evaluate learners on the skills they have acquired, content mastery and research skills. The presentation was worth 30% and this was limited to 20 slides on topics set by the Course coordinator with 5% allocated for the reflections below. Other assessment included a peer review of a presentation of a student on another topic, worth 10%, with similar questions to below and finally a take home exam involving writing a law reform proposal. The presentation was designed to mimic the real-world experience of lawyers who often need to brief clients and their employees on legal compliance issues. A strict limit of 20 slides was imposed full AGLC referencing was required, and students were given materials on legal presentations taken from several books and the experience of the first author[37]. Students were given examples from prior years of excellent presentations. Students were given also marking rubric which is presented below.

[31] Rosanne Birney, (2012). Reflective Writing: Quantitative Assessment and Identification of Linguistic Features, Waterford Institute of Technology.

[32] Boud, Keogh and Walker (n 2); Schön (n 1).

[33] David Kember, , Jan McKay, , Kit Sinclair, ,Frances Kam Yuet Wong,. (2008). A Four-category Scheme for Coding and Assessing the Level of Reflection in Written Work, Assessment & Evaluation in Higher Education, 33, 369-379.

[34] Kember and others (n 33); Mezirow (n 2); Schön (n 1).

[35] Thomas Daniel Ullmann, (2019). Automated Analysis of Reflection in Writing: Validating Machine Learning Approaches, International Journal of Artificial Intelligence in Education, 29, 217-257.

[36] Kovanović and others (n 29); Ullmann (n 35).

[37] John McGarry Acing the LLB -Capturing your full potential to improve your grades, (2016, Routledge).

BOX 1 VERSION OF THE MARKING RUBRIC FOR THE PRESENTATION WITH REFLECTION QUESTIONS

KNOWLEDGE OF TOPIC 15% 20 SLIDES maximum

- Knowledge and understanding of legal material including cases
- Conceptual grasp of issues, quality of argument and ability to answer questions
- Reflection on what this means for our legal system

PRESENTATION SKILLS 10%

HINT DO NOT READ OUT YOUR SLIDES, USE VISUAL AIDS PHOTOS OF THE ISSUES AND CHAT, BUT YOU CAN USE ENTIRE PARTS OF THE RELEVANTS ACTS OR SOFT LAW INSTRUMENTS

Quality of presentation

- Pacing of presentation
- Effective use of visual material-whiteboard, visual aids, handouts (as appropriate)
- Organisation/structure of material (intro; main body; conclusion)

Quality of communication

- Audibility, liveliness and clarity of presentation
- Confidence and fluency in use of English
- Appropriate use of body language (inc. eye contact)
- Listening skills: responsiveness to audience

REFLECTION ASPECT ENV AND NRM LAW
5%
3 SLIDES MAXIMUM
Put these questions on a slide each and reflect on them

1. How long did you spend on your preparation and do you think this was enough time?
2. What kind of notes did you make for your presentation? Were they useful on the day?
3. How did you feel before, during and after the exercise?
   [What was good and what was not so good?]
4. Write about your personal experience with your topic. Were you shocked, surprised, not surprised about the aspects of law you have identified?

The first three questions were standard questions on reflections on a presentation. Reflection is a key component of educational processes[38]. The final question and the main topic of this paper was an experiment by the course coordinator. In 2018, casual corridor chats with students indicated to the first author, that students were dismayed by the coverage and scope of environmental law in some domains.

[38] John Biggs and Catherine Tang, Teaching for Quality Learning at University (Society for research into higher education, 4th ed, 2011).

The first author then implemented this question in 2019 to collect these data for publication to assist other environmental law teachers. This type of question reflects 'legal consciousness' literature, part of the US law and society tradition, which de-centers the role of formal legal institutions and stresses instead the meanings which ordinary individuals give to legal and non-legal norms.[39]

As a part of the assessments, the learners were required to select a topic of their liking, from those listed on the course website, and present their learnings to their peers. The students were given a marking rubric in the course materials. They were marked on content knowledge, and presentation skills. Additionally, learners had to answer four questions reflecting on their experience and learnings, which is the focus of this present study. Since the course was instructed and evaluated by the same lecturer, we collected data from three years – 2019, 2020 and 2021. For the three years, we collected self-reflection data from 37, 87 and 40 learners respectively, who answered at least one of the four questions. The year wise distribution of the four questions is given in Table 1.

Table 1: Year-wise distribution of the reflection answers

Year	Q1: How long did you spend on your preparation and do you think this was enough time?	Q2: What kind of notes did you make for your presentation? Were they useful on the day?	Q3: How did you feel before, during and after the exercise?	Q4: Write about your personal experience with your topic. Were you shocked, surprised, not surprised about the aspects of law you have identified?	Total
2019	26	26	25	36	103
2020	87	87	87	86	347
2021	39	38	38	39	154
Total	152	151	150	161	614

5. Data Analysis

We adopted a vertical reflection framework defined by Kember and colleagues[40] to distinguish the learners based on their reflective writing. The answers to the four questions across the three years were evaluated on the reflection depth. Using this framework, reflection answers were categorised into four distinct levels based on the depth of reflection exhibited by the students – *a) No-reflection, b) Understanding, c) Simple reflection,* and *d) Critical Reflection*. To automate this process and simplify the labour-intensive manual content analysis process, we used a machine learning text classifier

[39] Anna-Maria Marshall and Scott Barclay, 'Introduction: In Their Own Words: How Ordinary People Construct the Legal World' (2003) 28 Law & Soc Inquiry 617.

[40] Kember and others (n 33).

developed by.[41] More specifically, we used a Random Forest classifier to classify reflective answers in this study. The entire answers were taken as the unit of analysis since reflection answers in the current context were generally short, and a single grade (level) per answer was sought.

To build the automated assessment system and predict the reflection levels, various features were extracted from these answers as used in the original classifier model developed by.[42] Among the several linguistic features the Linguistic Inquiry and Word Count (LIWC)[43], to capture psychological processes, and Coh-Metrix[44] tools, to capture text cohesion, were extracted. Other linguistic features included in the automated system were basic N-grams and part-of-speech tags, which were deemed efficient predictors of reflection in previous studies.[45] Additionally, to capture the answers' readability and complexity, we included five different indices – SMOG index, text standard index, word difficulty index, Gunning Fox index and Coleman-Liau index.[46]

[41] Blinded for review (under review).

[42] Kovanović and others (n 29).

[43] Yla R Tausczik and James W Pennebaker, 'The Psychological Meaning of Words: LIWC and Computerized Text Analysis Methods' (2010) 29 Journal of Language and Social Psychology 24.

[44] Danielle S McNamara and others, *Automated Evaluation of Text and Discourse with Coh-Metrix* (Cambridge University Press 2014) <http://ebooks.cambridge.org/ref/id/CBO9780511894664> accessed 12 March 2021.

[45] Kovanović and others (n 29); Yeonji Jung and Alyssa Friend Wise, 'How and How Well Do Students Reflect? Multi-Dimensional Automated Reflection Assessment in Health Professions Education', *Proceedings of the Tenth International Conference on Learning Analytics & Knowledge* (Association for Computing Machinery 2020) <http://doi.org/10.1145/3375462.3375528> accessed 11 March 2021.

[46] Kristian TH Jensen, 'Indicators of Text Complexity' (2009) 37 Copenhagen Studies in Language 61.

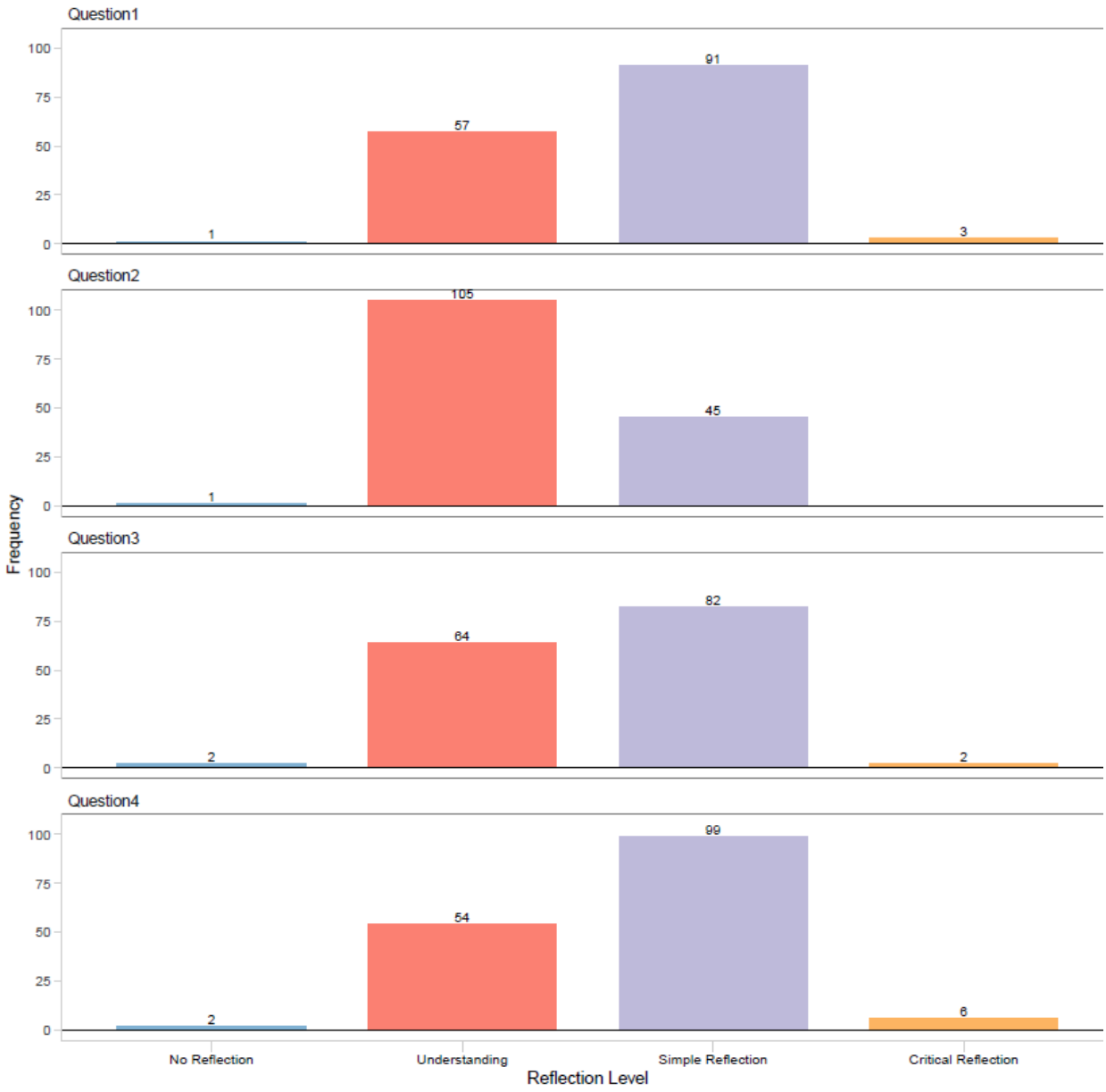

Figure 1. Question wise distribution of four-reflection levels
Box 2. Comments by the course coordinator on 4

The experience of reading the student reflections on these four questions was one of the most enjoyable of the first authors' tertiary teaching life. The questions posed gave students the opportunity to appreciate the complexity of human environmental law problems and the array of laws relevant. The

students were asked to think about social context of the legal problem and make a decision. Law is an "ethically saturated area".[47]

The first 3 questions focused on the law presentation and many students really provided deep reflections on the skills they could develop for the future. The presentation was for 20 minutes the longest in the UniSA law degree in those 3 cohorts.

After the first year, the answers to the question whether they were shocked or surprised was useful to me in teaching later cohorts. Many students reflected that the Australian law was inadequate and also morally flawed. This empowered me to bring this up front in the two compulsory topics which dealt with law in context.

Some examples are presented below.

6. Results and Discussion

This study provides the first evidence of using self-reflection questions within an Environmental Law course and implementing an automated system to evaluate the reflective writing. The output from the classifier grouped the answers into four distinct reflection levels. The question-wise distribution of four levels of reflections is shown in Figure 1.

It can be observed that the distribution counts of the mid-levels *Understanding*, and *Simple Reflection* were higher compared to the other two levels. More specifically, a total of 280 answers were coded as demonstrating *Understanding* and 317 answers out of the total of 614 were categorized as *Simple Reflection.* The counts of *No-Reflection* and *Critical Reflection* were significantly lower, with six and eleven answers respectively. The results of this work mirrored the findings of a more recent study by Jung and colleagues,[48] reporting that only 16% of the learners from a dental program exhibited deep reflection. Contrastingly, shallow reflective practice was the most common reflection form, comprising more than half of the learning cohort (53%). Likewise, in a different context, Lai and

[47] Marlene LeBrun M and Richard Johnstone The quiet revolution: improving student learning in law. (1994 Sydney: Law Book Company)

[48] Yeonji Jung, Alyssa Friend Wise and Kenneth L Allen, 'Using Theory-Informed Data Science Methods to Trace the Quality of Dental Student Reflections over Time' [2021] Advances in Health Sciences Education <https://doi.org/10.1007/s10459-021-10067-6> accessed 26 October 2021.

Calandra[49] reported that overall majority of learners (63%) exhibited dialogic or technical reflection synonymous to Understanding and Simple reflection), and further noted that the reflection improved for the treatment groups demonstrating higher levels of depth in their writings.

Although critical reflective practices are deemed desirable to be successful legal practitioners, Kember and colleagues[50] noted that demonstrating critical reflection requires a change in perspective which is usually hard to achieve. Critical reflection requires individuals to actively and purposefully review their everyday work which is usually driven by a set of deep-seated beliefs. Changing these beliefs can be a challenging phenomenon and thus echoed in this current study. On the contrary, the low distribution of the lowest level – *No reflection* – can be justified by the context of analysis; these are second-year learners of a reputed Australian University known for its high level of excellence and quality pedagogical practices and as such, are expected to demonstrate understanding of key concepts.

An example of a student's answer labelled as *Critical Reflection* to Question 4 – on their personal experience with the topic and the elements that shocked or (not) surprised them – by the classifier is shown below:

> *"I was shocked at how interesting my topic turned out to be. I will be honest in saying it would not have been my first or second choice, however after this assessment, I definitely feel differently. Particularly due to the current protests amongst American States, and across the world, regarding the Black Lives Matter campaign, I now have a much better understanding on what they can achieve. I also admit that prior to this, I didn't really understand what people thought they were going to achieve by protesting. I didn't understand how effective they can be and why they are so important, especially in a democratic society. I never really considered law in regard to the environment prior to this assessment, and was initially confused how anti-protest laws would relate. After reading the case, I was extremely intrigued and shocked. I was shocked by what had brought the case to court, but was also intrigued by the significance that protest has in protecting the environment. I also was shocked by the high number of successful environmental protests in Tasmania alone. This made me intrigued, and influenced me to do a little further research into protests within South Australia. I have to say, there was not one thing that I was not surprised about. As it was an extremely unfamiliar topic to me, I didn't have many expectations to be completely honest. This made the research all the more interesting for me.*
>
> *Another factor that completely shocked me, was how many states actually supported Tasmania in this case. It baffles me that only one state, this being Western Australia, went against Tasmania by defending our right to protest and the freedom of political communication. If I was to have predicted prior to this assessment how I thought other states felt towards this case at the time, I would have assumed they completely disapproved. Due to how I have seen states handling current protests, I thought it was always something that was greatly supported and never infringed upon by the government. Overall, I am actually glad I ended up with this topic. It is not something I would have thought myself to find so interesting, but its great implications definitely made it so."*

compared to answers by answers which were coded as *No reflection* –

> *"I don't have anything to note, I did what was asked because that was required of me."*

[49] Guolin Lai and Brendan Calandra, 'Examining the Effects of Computer-Based Scaffolds on Novice Teachers' Reflective Journal Writing' (2010) 58 Educational Technology Research and Development 421.

[50] Kember and others (n 33).

and

"I was not shocked but I was surprised how diversify s.25 even though it is a "generalisation" section. There were a lot of information in s.25 EPA."

In the example answer demonstrating a critical level of reflection, the learner offered the richest explanation of their understanding and experience. In that sense, the length of answers was proportional to the level of reflection, which confirms the findings of some previous studies.[51] Describing the initial skepticism surrounding the chosen topic, the learner exhibiting Critical Reflection later reported how a better understanding of the concept changed their perspective. Additionally, the learner conducted future research to have more clarity of context in their state. The other two non-reflective answers presented above, merely described their understating of the chosen topic, let alone a change in their perspective.

Similar observations of critical reflection were recorded from our results, across the answers to the other questions used in the study.

Question 1 –

"I chose my topic the week before this intensive course began. I thoroughly looked through the options, and initially it would not have been my first choice to present on topic 5. It was topic 3 that I was most interested in, however due to the fact that I am doing two intensives at the same time, it was not realistic for me to finish and be ready to present on day 2. Truthfully, I did not dedicate near as much time as I would generally endeavour to allocate for my assessments, and it solely due to the fact that my workload was greater and more time consuming then I had anticipated. On day 2 of the first week, I had a plan of which question I would do, and I had also began reading the case relevant to my presentation. Throughout the next few days, I unfortunately only dedicated small amounts of time to this assessment. This time was spent conducting most of my research. By the end of this week, on the Friday, I had found all of my sources, and had read and created brief notes highlighting relevant aspects and implications of the case. Regrettably, this meant I ultimately only had the weekend to create my transcript, format my PowerPoint and rehearse my presentation.

I am genuinely extremely disappointed in how much time I contributed for the preparation of this presentation. It was not until Sunday afternoon, this being the day before I was due to present, that I had completely finished my transcript. This left me with a very small window to rehearse, and practice. Generally, I am a pretty confident speaker, especially if I am well-formed and confident in what I am talking about. I always ensure I have at least 4-5 days to rehearse my oral presentations, as I firmly believe that the more you do rehearse, and the earlier this starts, the better the outcome will be. It is when I am not overly confident in my work, which was the case for this assessment, that I second guessed myself, and let nerves get the better of me. I can truthfully admit my mistakes in the preparation for this assessment, but can also say with relief that this has taught me a big lesson going forward. In some other assignments it may be possible to leave them to a later date, while still achieving great results, however oral presentations, especially one with a length as great as 20 minutes, needs to be well prepared for."

Question 3 –

[51] Kovanović and others (n 29); Lai and Calandra (n 48).

"Before the presentation I was proud of the work I put into this topic however I was a bit nervous to present. Epically because Jenifer also made a presentation reviewing this legislation on the course website. I did not want my presentation to be a copy of that one. So, I knew coming into the presentation that perhaps some people would already be educated on this topic. Furthermore, I thought Jenifer's presentation basically covered everything regarding the topic, so I had a bit of pressure on me to ensure this was different. Epically considering she was a lot more knowledgeable on this topic and the law in general. However, it is not often Law students get an opportunity to do a presentation in front of people, I believe this is a great opportunity to improve my presentation and communication skills before I do more presentations thought my degree.

During the presentation I felt calm and confident throughout the duration of my presentation. Unfortunately, I could not make the external class time to present in front of everyone, so I instead had to present via PowerPoint. This was not ideal as I had prepared to present in front of everyone, therefore I had to result in making changes to fit the circumstances. I had a bit of concern regarding time. There were some parts of legislation I could not read as I found it difficult to condense key parts of information. Which had me stressed out a bit, but I simply explained I could not read this part in full due to time and gave my best try to condense the information provided on the spot. A part in which I thought let me down a fraction was my tone of voice, unfortunately I was fighting through a cold and my voice was very nasally. I tried my hardest to fight it off, but I believe on some slides, the viewer may be able to tell that the person recording this presentation is unwell.

Afterwards I was relieved and happy. I thought I did the best I could and was very proud of myself. My peer reviewer sent me some feedback strong positive feedback. Which made my excitement rise. However, I wished I could have spoken a bit clearer, smoother and with more confidence. As I found myself stuttering and rushing my words at times when a lot of speaking was required. I this this was due to a sense of exhaustion and fatigue; I couldn't wait to finish and reward myself for all the hard work I've put into this."

These examples of *Critically Reflective* answers showcase how learners provide detailed description of their understanding of events, exhibiting changes in perspective over their beliefs and highlighting the measures adopted to tackle these changes.

7. Summary and Conclusions

Reflection is an important aspect of all learning processes and is common in law courses in the UK and US. Susler and Babacan[52] maintain that critical reflection is an integral element of legal education, providing learners with the opportunity to appraise their beliefs, philosophies, and practices and for lifelong learning. This study looked at reflection on the learning of skills to make legal presentations at a large public Australian University. The results across the three questions used in the study showed that shallow reflection as a more common form of reflective practice, confirming some of the findings in other tertiary courses. The methodology presented in this paper allows the identification of learners engaging in shallow reflection, and thus providing the scope for interventions. Also, from the pedagogical standpoint, such results can be utilized to support learners via additional materials

[52] Ozlem Susler and Alperhan Babacan, 'Embedding Critical Reflection in Legal Education' (2021) 37 Law in Context. A Socio-legal Journal <https://journals.latrobe.edu.au/index.php/law-in-context/article/view/154> accessed 15 January 2022.

outlining the importance of the reflection skill of legal presentation and improving their overall learning experiences.

The deepest reflections were found in the answers to the question - Write about your personal experience with your topic. Were you shocked, surprised, not surprised about the aspects of law you have identified? This may be in part due to the style of the question. Nevertheless, this was an enjoyable aspect of the course and certainly provided interesting reading and grounds to improve the course in subsequent deliveries.

PART 3.

COUNTRY REPORT: AUSTRIA

Climate(-Related) Action – of Progress and Delays

Birgit Hollaus[(*)]

As a member state of the European Union (EU), Austria's climate action is heavily influenced by EU climate and energy policies, including their planning cycles. When the latest planning cycle came to an end in 2020, the pandemic overshadowed and partly stalled those national parliamentary and policy processes that were meant to push for post-2020 climate action. While certain processes could ultimately be completed in 2021, others are still ongoing, delaying action that is urgently needed. Hence, the path Austria takes in the fight against climate change is missing crucial markers that serve as an orientation for policy-makers and -executers, businesses, civil society organisations and the public.

1. Developments in Statute Law

Austria is a federal state, in which legislative competences are shared between the federation *(Bund)* and the nine states *(Länder),* depending on the respective subject matter.[1] Climate protection is not mentioned in the relevant competence articles of the *Austrian Constitution*.[2] Instead, existing competences for other subject matters, such as air pollution control or energy efficiency for buildings, are used by the federation and the states respectively for legislative activities regarding climate protection.[3] Despite those efforts, competences regarding climate relevant matters remain fragmented, which reflects equally in existing climate action. Ultimately, the fragmentation of competences is a significant challenge for coherent and consistent climate action in Austria,[4] and, as will be shown, is also grounds for power struggles between the legislators.

1.1. New Framework for Promoting Renewable Energy Sources

In their government manifesto 2020–2024, the current Austrian coalition government (greens and conservatives) committed to promoting the use of renewable energy sources in Austria: by 2030, a total of 100% electric energy should come from renewable sources.[5] This target would require an increase in energy production from renewable sources by +50%.[6] In this light, the manifesto envisages a so-

called *Renewable Energy Expansion Act*, which should provide the framework for incentivising a shift towards renewable energy production and investment in the necessary infrastructure. A specific challenge such an act would have to overcome results from the competence situation described earlier: The substantive matter of the proposal is only partially covered by legislative competences of the federation.[7] A federal act on the matter would thus require a separate provision on competence and increased participation by the Federal Council, the chamber which represents the interests of the states in the parliamentary process. In case the Federal Council does not agree to the proposed act with a 2/3 majority, the act would not come into being.[8]

Consultations on the respective legislative proposal started in 2020,[9] with an aim to secure the support of the states and the relevant non-parliamentary stakeholders. Reportedly, one of the main points of disagreement related to an eco-power charge in relation to biomass installations, as the states had made their reluctance to have the federation collect such a charge clear in earlier parliamentary processes.[10] Opposition party-led states specifically criticised the additional burden on households as a result of the increased eco-power charge and thus called for exemptions for lower-income households.[11] Environmental organisations and other stakeholders criticised the funding criteria drafted for the different types of renewable energy sources. Specifically in view of waterpower and Austria's

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[1] Theo Öhlinger and Harald Eberhard, *Verfassungsrecht* (12th edn, facultas 2019) 119 et seqq.

[2] Bundes-Verfassungsgesetz (B-VG), Federal Law Gazette 1/1930, last amended by Federal Law Gazette I 235/2021.

[3] Thomas Horvath, *Klimaschutz und Kompetenzverteilung* (Jan Sramek Verlag 2014) 57 et seqq.

[4] See for the comparable situation with regard to environmental action, Bernhard Raschauer and Daniel Ennöckl, 'Umweltrecht Allgemeiner Teil' in Daniel Ennöckl, Nicolas Raschauer and Wolfgang Wessely (eds), *Handbuch Umweltrecht* (3rd edn, facultas 2019) 19, 35 et seqq.; Verena Madner, 'Wirtschaftsverfassung und Bundesstaat —Staatliche Kompetenzverteilung und Gemeinschaftsrecht'. in Stefan Griller, Benjamin Kneihs, Verena Madner and Michael Potacs (eds), *Wirtschaftsverfassung und Binnenmarkt: Festschrift für Heinz-Peter Rill zum 70. Geburtstag* (Verlag Österreich 2010) 137; Verena Madner, 'Europäisches Umweltrecht', in Institut für Umweltrecht & Österreichischer Wasser- und Abfallwirtschaftsverband (ed), *Jahrbuch des österreichischen und europäischen Umweltrechts 2005* (MANZ Verlag 2005) 1.

[5] Bundeskanzleramt Österreich (ed), *Aus Verantwortung für Österreich. Regierungsprogramm 2020– 2024* (Bundeskanzleramt Österreich 2020) 72.

[6] Explanatory Memorandum to Ministerial Draft Law 58/ME, *Erneuerbaren-Ausbau-Gesetz – EAG; Erneuerbaren-Ausbau-Gesetzespaket – EAG-Paket,* Legislative Period XXVII, 4.

[7] Explanatory Memorandum to Federal Government Draft Law No. 733 d.B., *Erneuerbaren-Ausbau-Gesetzespaket – EAG-Paket,* Legislative Period XXVII, 6.

[8] Theo Öhlinger and Harald Eberhard, *Verfassungsrecht* (12th edn, facultas 2019) 141 et seqq.

[9] Ministerial Draft Law 58/ME, *Erneuerbaren-Ausbau-Gesetz – EAG; Erneuerbaren-Ausbau-Gesetzespaket – EAG-Paket,* Legislative Period XXVII.

[10] 'Länder können neue Abgabe für Ökostrom festlegen' *Die Presse* (Vienna, 27 February 2019) <www.diepresse.com/5586969/laender-koennen-neue-abgabe-fuer-oekostrom-festlegen> accessed 5 January 2022.

[11] 'EAG ist beschlossene Sache' *Wiener Zeitung* (Vienna, 7 July 2021) <www.wienerzeitung.at/nachrichten/wirtschaft/oesterreich/2111708-EAG-ist-beschlossene-Sache> accessed 5 January 2022.

extensive reliance on that energy source, they questioned the ecological sustainability of those funding criteria.[12]

In early 2021, the *Renewable Energy Expansion Act (EAG)* was introduced into the parliamentary process and was ultimately adopted the following July.[13] It substantiates the 2030 target for 100% of electric energy coming from renewable sources and determines the contribution of certain energy sources to that target (photovoltaic, wind, water, biomass).[14] In order to support achievement of the target, the *EAG* works with two main instruments. On the one hand, it introduces a market premium that is supposed to bridge the gap between (higher) energy production costs from renewable sources and (lower) market energy prices.[15] On the other hand, the *EAG* introduces an investment grant for existing and new energy production installations,[16] with installations that use renewable gas and green hydrogen being dealt with separately.[17] To be eligible for either funding possibility, the respective production installation must meet certain criteria, which take into account, i.a., production capacity and efficiency.[18] The funds for these instruments come largely from a lump sum eco-power charge,[19] a variable eco-power support charge,[20] and a green gas support charge,[21] all added to consumer energy bills. Minimum income households are exempt from all three charges,[22] while low-income households benefit from a cost cap at 75 euros in relation to the first two charges.[23]

1.2. Stalled Negotiations on the Strategic Climate Action Framework

[12] WWF Österreich, 'WWF zum Erneuerbaren-Ausbau-Gesetz: Bundesregierung muss wirksame Naturschutz-Kriterien verankern' (*WWF Österreich*, 1 September 2020) <www.wwf.at/wwf-zum-erneuerbaren-ausbau-gesetz-bundesregierung-muss-wirksame-naturschutz-kriterien-verankern> accessed 5 January 2022; Benjamin Schlatter, 'Alles neu bei den Erneuerbaren' [2021] ecolex 8, 9 et seq.

[13] *Bundesgesetz über den Ausbau von Energie aus erneuerbaren Quellen (Erneuerbaren-Ausbau-Gesetz)*, Federal Law Gazette I 181/2021. At the moment, there is an ongoing parliamentary process to make amendments to the *Renewable Energy Expansion Act* in order to ensure its rules are in line with the EU procedures for state aid, Parliament Member Motion No. 2184/A, *Erneuerbaren-Ausbau-Gesetz (EAG), Elektrizitätswirtschafts- und -organisationsgesetz 2010 (EIWOG 2010) und Energie-Control-Gesetz (E-ControlG)*, Legislative Period XXVII.

[14] § 4(4) *EAG*.

[15] § 9(2) *EAG*.

[16] §§ 55 et seqq. *EAG*.

[17] §§ 59 et seqq. *EAG*.

[18] E.g. § 10 *EAG*.

[19] § 73 *EAG*.

[20] § 75 *EAG*.

[21] § 76 *EAG*.

[22] § 72 *EAG*.

[23] § 72a *EAG*.

Austrian climate action builds essentially on two main federal acts, the *Carbon Emissions Certificate Act (EZG)*[24] and the *Climate Protection Act (KSG)*.[25] The *EZG*, on the one hand, implements the EU emissions trading system for certain emission- and energy-intensive sectors in Austria (production industry, partly energy production and aviation).[26] The *KSG*, on the other hand, relates to those sectors which are not included in the EU's emissions trading scheme, i.e. waste, (partly) energy, building, mobility as well as agriculture, and which fall nationally within the competence of both the federation and the states.[27] For those sectors, the *KSG* determines the maximum annual emissions up until 2020 but not any measures to secure observance of these emission ceilings. Instead, those measures are to be designed and determined by the respective legislators, i.e. the federation or the states.[28] Additionally, § 7 *KSG* requires these legislators to also come to an agreement for a so-called responsibility mechanism in case those emission ceilings are not observed and result in financial obligations for Austria.[29] That agreement takes the form of an amendment to the *Austrian Fiscal Equalisation Act (FAG),*[30] which introduced a coordination requirement between the federation and the states as regards measures for achieving the emission ceilings in the *KSG* sectors.[31] In case those emission ceilings are nevertheless not observed, the resulting costs are distributed according to an 80:20 ratio between the federation and the states.[32] The legal literature broadly questions the effectiveness of this rule,[33] amongst others, because it does not apply to the exceedance of sector-specific emission ceilings but the overall annual emission ceiling only. Certain sectors, however, such as mobility, continue to be marked by increasing emissions which would require more stringent and forward-looking action, yet the responsibility mechanism would not reflect this urgency.[34]

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[24] *Bundesgesetz über ein System für den Handel mit Treibhausgasemissionszertifikaten (Emissionszertifikategesetz 2011*), Federal Law Gazette I 118/2011, last amended by Federal Law Gazette I 142/2020.

[25] *Bundesgesetz zur Einhaltung von Höchstmengen von Treibhausgasemissionen und zur Erarbeitung von wirksamen Maßnahmen zum Klimaschutz (Klimaschutzgesetz)*, Federal Law Gazette I 106/2011, last amended by Federal Law Gazette I 58/2017.

[26] See further Edwin Woerdman, 'EU Emissions Trading System' in Edwin Woerdman, Martha Roggenkamp and Marijn Holwerda (eds), *Essential EU Climate Law* (2nd edn, Edward Elgar 2021) 44.

[27] Judith Fitz and Daniel Ennöckl, 'Klimaschutzrecht' in Daniel Ennöckl, Nicolas Raschauer and Wolfgang Wessely (eds), *Handbuch Umweltrecht* (3rd edn, facultas 2019) 757.

[28] Daniel Ennöckl, 'Wie kann das Recht das Klima schützen?' [2021] Österreichische Juristen-Zeitung 302.

[29] As a requirement of EU law, Austria would have to buy additional emission certificates within the emission trading scheme to cover its surplus emissions.

[30] *Bundesgesetz, mit dem der Finanzausgleich für die Jahre 2017 bis 2021 geregelt wird und sonstige finanzausgleichsrechtliche Bestimmungen getroffen werden* (*Finanzausgleichsgesetz 2017*), Federal Law Gazette I 116/2016, last amended by Federal Law Gazette I 140/2021.

[31] § 28 *KSG*.

[32] § 29(2) *KSG*.

[33] E.g. Stefan Schwarzer, 'Zielvereinbarungen zwischen politischen Akteuren als Steuerungsinstrument im neuen Klimaschutzgesetz' [2012] Recht der Umwelt 49.

[34] Teresa Habjan, 'Das österreichische Klimaschutzgesetz' in Gottfried Kirchengast, Eva Schulev-Steindl and Gerhard Schnedl (eds), *Klimaschutzrecht zwischen Wunsch und Wirklichkeit* (Böhlau Verlag 2018) 98.

As the *KSG* only sets emission ceilings up until 2020, it was clear that at least some changes are necessary for the post-2020 period.[35] However, only in April 2021, thus 4 months after the KSG emission ceilings were no longer valid, did a draft legislative act for the new *KSG* leak.'[36] The leaked draft, prepared by the government parties, included more stringent emission ceilings for the *KSG* sectors and a renewed responsibility mechanism: in case a sector-specific emission ceiling was exceeded, a fixed price per ton CO2 surplus (2030: 100 euros) would have to be paid into a so-called future investment fund, with the federation and the states sharing costs according to a 60:40 ratio. This new responsibility mechanism seems to respond to certain criticism, also recently emphasised by the Austrian Court of Audit (ACA) in a 2021 report. In its report, the ACA highlighted that the 80:20 cost divide did not take into account the contribution of the federation or the states to the sector emissions, actual or mathematical. Accordingly, the responsibility mechanism would not actually reflect the responsibility of the federation or the states for exceeding the emissions ceiling and would thus not provide the legislators with an incentive for (increasing) climate action within their respective competences.[37]

It is understood that this draft proposal and specifically the proposed responsibility mechanism were met with heavy criticism from stakeholders deemed close to the coalition parties. As a result, a redrafted proposal was exchanged between the governing parties in November 2021.[38] The outcome of this exchange, however, remains unclear. Until today, no draft proposal was introduced into the parliamentary processes.[39] Thus, Austria is still without an operational strategic framework for central climate-relevant sectors.

1.3. Putting a Price on Carbon Emissions

As part of the budgetary planning for 2022, the governing parties announced in October 2021 two central climate-related financial measures: a carbon pricing mechanism in respect of fossil fuels and

[35] See also below, policy developments.

[36] Nora Laufer, 'Plan für neues Gesetz: Werden die Klimaziele verfehlt, müssen Bund und Länder zahlen' *Der Standard* (Vienna, 25 April 2021) <www.derstandard.at/story/2000126127747/plan-fuer-neues-gesetz-werden-die-klimaziele-verfehlt-muessen-bund> accessed 5 January 2022.

[37] Rechnungshof Österreich (ed), *Klimaschutz in Österreich – Maßnahmen und Zielerreichung 2020*, Reihe BUND 2021/16, (Rechnungshof Österreich 2021) 62 et seqq.

[38] Nora Laufer, 'Ringen um Klimaschutzgesetz geht ins Finale, "Notfallsmechanismus" wackelt' *Der Standard* (Vienna, 24 November 2021) <www.derstandard.at/story/2000131377644/ringen-um-klimaschutzgesetz-geht-ins-finale-notfallsmechanismus-wackelt> accessed 5 January 2022.

[39] Klimavolksbegehren, 'Gefährliches Jubiläum: Ein Jahr ohne nationale Klimaziele' APA (Vienna, 28. December 2021) <www.ots.at/presseaussendung/OTS_20211228_OTS0015/gefaehrliches-jubilaeum-ein-jahr-ohne-nationale-klimaziele> accessed 5 January 2022.

an ecological-social tax reform to reduce the (resulting) financial strain on households.[40] The relating legislative proposals were introduced into the parliamentary process in mid-December 2021:

The *National Emissions Certificate Trading Act* (*NEHG*) envisages the introduction of a trading system for emission certificates in relation to emissions from the building and mobility sector.[41] The introduction of the trading system is designed in multiple stages, with the first stage tied closely to the current fuel tax system: it obliges fuel suppliers (mineral oils, combustible fuels, natural gas and coal) to submit an emission certificate for each ton of CO2 the fuel they provide emits when utilised.[42] The proposal sets the starting price for such an emission certificate at 30 euros in 2022, with a yearly increase between 5 and 10 euros.[43] However, that increase is subject to evaluation and, in case the carbon price also significantly increases (above 12.5%) consumer energy prices (natural gas, fuel oil, petrol and diesel), may be decreased. The level of the carbon price was indeed the most criticised part of this proposal. According to scientists and environmental organisations, the carbon price would be far too low to have an impact on consumer behaviour and hence the environment.[44] In contrast, consumer and business organisations viewed the carbon price as too high and another additional burden on those they, respectively, represent.[45]

A so-called climate bonus, proposed in the *Climate Bonus Act (KlimBG),*[46] seeks to limit the additional burden expected to result from the introduction of the carbon pricing mechanism. The climate bonus consists of a lump sum payment, called the regional climate bonus, in the amount of 100 euros per year for every adult person who has their main residence in Austria; for minors, the regional climate bonus is halved.[47] A regional compensation payment is added to the regional climate bonus to reflect the varying levels of infrastructure available in different parts of the country, as such availability would co-determine mobility choices by residents and thus their carbon emissions.[48] Accordingly, the

[40] Federal Government Draft Law No. 1034 d.B., *Bundesfinanzgesetz 2022 – BFG 2022 samt Anlagen*, Legislative Period XXVII.

[41] Federal Government Draft Law No. 1293 d.B., *Ökosoziales Steuerreformgesetz 2022 Teil I – ÖkoStRefG 2022 Teil I*, Legislative Period XXVII.

[42] Explanatory Memorandum to Federal Government Draft Law No. 1293 d.B., 3.

[43] § 10 *NEHG* as included in Federal Government Draft Law No. 1293 d.B.

[44] 'Österreichische Wissenschafter fordern höhere CO2-Bepreisung' *Der Standard* (Vienna, 7 October 2021) <derstandard.at/story/2000130240353/oesterreichische-wissenschafter-fordern-hoehere-co2-bepreisung> accessed 5 January 2022; 'NGOs ist der CO2-Preis nicht hoch genug' *Wiener Zeitung* (Vienna, 3 October 2021) <www.wienerzeitung.at/nachrichten/politik/oesterreich/2123523-NGOs-ist-der-CO2-Preis-nicht-hoch-genug.html> accessed 5 January 2022.

[45] 'CO2-Steuer kommt, Entlastung vorgesehen' (*ORF.at*, 3 October 2021) <orf.at/stories/3230965/> accessed 5 January 2022.

[46] Federal Government Draft Law No. 1292 d.B., *Klimabonusgesetz – KliBG*, Legislative Period XXVII.

[47] § 3 KlimBG as included in Federal Government Draft Law No. 1292 d.B.

[48] Explanatory Memorandum to Federal Government Draft Law No. 1292 d.B., 1.

Austrian territory is divided up into four categories, with all but category one receiving a certain percentage of the regional climate bonus on top (+33%, +66%, +100%).[49]

So far, the climate bonus had to withstand two main points of critique. On the one hand, it was criticised for being a lump sum that does not take personal income into account. The bonus would thus limit the additional costs resulting from the introduction of a carbon pricing scheme equally for everyone. Yet, in proportion to their income, financially disadvantaged households would require more support in bearing additional costs.[50] On the other hand, the design of the regional compensation payment was criticised for oversimplifying circumstances. A quartering of the Austrian territory would not reflect the differing levels of available infrastructure and lead to similar treatment of very dissimilar circumstances.[51] For similar reasons, the proposal received harsh critique for being, despite its marketing, neither environmental nor social.[52]

2. Policy Developments

2.1. A Popular Initiative Calling for Increased Climate Action Addressed in Parliament

A popular initiative enables Austrian citizens to approach the parliament with a matter that falls into the legislative competence of the federation, provided the initiative is supported by 100,000 signatories.[53] In early March, a group of Austrian citizens, joined by Fridays for Future Austria and other environmental organisations, filed a popular initiative on climate action with the Austrian authorities (*Klimavolksbegehren*). With this initiative, the organisers called for constitutional and legislative changes that would make climate action feasible and affordable on all governing levels.[54] The full initiative included several specific demands in this context, such as a constitutional right to

[49] § 4 KlimBG as included in Federal Government Draft Law No. 1292 d.B.

[50] Heike Lehner and Hanno Lorenz, 'Ein Klimabonus für die Österreicher' (Agenda Austria, 3 July 2021) <https://www.agenda-austria.at/publikationen/ein-klimabonus-fuer-die-oesterreicher/ein-bonus-fuer-den-klimaschutz/> accessed 5 January 2022.

[51] 'Rechenbeispiele: Klimabonus wertet Gleiches teils ungleich' *Die Presse* (Vienna, 6 October 2021) <www.diepresse.com/6043497/rechenbeispiele-klimabonus-wertet-gleiches-teils-ungleich> accessed 5 January 2022.

[52] Rosa Winkler-Hermaden 'Bürgermeister Ludwig will Paket zur Steuerreform "aufschnüren"' *Der Standard* (Vienna, 5 October 2021) <www.derstandard.at/story/2000130177868/warum-sich-wien-vom-klimabonus-benachteiligt-fuehlt> accessed 5 January 2022.

[53] Art 41(2) *Austrian Constitution*.

[54] Bundesministerium für Inneres, 'Wahlangelegenheiten; Instrumente der direkten Demokratie; Volksbegehren – VB Volksbegehren „Klimavolksbegehren"; Einleitungsantrag – Stattgebung ' <www.bmi.gv.at/411/Volksbegehren_der_XX_Gesetzgebungsperiode/klimavolksbegehren/files/Verlautbarung.pdf> accessed 5 January 2022.

climate protection or the phase-out of climate-detrimental subsidies.[55] The initiative was ultimately supported by 380,590 signatories,[56] which amounts to 5.96 % of the eligible Austrian population and ranks it 17th among concluded popular initiatives.[57] Having thus overcome the 100,000 signatory mark, the initiative was submitted to the National Council, the chamber who represents the interests of the federation in the parliamentary process, for action.

In the parliament, consultations and discussions on the popular initiative started in September 2020.[58] Two specific demands of the initiative caught particular attention.

2.2. A Right to Climate Protection

The initiative had called for the introduction of a constitutional right to climate protection. While the *European Convention on Human Rights (ECHR)* forms part of Austrian Constitutional law,[59] its Art. 8 ECHR, in its current understanding, would not constitute a fully-fledged human right to a healthy environment; one, that includes a healthy climate system. A constitutional right to climate protection would thus fill a gap to empower individuals and groups to challenge public and private acts which further climate change, yet also to call on governments to protect that right through increased action.[60] In discussing this demand, doubts were raised whether such a right would fit into the existing system of constitutional rights and could actually be implemented.[61] Ultimately, in March 2021, the National Council could agree on a resolution, in which they called on the government to check the legal feasibility of a constitutional right to climate protection.[62] While, meanwhile, the relating expert

[55] Bundesministerium für Inneres, 'Begründung zur Einleitung des Verfahrens für das Volksbegehren „Klimavolksbegehren"' <www.bmi.gv.at/411/Volksbegehren_der_XX_Gesetzgebungsperiode/klimavolksbegehren/files/052020_Begruendung_Klimavolksbegehren.pdf> accessed 5 January 2022.

[56] Bundeswahlbehörde, 'Volksbegehren „Klimavolksbegehren"' <www.bmi.gv.at/411/Volksbegehren_der_XX_Gesetzgebungsperiode/Klimavolksbegehren/files/Verlautbarung_Klima.pdf> accessed 5 January 2022.

[57] Bundesministerium für Inneres, 'Volksbegehren Klimavolksbegehren' < www.bmi.gv.at/411/Volksbegehren_der_XX_Gesetzgebungsperiode/Klimavolksbegehren/files/Broschuere_Klima_20200729.pdf> accessed 5 January 2022.

[58] Popular Initiative No. (348 d.B.), *Klimavolksbegehren*, Legislative Period XXVII.

[59] Christoph Grabenwarter and Michael Holoubek, *Verfassungsrecht. Allgemeines Verwaltungsrecht* (4th edn, facultas 2019) 168 et seqq.

[60] Bundesministerium für Inneres, 'Begründung zur Einleitung des Verfahrens für das Volksbegehren „Klimavolksbegehren"' <www.bmi.gv.at/411/Volksbegehren_der_XX_Gesetzgebungsperiode/klimavolksbegehren/files/052020_Begruendung_Klimavolksbegehren.pdf> accessed 5 January 2022..

[61] 'Umweltausschuss berät über Für und Wider eines Grundrechts auf Klimaschutz in der Verfassung' Parlamentskorrespondenz (Vienna, 16 December 2020) <www.parlament.gv.at/PAKT/PR/JAHR_2020/PK1441/#XXVII_I_00348> accessed 5 January 2022.

[62] Resolution No. 160/E of the Federal Council of 26 March 2021 in relation to measures following the popular initiative on increased climate action, Legislative Period XXVII.

opinion has been obtained, and confirms the feasibility of the demand,[63] a draft law for the introduction of the constitutional right to climate protection is still missing.

2.3. A Citizens' Council on Climate Action

The organisers of the popular initiative called for a sustainable financial framework, which ensures the phase-out of fossil fuels and the transition towards clean energy and mobility. This framework and its accompanying measures should be designed in a participatory way, by, for example, including a citizens' council in the process.[64] The demand for more participation in designing certain climate measures was not met with much reluctance in the Federal Council; after all, the instrument had already been used in the federal states on different occasions and was thus somewhat familiar.[65] Ultimately, the National Council, in its resolution of March 2021, called on the government to establish a citizens' council on climate change that should discuss and develop measures, which are necessary to achieve Austria's climate targets.[66] Shortly after, the government acted accordingly. The Citizens' Council on Climate Change (*Klimabürger der Brgerinnen und Brger*) consists of 100 individuals who have their main residence in Austria. In selecting these members, the responsible agency took several socio-economical factors, such as education, into account to mirror the composition of the Austrian population.[67] Starting in January 2022, the Citizens' Council on Climate Change will meet on six weekends to discuss selected areas of climate action, from agriculture to energy, and develop proposals for concrete measures, which are then submitted to the Austrian government.[68] However, at the time of writing, given Covid developments on the continent, it is unclear whether the plans for in-person-meetings can continue.

Conclusion

[63] Daniel Ennöckl, Kurzstudie „Möglichkeiten einer verfassungsrechtlichen Verankerung eines Grundrechts auf Klimaschutz" (Juni 2021) <www.parlament.gv.at/PAKT/VHG/XXVII/III/III_00365/imfname_987168.pdf > accessed 5 January 2022.

[64] Bundesministerium für Inneres, 'Begründung zur Einleitung des Verfahrens für das Volksbegehren „Klimavolksbegehren"' <www.bmi.gv.at/411/Volksbegehren_der_XX_Gesetzgebungsperiode/klimavolksbegehren/files/052020_Begruendung_Klimavolksbegehren.pdf> accessed 5 January 2022.

[65] Claudia Drexel, 'Neue Wege der politischen Partizipation' [2013] SPRW 165.

[66] Resolution No. 160/E of the Federal Council of 26 March 2021 in relation to measures following the popular initiative on increased climate action, Legislative Period XXVII.

[67] Austrian Statistics, 'Klimarat der Bürgerinnen und Bürger 2021/22' <http://www.statistik.at/web_de/frageboegen/private_haushalte/klimarat/index.html> accessed 5 January 2022.

[68] Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, 'Klimarat der Bürgerinnen und Bürger' <www.bmk.gv.at/themen/klima_umwelt/klimaschutz/nat_klimapolitik/klimarat.html> accessed 5 January 2022.

The urgency of tackling the climate crisis increases rapidly. Nevertheless, the developments in Austria in the past year do not reflect this urgency. There has of course been valuable progress on certain matters, such as clean energy and a push for carbon pricing. However, it cannot be overlooked that a crucial element is still missing: a forward-looking and strategic framework for climate action. While targets and policy paths have been put forward, neither has been consolidated into a binding and coherent framework that can serve as an orientation for policy-makers and -executers, businesses, civil society organisations and the public. As both legislative and policy processes are still ongoing, hopes are that 2022 brings more clarity for the path Austria takes in the fight against climate change.

COUNTRY REPORT: IRAN

Climate Change Adaptation Law and Policies in Iran

Mehdi Piri(*)

Amir Hossein Korhani(**)

Introduction

Several statistical reports point out that the middle east has seen a significant temperature change in the last century.[1] Local research has shown that this has had profound impact on Iran.[2]

The IPCC[3] estimates that the region will become warmer and drier in the future. An increase in temperature thresholds and a decrease in rainfall will lead to severe droughts in the region. According to IPCC modelling, 80 to 100 million people will be exposed to water shortages in the region by 2050, and groundwater will decline rapidly.[4]

In Iran, the reduction of approximately 50% of surface runoffs, increased flood occurrence and severe growth in imports of agricultural products are estimated. These all, clearly indicate serious impacts of climate change in Iran. Iran is also experiencing the increasing trend of drying wetlands, as an important indicator of the climate change impact.[5] It is suggested that, with regards to Iran's geographical location and economic structure and taking into account the average precipitation and evaporation, Iran would rank under the category of vulnerable countries in accordance with articles 4.8 and 4.10 of the UNFCCC.

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[1] P Lionello and others, 'The Mediterranean climate: an overview of the main characteristics and issues' [2006] 4(1) *Developments in Earth and Environmental Sciences* 1-26; S Russo and others, 'When will unusual heat waves become normal in a warming Africa?' [2016] 11(5) *Environmental Research Letters*.

[2] E Bucchignani and others, ' Climate change projections for the Middle East–North Africa domain with COSMO-CLM at different spatial resolutions [2018] 9(1), *Advances in Climate Change Research*, 66-80.

[3] IPCC, 'The Intergovernmental Panel on Climate Change Sixth Assessment Report' (*Https://wwwipccch*, 2021) <https://www.ipcc.ch/report/ar6/wg1/#FullReport> accessed 26 January 2022.

[4] IPCC, 'The Intergovernmental Panel on Climate Change Sixth Assessment Report' (*Https://wwwipccch*, 2021) <https://www.ipcc.ch/report/ar6/wg1/#FullReport> accessed 26 January 2022.

[5] Ebrahimi-Khusfi, Zohre, Reza Ghazavi, and Mahdi Zarei. 'The Effect of Climate Changes on the Wetland Moisture Variations and Its Correlation with Sand-Dust Events in a Semiarid Environment, Northwestern Iran.' [2020]: 48(12) *Journal of the Indian Society of Remote Sensing* 1797-1808.

At the CoP held in Paris in 2015, the State Parties signed an agreement in this regard, which is known as the Paris Agreement. In addition to addressing emissions reduction, the Paris Agreement deals with the issue of adaptation and governments' efforts to mitigate the effects of climate change. It should be noted that the Parties' national contributions to the Paris Agreement include their efforts over a period of time and will take into account the support needed for developing countries and least developed countries.

In this article, authors first intend to examine the effects of global warming in the Middle East in general. Then, measures which have been taken by Islamic Republic of Iran will be discussed.

1. Impacts of climate change in the Middle East

Climate change has various consequences on the natural and human environment. In general, the effects of climate change can be divided into damages to the human environment and the natural environment. The notion of damage to human environment in general, due to climate change, may be referred to as the destruction of infrastructures, change in social ethics due to extreme heat, lack of access to water resources for drinking and industry and agriculture, lack of food and lack of energy, and their economic and social consequences. [6]

Reduction of the levels of agricultural production, sharp drops in surface runoffs and underground water storage, increase of mean temperature with its consequences (heat exhaustion and spread of some diseases), increased hot-spots of dust and sand storms (with high health and industrial adverse impacts) as well as extreme vulnerability of biodiversity and natural resources are some of the direct and indirect extreme impacts of climate change.[7] Also, increased air pollution due to lack of appropriate technology support with its increased health risks is another aspect of the country's vulnerability. In accordance with IPCC Reports, climate change and global warming have led to widespread and persistent droughts, as well as non-uniform distribution of precipitation. In the Middle East, water resources are depleted and the region has been faced with increasing water shortages. Climate change is a major challenge, especially if we look at the increasing and persistent droughts, as well as the growing demand for water and water scarcity. The IPCC estimates that the region will become warmer and drier in the future. An

[6] See generally on that John S. Dryzek and others, The Oxford Handbook of Climate Change and Society (Oxford 2011).

[7] Dorte Verner and others, Adaptation to a Changing Climate in the Arab Countries: A Case for Adaptation Governance and Leadership in Building Climate Resilience (World Bank Publications, 2012).

increase in temperature thresholds and a decrease in rainfall will lead to severe droughts in the region. According to IPCC modelling, 80 to 100 million people will be exposed to water shortages in the region by 2050, and groundwater will decline rapidly.[8]

In Iran, the reduction of approximately 50% of surface runoffs, increased flood occurrence and severe growth in imports of agricultural products are estimated. These all, clearly indicate serious impacts of climate change in Iran. Iran is also experiencing the increasing trend of drying wetlands, as an important indicator of the climate change impact.[9] It is suggested that, with regards to Iran's geographical location and economic structure and taking into account the average precipitation and evaporation, Iran would rank under the category of vulnerable countries in accordance with articles 4.8 and 4.10 of the UNFCCC.

Climate change will exacerbate tensions in access to and exploitation of natural resources, undermine community livelihoods, displacement, and human casualties.[10] Also, in today's world, with the global connections, the negative consequences of the impact of climate change on states are not limited to their geographical borders and will affect the surrounding areas. Widespread migration from poor areas to better-off areas and the social consequences are part of the predictable tensions. The health sector is one of the areas affected by climate change, which has also been considered in the strategies of the World Health Organization.[11]

Climate change in the Middle East has also had very significant effects on the natural environment. Effects such as drought or floods caused by changes in rainfall patterns, and in this regard, its secondary effects on food supply and public health can be mentioned. Also, studies conducted in the Middle East region show that if the same pattern of air temperature propagation continues especially in hot seasons,

[8] IPCC, 'The Intergovernmental Panel on Climate Change Sixth Assessment Report' (*Https://wwwipccch,* 2021) <https://www.ipcc.ch/report/ar6/wg1/#FullReport> accessed 26 January 2022.

[9] Ebrahimi-Khusfi, Zohre, Reza Ghazavi, and Mahdi Zarei. 'The Effect of Climate Changes on the Wetland Moisture Variations and Its Correlation with Sand-Dust Events in a Semiarid Environment, Northwestern Iran.' [2020]: 48(12) *Journal of the Indian Society of Remote Sensing* 1797-1808.

[10] Khavarian-Garmsir, A. R., Pourahmad, A., Hataminejad, H., & Farhoodi, R 'Climate change and environmental degradation and the drivers of migration in the context of shrinking cities: A case study of Khuzestan province, Iran'[2019]: 47 *Sustainable Cities and Society*.

[11] Kathryn J Bowen and Kristie L Ebi, 'Health risks of climate change in the World Health Organization South-East Asia Region' [2017] 6(2) WHO South-East Asia Journal of Public Health <https://apps.who.int/iris/handle/10665/329614> accessed 26 January 2022.

the possibility of living in some cities or the possibility of holding some religious ceremonies such as Hajj with millions of pilgrims will face major setbacks.[12]

1. Adaptation law and policies in Islamic republic of Iran

The Government of the Islamic Republic of Iran ratified the United Nations Convention on Climate Change in 1996 and subsequently acceded to the Kyoto Protocol as a non-annexed 1 state and without having quantitative targets for reducing greenhouse gas emissions.[13] Under the auspices of the UNFCCC and the Kyoto Protocol, the government of the Islamic Republic of Iran has taken measures in accordance with domestic laws to reduce greenhouse gas emissions. In 2015, along with other governments, the Government of the Islamic Republic of Iran also signed the Paris Agreement and began the formal process of ratifying the said agreement in the Parliament, still pending. [14]

In this regard, the first regulation adopted in connection with the United Nations Framework Convention on Climate Change and the Kyoto Protocol is the executive regulation adopted in 2008 by the State Cabinet.[15] This regulation creates a framework which covers governmental activities in this field. The regulation first describes government policies and strategies and addresses the adaption as it requires state preparedness to deal with and manage the consequences of climate change through:

5-1- Optimization of resource consumption

5-2- Modification of production and consumption patterns

5.3- Financial support for compensatory programs

5-4- Creating food security

5-5- Management of facilities and equipment

Therefore, the Government is required to adopt appropriate policies with respect to adaption with climate change consequences. As noted above these policies take into account the particular economy

[12] Pal, J. S., & Eltahir, E. A. ' Future temperature in southwest Asia projected to exceed a threshold for human adaptability' [2016] 6(2), *Nature Climate Change*, 197.

[13] See for more info: https://treaties.un.org/Pages/ViewDetailsIII.aspx?src=IND&mtdsg_no=XXVII-7&chapter=27&Temp=mtdsg3&clang=_en, 03/02/2022; https://treaties.un.org/pages/viewdetails.aspx?src=treaty&mtdsg_no=xxvii-7-a&chapter=27&clang=_en, last visited on 03/02/2022; https last visited 03/02/2022;

[14] See For more info https://rc.majlis.ir/fa/legal_draft/show/989119, last visited on 03/02/2022.

[15] see for more info https://rc.majlis.ir/fa/law/show/136323, last visited 03/02/2022.

and environment of the country. Such policies seem to meet the first category of adaptation measures as required by the Paris Agreement. Next, a National Working Group was established to manage all issues related to climate change in the country[16]. Its main function with respect to adaption is planning to prevent and reduce the adverse effects of climate change in the country. In doing so, this National Working Group, composed of authorized representatives of relevant ministries and governmental organizations, will prepare appropriate plans aligning with policies to deal with the consequences of climate change. These policies and plans should be accordingly implemented by the relevant authorities and results of their measures shall be reported. Furthermore, in coordination with the National Working Group, each of the relevant ministries and organizations undertake specific tasks with respect to adaptation and mitigation separately.

In the 3rd paragraph executive bodies which confront climate change issues are addressed. These entities range from various ministries and organizations and are urged to investigating and identifying the damage caused by climate change prone subjects in a report and submitting their report to the National Working Group. Sometimes a deadline has been set to define a strategic plan to face severe impacts of climate change like increased heat and drought. Monetary and fiscal policy on the operation of the plans are also foreseen to combat the phenomenon of climate change and taking good care of health issues and wildlife. These policies clearly indicate that Iran is planning adaptation actions and allocating resources to support adaptation to climate change. National adaptation policy is increasingly focusing on identifying adaptation gaps and analyzing appropriate adaptation practices as required. This is mainly because of the fact that making investment decisions require access to baseline data in the area of adaptation.[17] The approach is focused on reducing vulnerability to climate change.

It should be noted that the Government of the Islamic Republic of Iran has modified the executive regulations of the UNFCCC and its additional protocols in 2012. In the mentioned regulation, in general, the executive framework of the Iranian government's programs in this regard has been reformulated and the executive strategies of the country have been specified. Here are some of the strategies that are related to adaptation:

[16] National Working Group on Climate change.

[17] Tompkins E. and others 'Documenting the state of adaptation for the global stocktake of the Paris Agreement' [2018]9(5) *Wiley Interdisciplinary Reviews: Climate Change* 545.

-Establish the necessary infrastructure and mechanisms to achieve the objectives of the UNFCCC and the Kyoto Protocol.

-Maximum use of global and regional environmental capacities and facilities in various technical, economic and educational dimensions within the framework of the Convention and the Protocol.

-Supporting domestic research in order to achieve the objectives of the Convention and the Protocol.

-Creating the necessary preparation to prevent and deal with the consequences of climate change.

In this regard, a National Working Group has been formed to determine specific strategies established sub-sectors in the areas of water resources management, agriculture and food security (agriculture and horticulture), livestock, poultry and fisheries in the field of natural resources and biodiversity (biological resources) and health. Within the framework of this strategic plan, specific program goals have been considered for each of the mentioned sections.

By looking at these adaptation strategies one may clearly observe a shift in policy making and focusing more on a strategic approach to adaptation policies instead of concentrating on vulnerabilities. It resembles more a framework for managing climate change effects, prioritizing and coordinating adaptation measures.

As mentioned, Iran has not yet ratified Paris Agreement, but already submitted its own Intended Nationally Determined Contribution (INDC). This INDC is not yet converted to a Nationally Determined Contribution (NDC), precisely because Iran has not yet ratified the Paris Agreement. Below is a brief description of the adaptation measures taken in Iran in general.

The INDC has goals on enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change. The water sector is highlighted and its needs for the investment in water resources infrastructure, increasing productivity in the water sector, increasing efficiency and reducing losses in water yield, water networks and providing new water resources. These adaptation programs require a wide spectrum of actions and require additional international financial resources and technology transfer. These would be a climate smart agricultural technology, practices for scattered

local communities, for supplying water (desalination, recycling and water treatment), development of on-line monitoring network of climate observation system, general circulation models (for national and regional application with monitoring and observing features for forest fires), access to new and environmentally sound technologies for industrial production, as well as forest fire fighting systems and early-warning and monitoring systems of climate extreme events, dust and sand storms and access to global satellite data.

"The Law on the Sixth Five-Year Economic, Cultural and Social Development Plan for (2016-2021)"[18] (hereafter the "Sixth Development Plan") is very important for the country and cover all social, economic and ecological sectors of the country. The "Sixth Development Plan" declares the goals to be obtained by the country over the next five years. It is of interest here, because of its importance for the country and as it provides guidelines for the Iranian government to develop the country in all aspects. In the "Sixth Development Plan", special attention has been paid to the water crisis, and environment and food security issues that have been seriously affected by climate change. This is because of the importance of incorporating compatibility with the effects of climate change in the development of programs. Adaptation to climate change is not directly targeted in this plan, meanwhile, measures which directly or indirectly aimed to adapt to climate change consequences are articulated in different sectors and sub-sectors as follows:

1. Water

The Government is required to secure water rights in order to deal with the water shortage crisis, land sustainability, increase of production in the agricultural sector, balancing aquifers and improving productivity and water level compensation, by conducting following measures:

A- Increasing performance per unit area and increasing productivity in product of agriculture production with priority of products with comparative advantage and high export value and cultivars with less water requirement and compatible with salinity, drought resistant and observing the cultivation pattern appropriate to the region.

B- Development of new irrigation methods, development of dams and systems of surface water catchment at least in the amount of six hundred thousand hectares per year.

[18] The Law on the Sixth Five-Year Economic, Cultural and Social Development Plan for (2016-2021 was approved by the Iranian Parliament in 2016. See for more info: https://rc.majlis.ir/fa/law/show/1014547. Last visited 03/02/2022.

C-The Ministry of Energy is required to take the necessary measures to reform the drinking water exploitation system, extraction efficiency and consumption efficiency by at least equal to thirty percent and also at least three percent of drinking water in the southern regions of the country by desalinating seawater

D-The Government is required to provide the necessary arrangements using a variety of methods to increase at least twenty-five percent of the country's urban sewerage network coverage. These methods include completion and implementation of facilities for collection, treatment, recycling and management of wastewater in cities and industrial sector and services to towns and other units that produce wastewater with excessive pollution from national standards by concluding a post-sales contract or pre-discharge contract.

F- The Government is also required to take measures necessary for stabilization, continuity and increase its water rights in international rivers such as Helmand and securing their environmental water rights. Therefore, the state measures in this field require international cooperation on management of shared watercourses.

2. Protection of Forests and Rangelands

The UNFCCC has acknowledged the role of forests in the carbon cycle and includes several references to 'sinks' and their role in mitigation.[19] But forest will have a great role in adaptation as well, in so much as they alternatively could provide livelihood opportunities. Therefore, the protection of forests and rangeland are of great importance in adaptation law and policies. Some of measures which are required by the "Sixth Development Plan" include, fire prevention plan, development of forests and pastures, watershed and aquifer protection, desertification, cadastral map preparation and at last management and protection of wildlife zones.

3. Energy

Climate change affects energy sector including energy supply, energy demand, energy endowment, energy infrastructure, and transportation.[20] Therefore, in response to climate change effect, several adaptation measures are presumed to minimize such negative impacts. In this regard, the

[19] Carmenza, Robledo and others 'Tropical forests and adaptation to climate change: In search of synergies'. [2005 CIFOR] 98

[20] Jane Ebinger and Walter Vergara, *Climate Impacts on Energy Systems : Key Issues for Energy Sector Adaptation* (1 edn, World Bank Studies 2011) 26-42.

Government is required specifically address the energy related issue like applying green management program, providing facilities to reduce the transportation gas consumption and finance the possible plans to convert waste into fertilizer or energy.

4. Waste management

Therefore, one of the main policies which is adopted by the Government relates to the waste management. These are a few of these policies as codified in the "Sixth Development Plan" as Waste reduction and recycling in buildings and vehicles.

These policies as provided in the "Sixth Development Plan" are supported by the Government through various means such as financial support, providing facilities for investment of private sectors, international cooperation and subsidies. For example, for the development of new irrigation methods, at least eighty-five per cent of the costs shall be provided and paid by the government as a state aid or resources, which are obtained from the sale of wastewater for development and completion shall be used for urban wastewater projects.

To encourage domestic and foreign private sector investment Government is required to provide foreign currency credits required to implement climate change plans. Furthermore, the Government is required to increase public participation in decision making on proposed activities and provide opportunity to public in developing such projects. This will promote social justice and increase productivity in water and energy consumption. Also, the Government is allowed to subsidize the price of water and energy carriers and other subsidized goods and services with social and economic considerations and maintaining the comparative and competitive advantage for industries and products, gradually and in a manner to increase production and employment, supporting non-oil exports, productivity, reduction of energy intensity, reduction of air pollution and promotion of social justice indicators and social support to needy households and providing operating and investment costs of relevant companies.

Conclusion

In the UNCCC, the commitments of Parties, especially developing countries such as the Islamic Republic of Iran, are limited to take appropriate actions to mitigate greenhouse gases emission and other general commitments such as submitting periodic reports on the amount of emissions and measures and programs taken or underway to reduce and adapt to climate change impacts.

In the Paris Agreement, however, we observe a shift in the wording and the Parties are legally required to submit adaption plans. With regard to the adaptation measures mentioned in the agreement, it should be noted that the major measures proposed are non-binding, but the need to comply with the decisions of the Conference of Parties in this regard may imply responsibility for Parties to fulfill their subsequent commitments. Iran has submitted its adaptation plans through INDC without setting any specific targets thereof and is willing to present a national program to adapt consequences of climate change, taking into account its domestic capabilities and of course conditional to international support. Iran has taken various adaptation measures in its domestic laws and regulations.

It is noteworthy to mention that Iran is under the pressure of the US unilateral sanctions and therefore is unable to achieve international cooperation and support. Notwithstanding laws and policies which have been already adopted by the country, Iran needs to secure financial resources and technology transfer in order to be able to fully implement such laws and policies. Meanwhile, it seems very difficult for the country which is under such comprehensive sanctions to comply with its climate requirements and fully implement its law and policies.

COUNTRY REPORT: NEW ZEALAND

Resource Management Reform

Trevor Daya-Winterbottom[*]

This country report focuses on the proposed reform of the Resource Management Act 1991 (RMA), the principal environmental law statute in New Zealand that came into force as law on 1 October 1991 and legislated for the sustainable management of natural and physical resources.[1] The RMA was the product of an intense law reform project during the period 1988-1991 which took place against the background context of the publication of the Brundtland report, *Our Common Future*, in 1987 and the lead up to the United Nations Conference on Environment and Development held in Rio de Janeiro during June 1992. It is therefore serendipitous that the current debate about the reform of the RMA should take place against the background context of the Global Pact for the Environment 2017 and the lead up to Stockholm+50 that will take place in June 2022 and reaffirm the principles of the Rio Declaration 1992 in a high-level political declaration.

The current RMA reform process is based on the conclusions of the independent Resource Management Review Panel (appointed by the Minister for the Environment in July 2019)[2] that the RMA has not delivered on desired environmental outcomes or given effect to the principles of the Treaty of Waitangi 1840 between the Crown and Maori that provided for the establishment of the realm of New Zealand. Accordingly, the Government announced in February 2021 that it intends to repeal and replace the RMA with three new statutes that will manage the environmental challenges faced by New Zealand "more effectively for current and future generations",[3] namely, a Natural and Built Environments Act (NBA), a Strategic Planning Act (SPA), and a Climate Adaptation Act (CAA).

A parliamentary paper on the exposure draft NBA (including the text of parts 1, 2, 3, and 4 and schedule 3 of the NBA) was released by the Government in June 2021,[4] and was referred to the Environment select committee of Parliament in July 2021 for inquiry to provide feedback to the

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[1] RMA, s 5.

[2] Report of the Resource Management Review Panel, *New Directions for Resource Management in New Zealand* (June 2020).

[3] Ministry for the Environment, Overview of the resource management reforms (21 January 2022) <www.environment.govt.nz>.

[4] New Zealand Government, *Natural and Built Environments Bill: Parliamentary paper on the exposure draft* (updated July 2021) <www.environment.govt.nz>.

Government on whether the provisions in the NBA exposure draft would support the objectives of the RMA reform process noted above. Following public submissions and hearings the Environment Committee reported back in November 2021 and recommended that the Government should proceed with the development of the NBA.[5] The Bill has not (at the time of writing) yet been introduced into Parliament.

The Strategic Planning Board has been established as an interdepartmental executive board under the Public Service Act 2020 to oversee the development of the SPA, and the timeline for scoping the development of the CAA has not yet been released by the Government.

1. The welfare and well-being of the environment

The statutory purpose of the NBA is to enable (a) the welfare and well-being of the environment to be upheld by protecting and enhancing the natural environment, and (b) people and communities to use the environment in a way that supports the well-being of present generations without compromising the well-being of future generations.[6]

The statutory purpose is the be achieved by prescribing environmental limits on the use of the environment,[7] by providing for a range of environmental outcomes,[8] and by requiring that any adverse effects arising from the use of the environment must be avoided, remedied, or mitigated.[9]

While environmental limits and environmental outcomes are to be included in the national planning framework (NPF) (that is to be promulgated by regulations made by the Governor-General on the recommendation of the responsible Minister), adverse effects arising from the use of the environment will be controlled under natural and built environment plans prepared by regional planning committees under part 4 of the NBA.

Section 5(3) of the NBA underpins the ecological approach for upholding the welfare and well-being of the environment by confirming that this approach to protecting and enhancing the natural environment includes:

The health of the natural environment.

The intrinsic relationships between Maori and the environment.

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5 Environment Committee, *Inquiry on the Natural and Built Environments Bill: Parliamentary Paper* (November 2021), 4 <www.parliament.nz>.

6 NBA, s 5(1).

7 NBA, s 5(2)(a).

8 NBA, s 5(2)(b).

9 NBA, s 5(2)(c).

The interconnectedness of all parts of the environment.

The essential relationship between the health of the natural environment and its capacity to sustain all life.

The report of the Environment Committee confirmed that conceptually, upholding the welfare and well-being of the environment "is intended as an intergenerational environmental ethic for New Zealanders".[10]

However, s 5 of the NBA refers interchangeably to both the "environment" and the "natural environment". For example:

Section 5(1)(a) and s 5(3) of the NBA which embed the ecological approach to protecting and enhancing the welfare and well-being of the environment refer to the "natural environment" in particular, which includes:

Land, water, air, soil, minerals, energy, and all forms of plants, animals, and other living organisms (whether native to New Zealand or introduced) and their habitats; and

Ecosystems and their constituent parts.[11]

Whereas s 5(1)(b) and s 5(2) of the NBA which have an anthropocentric focus on the use of the environment refer more broadly to the "environment" which includes:

The natural environment; and

People and communities and the built environment which they create; and

The social, economic, and cultural conditions that affect both (a) the natural environment and (b) people and communities and the built environment or that are affected by them.[12]

Generally, by virtue of the more explicit reference to protecting and enhancing the natural environment through the normative lens of tikanga Maori (customary values and practices)[13] and the inclusion of mandatory environmental limits,[14] the statutory purpose of the NBA is much broader than the provisions currently found in the RMA that enable people and communities to provide for their cultural, economic, and social well-being,[15] consistent with meeting cultural[16] and environmental[17] bottom lines.

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10 Environment Committee report (n 5) 14.
11 NBA, s 3.
12 NBA, s 3.
13 RMA, s 2(1).
14 NBA, s 5(2)(a), s 12A.
15 RMA, s 5(2).
16 RMA, s 6(e), s 6(g), s 7(a).
17 RMA, s 5(2)(a), s 5(2)(b), s 5(2)(c).

2. Environmental limits

The NBA provides for environmental limits to be set for protecting the ecological integrity of the natural environment or human health,[18] either by the NPF or by natural and built environment plans that are required to be prepared for each region.[19] Notwithstanding the emphasis on protecting and restoring cultural values in s 13A(b) of the NBA, environmental limits are focused entirely on setting minimum or maximum standards in relation to the natural environment[20] – air, indigenous biodiversity, coastal waters, estuaries, freshwater, and soil.[21]

The report of the Environment Committee noted that some members of the Committee considered that the NBA should include certain environmental law principles (for example, the precautionary principle and the principle of non-regression) in order "to assist the development and application of environmental limits".[22] In particular, the Committee noted that including the non-regression principle in the NBA "would provide certainty by constraining successive governments from weakening levels of environmental protection through regulations setting environmental limits".[23]

While s 12A(2) of the NBA provides that all persons using, protecting, or enhancing the environment must comply with environmental limits, this provision is currently located in part 3 of the NBA and could be more explicitly located in part 2 of the NBA in close proximity to the statutory purpose.

Arguably, s 12A(1) of the NBA should be amended to enable environmental limits to be set for protecting cultural values (e.g. heritage and landscapes). This approach would be consistent with s 13A(a) and s 13A(b)(i) of the NBA which provide for the protection and restoration of both the natural environment and the relationship of Maori with their cultural values. Extending the same approach to cultural heritage generally that is protected under the Heritage New Zealand Pouhere Taonga Act 2014 and cultural or outstanding landscapes designated in accordance with the NPF would also be sensible (for example, in resolving any conflict regarding "how to best achieve national targets for reducing

[18] NBA, s 12A.
[19] NBA, s 12C.
[20] NBA, s 12D, s 12B(2).
[21] NBA, s 12B(1).
[22] Environment Committee report (n 5) 29.
[23] Environment Committee report (n 5) 30.

greenhouse gas emissions where renewable energy generation (such as wind turbines) could affect an outstanding natural landscape").[24]

3. Environmental outcomes

The environmental outcomes listed in s 13A of the NBA include a range of matters relating to the natural environment, cultural values, climate change and natural hazards, and the functioning of urban and rural areas. The theme of environmental protection found in s 5(1)(a) of the NBA (noted above) also permeates the environmental outcomes relating to the natural environment and cultural values which are to be protected, and if degraded, restored. Greenhouse gas (GHG) emissions are to be reduced or removed from the atmosphere, and the risks arising from both natural hazards and the effects of climate change are to be reduced. In relation to urban and rural areas, s 13A(d) of the NBA seeks to provide for well-functioning areas by (inter alia) enabling sufficient land supply for development, the timely provision of infrastructure, promoting economic and social benefits, preserving highly productive land for food production, and enhancing public access along the coast and lakes and rivers.

However, s 13A of the NBA does not specify any priority between these different environmental outcomes which creates a real tension between the anthropocentric and ecological perspectives on the environment.

There is therefore clearly the potential for conflict between providing for the various environmental outcomes listed in s 13A of the NBA. For example, between protecting and restoring the natural environment on the one hand and enabling sufficient land supply for development on the other hand. Similarly, tension may arise between reducing GHG emissions and infrastructure depending on the availability of public transport (with land transport being one of the two major sources of GHG emissions in New Zealand).[25] The requirement to preserve highly productive land for food production in s 13A(d)(iv) of the NBA is effectively a return to the provisions previously found in s 3(d) of the Town and Country Planning Act 1977 that were repealed by the RMA, while enhancing public access along (inter alia) the coast in s 13A(d)(v) of the NBA is a legacy of Queen Victoria's instructions to Lieutenant-Governor Hobson in 1839 for establishing the realm of New Zealand that

[24] Environment Committee report (n 5) 41.
[25] A definition of infrastructure is not currently included in s 3 of the exposure draft NBA.

has featured in subsequent legislation providing for the reservation of marginal strips or esplanade reserves on the subdivision of land including s 77 and s 230 of the RMA.[26]

The report of the Environment Committee noted that the "intent of the NBA is to prefer synergies between outcomes" but acknowledged that "it will not always be possible to resolve conflicts between outcomes".[27] The Committee therefore considered alternative ways to resolve potential conflict between the environmental outcomes listed in s 13A of the NBA, but rejected the option of specifying priority between the outcomes – stating that "presenting a hierarchy of outcomes would be inappropriate".[28] Other conflict resolution tools considered by the Committee included:

- Criteria that apply when activities can be located in sensitive places.
- Providing for public participation in plan preparation and consenting processes.
- Determining when offsetting and compensation may be appropriate.
- Requiring decision-makers to take account of environmental law principles, for example: … the precautionary principle; the principle that harm should be avoided; the principle of rectification at source; the polluter pays principle and internalisation of environmental costs; the principles of inter-generational and intra-generational equity.[29]

The Committee was asked under its terms of reference to collate a list of ideas for making the resource management system under the NBA more "efficient" and "less complex".[30] It is for note that, examples of system efficiencies listed in Appendix 2 of the Parliamentary paper on the exposure draft NBA included "streamlined and more flexible consultation requirements for plan development" and requiring written "rather than oral" submissions on plans.[31] There is therefore a disconnection between the Government's desire to streamline public participation and downgrade access to environmental justice from the right to appear before planning committees (currently provided for under cl 8B of schedule 1 of the RMA) merely to a right to make written submissions on the one hand, and the Committee's view that public participation could assist in resolving conflict arising from providing for the various environmental outcomes listed in s 13A of the NBA on the other hand.

Determining when offsetting and compensation may be appropriate could be assisted by including an effects hierarchy in the NBA similar to that found in cl 3.21 of the National Policy

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26 The Encyclopaedia of New Zealand, <www.teara.govt.nz>.
27 Environment Committee report (n 5) 34.
28 Environment Committee report (n 5) 35.
29 Environment Committee report (n 5) 35.
30 Parliamentary paper (n 4) 80.
31 Parliamentary paper (n 4) 81.

Statement on Freshwater Management 2020 to provide clear direction about when it may be appropriate to remedy or mitigate rather than avoid any adverse effects, when offsetting or providing environmental compensation may be appropriate, and that where any residual adverse effects (that are not consistent with living within prescribed environmental limits or tikanga Maori) remain unaddressed that consent should appropriately be declined. This approach would clarify the circumstances when it may be appropriate to prevent the occurrence of activities that are likely to give rise to adverse effects on the environment.

4. National planning framework

The NPF will be central to implementation of the NBA by providing direction on matters of national significance, promoting consistency across the resource management system, setting environmental limits, and resolving conflict between (inter alia) the environmental outcomes listed in s 13A of the NBA.[32] For example, the report of the Environment Committee noted:

A key feature of the new system involves trying to identify and resolve conflicts at the appropriate level. Where possible, conflicts should be identified and resolved at the level of national direction and plan-making, rather than at the consenting level. Therefore it is important to provide as much clarity about conflict resolution in the NBA and the NPF as possible …[33]

Accordingly, the Committee recommended that the NBA should be strengthened to address these comments.[34]

5. Natural and built environment plans

Natural and built environment plans are required to be prepared for each region by a special committee constituted under s 23 and schedule 3 of the NBA. Members of the planning committees for each region will include representatives of each local authority, mana whenua (Maori holding customary authority), and the Minister of Conservation.[35] These plans form part of the implementation framework for giving effect to the NPF.[36] For example, the provisions in the NPF may have direct legal effect without the need to be incorporated into plans or subordinate legislation prepared under other

[32] NBA, s 10.
[33] Environment Committee report (n 5) 41.
[34] Environment Committee report (n 5), Recommendation 29, 41.
[35] NBA, schedule 3.
[36] NBA, s 15(1)(a).

statutes (e.g. regional spatial strategies that are to be prepared under the proposed SPA),[37] or the NPF may prescribe that certain provisions must be given effect to through plans or regional spatial strategies.[38] Where any NPF provisions are to be given effect to through plans, these provisions will need to be transposed into the plan via the plan preparation process under s 21 and schedule 2 of the NBA. While plans prepared under the RMA may include rules that have the same regulatory effect as subordinate legislation,[39] currently the exposure draft of the NBA includes a placeholder and the legal status of natural and built environment plans as subordinate legislation has yet to be determined.[40]

6. Implementation principles

The report of the Environment Committee noted that s 18 of the NBA is a placeholder for a set of "overarching" implementation principles (including taking a precautionary approach) that relevant persons (for example, decision-makers) would be required to follow.[41] However, the Committee considered that further work was needed "to determine whether overarching principles would be preferable to imposing bespoke requirements for specific functions and powers … incorporated into clauses for specific substantive and procedural decision-making requirements" under the NBA.[42]

The Committee also noted the clear tension between the anthropocentric and ecological focus of the environmental outcomes listed in s 13A of the NBA, and "proposed that principles be included in the NBA to assist in resolving conflicts between environmental outcomes".[43]

Currently, the implementation principles remain located in part 3 of the NBA pertaining to the NPF and are focused on "relevant persons" which may (following the ambivalent position in the Committee's report) be focused solely on decision-makers,[44] in stark contrast with corresponding provisions in the RMA which apply to all persons and all parts of the statute.[45] Additionally, only five environmental principles - integrated management, indigeneity (e.g. recognizing and providing for kaitiakitanga), public participation, environmental impact assessment (e.g. having regard to cumulative effects), and the precautionary approach are currently included in s 18 of the NBA.

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37 NBA, s 15(1)(c).
38 NBA, s 15(1)(a), s 15(1)(b).
39 RMA, s 68(2), s 76(2).
40 NBA, s 21(2).
41 Environment Committee report (n 5) 46.
42 Environment Committee report (n 5) 46.
43 Environment Committee report (n 5) 46.
44 NBA, s 18.
45 RMA, s 7(a).

Conclusion

Overall, the success of the NBA in supporting the objectives of the RMA reform process (namely, delivering on desired environmental outcomes and giving effect to the principles of the Treaty of Waitangi – consistent with living within environmental limits) will ultimately rest (as a framework statute like the RMA) on the quality of the NPF made by the Governor-General on the recommendation of the Minister and the natural and built environment plans prepared by regional planning committees.

COUNTRY REPORT: PHILIPPINES

Recent Developments on the Writ of Nature in the Philippines

Rose-Liza Eisma-Osorio[(*)]

1. Background

Recently, the Supreme Court of the Philippines granted a *writ of kalikasan* (translation: nature) against the growing plastic crisis in the country. This was in response to a petition filed by 52 petitioners seeking the protection of their constitutional right to a healthful and balanced ecology against the unabated use and disposal of plastics in the country. The petitioners sought the *writ of kalikasan and a writ of continuing mandamus* to compel the government to prohibit disposable plastics by fully implementing the country's solid waste management law.

A *writ of kalikasan* is one of the extraordinary remedies introduced by the Court through its Rules of Procedure for Environmental Cases.[1] The writ is intended to safeguard such constitutionally protected right to environment against any unlawful act or omission of a public official or employee, or private individual or entity. This writ can be issued if the environmental damage caused is of such magnitude as to prejudice the life, health or property of inhabitants in two or more cities or provinces.[2] Together with the *writ of kalikasan*, the Court also granted a writ of continuing mandamus against the National Solid Waste Management Commission and 13 other national government agencies for failing to address the plastic crisis as alleged by the petitioners in their lawsuit. The *writ of continuing mandamus* is another special remedy under the same Rules when any agency or instrumentality of the government or a public officer unlawfully neglects the performance of a mandate resulting from such office in connection with the enforcement or violation of an environmental law, regulation or right.[3] These twin remedies are often utilized to require governmental action to ensure protection for the environment.

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[1] Administrative Matter 09-6-8-SC 2010 (Phil.).
[2] Administrative Matter 09-6-8-SC 2010 (Phil.), Rule 7.
[3] Administrative Matter 09-6-8-SC 2010 (Phil.), Rule 8.

The latest decision shows the importance given by the court for an effective and early resolution of the legal issues brought by the petitioners. The *writ of kalikasan* is usually issued because of its finding that the petition is sufficient in form and substance. The petitioners also sought the issuance of a Temporary Environmental Protection Order (TEPO) requiring respondents to immediately prohibit commercial establishments, warehouses and manufacturers from selling, conveying, distributing and using disposable plastics and similar products that contain Bisphenol-A, phthalates, and other known endocrine disrupting chemicals. While the Court did not issue the TEPO, it required the respondents to file their respective verified returns and remanded the case to the Court of Appeals for reception of evidence.

1. The basic legal framework dealing with plastic

The Philippines has long recognized the need to address plastic pollution when it enacted its basic law dealing with solid waste management. The *Ecological Solid Waste Management Act* sought to eradicate non-environmentally acceptable products of packaging as early as 2000s. It contains a key provision which mandates the National Solid Waste Management Commission to prepare a list of such products within one year from the effectivity of the law.[4] These non-environmentally acceptable products shall thereafter be prohibited according to a schedule to be set by the said Commission provided that it first finds that there are alternatives available which are available to consumers at no more than ten percent greater cost than the disposable product.[5] The implementing guidelines of the law define 'non-environmentally acceptable product or packaging' as those that are not reusable, biodegradable or compostable, and recyclable, and it must also be toxic or hazardous to the environment. With this definition, the prohibition clearly applies to plastic in general.

The law also requires the Commission to annually review and update the list of prohibited non-environmentally acceptable products. In consonance with this, another legal provision prohibits the use of non-environmentally acceptable packaging by any commercial establishment. The Commission is likewise mandated to determine a phaseout period after proper consultations have been conducted.

[4] Ecological Solid Waste Management Act 2001, s. 29.

[5] Note that the Section 29 also provides that; "Notwithstanding any other provision to the contrary, this shall not apply to packaging used at hospitals, nursing homes or other medical facilities and any packaging which is not environmentally acceptable, but for which there is no commercially available alternative as determined by the Commission."

2. The mounting problem of plastic

Globally, an estimated 12 million metric tons of plastic leaks into the ocean every year.[6] The Philippines contributes around 2.7 million metric tons to the global plastic waste pollution and about 20% of which go straight to the oceans,[7] due to poor waste management in the country. It has been shown that majority of macro- and microplastics are released from the terrestrial environment which are then transported through rivers and stormwater runoffs, and get deposited in beaches and other marine habitats.[8] Two recent studies show the effects of plastics in major water bodies in the country - in Manila Bay where actual single-use plastic leakage is 9,737 tons per year and in Central Philippines' Tañon Strait Protected Seascape where the highest density presence of microplastics in Philippine marine waters was confirmed.'[9]

Recent studies have also proven the deleterious impacts of plastics on human health and the environment. A study by IPEN shows that pollutants including industrial chemicals, pesticides, pharmaceuticals, heavy metals, plastics and microplastics have deleterious impacts to aquatic ecosystems at all trophic levels from plankton to whales.[10] Microplastics found in every area of the ocean, from the water columns to the sediments at the ocean floors. The study also notes the negative health effects caused by exposure of aquatic organisms to microplastics. These include increased immune response, decreased food consumption, weight loss and energy depletion, decreased growth

[6] Jenna R. Jambeck, Roland Geyer, Chris Wilcox, Theodore R. Siegler, Miriam Perryman, Anthony Andrady, Ramani Narayan, Kara Lavender Law, 'Plastic waste inputs from land into the ocean' (2015) Science 347 (2015): 768–771 < https://pubmed.ncbi.nlm.nih.gov/25678662/> accessed 29 November 2021.

[7] Graeme Macfadyen, Tim Huntington, and Rod Cappell, 'Abandoned, lost or otherwise discarded fishing gear' (2009) FAO Fisheries and Aquaculture Technical Paper, No. 523, UNEP Regional Seas Reports and Studies, No. 185.

[8] Anna E. Shwarz, Tom N. Lighthart, Elise Boukris, Toon van Harmelen, 'Sources, transport, and accumulation of different types of plastic litter in aquatic environments: a review study' [2019] 143 Marine Pollution Bull. 92; Deo Florence L. Onda, Norchel Corcia F. Gomez, Daniel John E. Purganan, Mark Paulo S. Tolentino, Justine Marey S. Bitalac, Jahannah Victoria M. Calpito, Jose Nickolo O. Perex, and Alvin Claine A. Viernes, 'Marine Microbes and Plastic Debris: Research Status and Opportunities' [2020] 149 Phil. L. Science 71.

[9] Mario Torres, Cristina Salibay and Ersyllen Biñas, 'Solid Waste Collection Efficiency Assessment of Selected Local Government Units Along Manila Bay' [2021] DOI:10.13140/RG.2.2.34401.84327 < https://www.researchgate.net/ publication/354542122_Solid_Waste_Collection_Efficiency_Assessment_of_Selected_Local_Government_Units_Along_Manila_Bay > accessed 28 November 2021. Ecosystems Research and Development Bureau-Department of Environment and Natural Resources, 'CRERDEC's study confirms presence of microplastics in the Philippine marine waters, highest density in Tañon Strait Protected Seascape in Badian and Moalboal, Cebu' (ERDB-DENR n.d.) <https://erdb.denr.gov.ph/2021/10/19/crerdecs-study-confirms-presence-of-microplastics-in-the-philippine-marine-waters-highest-density-in-tanon-strait-protected-seascape-in-badian-and-moalboal-cebu/> accessed November 22, 2021.

[10] Matt Landos, Mariann Lloyd-Smith and Joanna Immig, 'Aquatic Pollutants in Oceans and Fisheries. International Pollutants Elimination Network ' (IPEN, April 2021) < https://ipen.org/transfer/embargo/aquatic_pollutants_in_oceans_and_fisheries_ipen-en.pdf> accessed 20 November 2021.

rate, decreased fertility and impacts on subsequent generations.[11] According to a report, to fully assess the health impacts of plastics, one must not only consider each stage of its lifecycle, but also all possible exposure pathways of the variety of substances used and released throughout the lifecycle. Hence, its impacts on human health will vary depending on the specific route of exposure to the particular substance, i.e., inhalation, ingestion and skin contact.[12] Plastic pollution persists in the environment for a long time; hence, the recent action of the Court was a much-welcomed development to ensure the full enforcement of the legal provisions dealing with non-environmentally acceptable products or packaging.

3. Trends in Philippines' environmental jurisprudence

While trends in judicial decision-making by the Philippine Supreme Court have shown the relaxation of the rules on *locus standi* for environmental cases as shown in the landmark decision of *Oposa v. Factoran* and the *Resident Marine Mammals v. Reyes*.

In the *Oposa* ruling, the Court recognized the right of minor children to file a case to safeguard the right of future generations to a healthy environment.[13] Liberalized locus standi in the *Resident Marine Mammals* ruling allowed any Filipino citizen, as a steward of nature to bring a suit to enforce rights or obligations under environmental laws. In this case, petitioners were collectively referred to as the "Resident Marine Mammals," i.e., the toothed whales, dolphins, porpoises, and other cetacean species, which inhabit the waters in and around the Tañon Strait Protected Seascape. They were joined by Gloria Estenzo Ramos and Rose-Liza Eisma-Osorio as their legal guardians and as friends (to be collectively known as "the Stewards") who allegedly empathize with, and seek the protection of, the aforementioned marine species. In its ruling, the Court allowed the petition to be filed on behalf of non-human plaintiffs and held that locus standi in environmental cases has been given a more liberalized approach although developments in Philippine legal theory and jurisprudence have not

[11] *Ibid.*

[12] Center for International Environmental Law, Earthworks, Global Alliance for Incinerator Alternatives, Healthy Babies Bright Future, IPEN, Texas Environmental Justice Advocacy Services, UPSTREAM, and #breakfreefromplastic (2019) Plastic & Health: The Hidden Costs of a Plastic Planet. <https://www.ciel.org/wp-content/uploads/2019/02/Plastic-and-Health-The-Hidden-Costs-of-a-Plastic-Planet-February-2019.pdf> accessed 9 January 2022.

[13] *Oposa v. Factoran,* GR no. 101083 (PhilSC, 30 July 1993).

progressed as far as giving legal standing for inanimate objects. The Court took a permissive position on the issue of *locus standi* in environmental cases and stated that:

> "... the need to give the Resident Marine Mammals legal standing has been eliminated by our Rules, which allow any Filipino citizen, as a steward of nature, to bring a suit to enforce our environmental laws."[14]

Despite the seemingly positive trend in terms of procedural questions on *locus standi,* the Court exercised more restraint when it came to dispensing of substantive issues in environmental cases. But there were some successful lawsuits in the beginning. In 2010, the court decided positively in the case of *West Tower Condominium Corporation v. First Philippine Industrial Corp., et al.*,[15] where it granted the writ of kalikasan along with the Temporary Environmental Protection Order in a petition to stop the leak in the oil pipeline owned by the respondents, which transports the petroleum requirements in the Metro Manila and surrounding provinces. The court stressed that the filing of a petition for the issuance of the writ does not require that a petitioner should be directly affected by an environmental disaster because the rule clearly allows any person to file the petition on behalf of persons whose constitutional right has been violated or threatened with violation. Eight years later, the Supreme Court again issued the writ of kalikasan in *Osmeña v. Garganera*[16] for the closure of a garbage dumpsite in Cebu City. The court explained that the nature or degree of environmental damage that must be present before the writ can be issued will be decided on a case-to-case basis. This is because the rules do not define the exact nature or degree of damage but only require that it can sufficiently cover the territories of two cities or provinces.

However, many recent court decisions will show judicial restraint in environmental cases. These can be seen in a catena of cases starting with *Arigo v, Swift* (2014), *Paje v. Casiño* (2015), and *Segovia v. Climate Change Commission* (2017), as well as the two 2021 decisions in *Alvarez, et al. v. Department of Environment and Natural Resources, et al.* and *Villar v. Alltech Contractors, Inc., et al.* In *Arigo v. Swift*,[17] the court denied the petition seeking for a *writ of kalikasan with TEPO* against violations of environmental laws and regulations in relation to the grounding of the US military ship USS Guardian over the *Tubbataha* Reefs, a 97,030-hectare protected marine park which is also a UNESCO World

[14] *Resident Marine Mammals of Tañon Strait Protected Seascape v. Reyes*, GR no. 180771 (PhilSC, 21 April 2015).
[15] *West Tower Condominium Corporation v. First Philippine Industrial Corporation*, GR no. 194239 (PhilSC, 31 May 2011).
[16] *Osmeña v. Garganera*, GR no. 231164 (PhilSC 20 March 2018).
[17] *Arigo v. Swift,* GR no. 206510 (PhilSC 16 Sept 2014).

Heritage Site. In the following year, the court in the case of *Paje v. Casiño*,[18] denied the appeal for the issuance of the writ because there was no causal link or reasonable connection shown by the plaintiffs relative to the irregularities in the issued Environmental Compliance Certificate (ECC) by the Environmental Department and the negative environmental impacts. This was echoed in the case of *Segovia v. The Climate Change Commission*,[19] where petitioners sought for both *writs of kalikasan and continuing mandamus* against respondents to compel the implementation of the Climate Change Act of 2009, Clean Air Act of 1999, and other issuances relating to the road sharing principle and the reduction of air pollutant emissions.

In 2021, the court has dismissed several *writ of kalikasan* cases. It denied the writ of kalikasan sought by the plaintiffs seeking to stop the construction of a domestic and international airport on a 2,500-hectare foreshore and wetland area in *Alvarez v. Department of Environment and Natural Resources*. The Supreme Court held:

> "the illegal act or omission of the private respondents which amounts to a violation of the right to a balanced and healthful ecology was not established as the mere signing of an agreement between the private corporation and public authorities does not by itself present or can cause environmental damage which warrants the issuance of the *writ of kalikasan*."[20]

In Alyansa ng mga Grupong Haligi ng Agham at Teknolohiya para sa Mamamayan (AGHAM) v. Japan Tobacco International (Philippines), Inc.,[21] the court also dismissed a petition seeking for a writ of kalikasan against the government's destruction of "Mighty" cigarettes through co-processing or the process of using waste as raw material or source of energy instead of coal or fossil fuels inside the compound of Holcim Philippines, Inc. in Davao City and Bulacan. Likewise, it also denied the petition to stop the reclamation in an area close to the Las Piñas Parañaque Wetland Park (formerly known as the LPPCHEA), a wetland included in the Ramsar Convention list of Wetlands of International Importance, along the coastline of Manila Bay in Villar v. Alltech Contractors[22]. The Supreme Court ruled against the issuance of the writ of kalikasan because Villar failed to establish the causal link

[18] *Paje v. Casiño*, GR no. 207257 (PhilSC, 3 February 2015).
[19] *Segovia and others v. Climate Change Commission and others*, GR no. 211010 (PhilSC, 7 March 2017).
[20]
[21] *Alyansa ng mga Grupong Haligi ng Agham at Teknolohiya para sa Mamamayan (AGHAM) v. Japan Tobacco International (Philippines), Inc. and others*, GR no. 235771 (PhilSC 15 June 2021).
[22] *Villar, supported by 315,849 residents of Las Pinas City v. Alltech Contractors, Inc., and others*, GR no. 208702 (PhilSC 11 May 2021).

between the issuance of Alltech's ECC to justify resorting to the extraordinary remedy of filing a petition for a writ of kalikasan.

With recent environmental jurisprudence, the court has always emphasized that there must always be a causal link between the alleged irregularities to warrant their intervention. Hence, the grant of the petition seeking for the issuance of the twin *writs of kalikasan and continuing mandamus* to compel the national government agencies to act on their mandate to prohibit non-environmentally acceptable products or packaging is considered a positive direction by the court following this recent line of cases.

4. Creating the causal link between government (in)action and environmental damage

Adverse environmental impacts from plastics are evident. Despite this, it is as important in the *writ of kalikasan* to show that there is a causal link between the damage caused and the irregularities in governmental action or, in this case, inaction due to the long delay in issuing the list of non-environmentally acceptable products by the mandated body, the National Solid Waste Management Commission and its member agencies. The respondents' duty as stated in the law is time-bound, as the task to list the non-environmentally acceptable products was to be accomplished within one year from the effectivity of the law.

According to the *Rules*, the *writ of kalikasan* is immediate in nature and specific remedies can be provided. These include any of the following: (1) to permanently cease and desist from committing acts or neglecting the performance of a duty; (2) to protect, preserve, rehabilitate or restore environment; (3) to monitor strict compliance with the decision and orders of the courts; (4) to make periodic reports on the execution of the final judgment; and (5) other similar reliefs. Hence, to expedite the resolution of the case, the Supreme Court usually remands the case to the Court of Appeals which will be required to conduct hearings and thereafter submit a report and recommendation to the Supreme Court. Actual trial is conducted before the appellate court where parties are allowed to submit respective evidences. Plaintiffs must show the link between the government inaction and the environmental damage caused by plastic pollution while respondents can prove otherwise. At this point, the appellate court can also appoint several *amici curiae* who are experts on the topic to aid in assessing the technical aspects of the case. The Supreme Court can then issue a resolution and decide on the basis of the recommendations of the Court of Appeals.

Conclusion

Judicial review can ensure the proper check and balance of the legislative, executive and judicial branches of government in dealing with environmental matters. At the same time, It can also enable the full implementation of environmental laws. With the increasing threats to the environment, legal remedies are often utilized to enforce environmental laws. While recent cases show the exercise of judicial restraint in legal actions aimed at protecting environmental rights through the *writ of kalikasan*, this extraordinary remedy serves as a potent tool for decisive judicial action towards the protection of environmental rights.

COUNTRY REPORT: THE NETHERLANDS

Two Developments: Standing in Environmental Matters and Environmental (Impact) Assessments for General Rules

Lolke Braaksma[(*)] and Bas Tadema[(**)]

Introduction

Dutch environmental law has developed significantly over the past years. An example is the now world-renowned *Urgenda*-case of 20 December 2019 in which the Supreme Court of the Netherlands upheld a judgment that obliged the Dutch State to reduce CO_2-emissions by at least 25% in 2020 compared to 1990 levels to comply with its duty of care.[1] In the more recent judgment of 26 May 2021, the District Court of The Hague ruled that a similar duty of care exists for the private oil company Royal Dutch Shell Plc, and consequently ordered this company to reduce its CO_2-emissions by a minimum of 45% in 2030 compared to 2019 levels.[2]

This country report highlights the main developments in Dutch environmental law in 2021, and as the outcome of the procedure of the *Shell*-case is not yet final – because Royal Dutch Shell Plc appealed against the judgment of 26 May 2021 – this report instead focuses on the legal relevance and consequences of two other major developments in Dutch environmental law that also received significant attention in literature.[3] These developments concern instances where the highest (general) administrative court in the Netherlands – the Administrative Jurisdiction Division of the Council of State[4] (Council of State) – followed up on two preliminary rulings of the Court of Justice of the European Union (CJEU) and declared Dutch environmental law contrary to EU law. The first instance is related to the extent to which individuals and environmental non-governmental organizations

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[1] Supreme Court (*Hoge Raad*) 20 December 2019, ECLI:NL:HR:2019:2006 (*Urgenda*). See on this judgment e.g. J. Spier, 'The "Strongest" Climate Ruling Yet': The Dutch Supreme Court's Urgenda Judgment', *Netherlands International Law Review* 2020/67, pp. 319-391.

[2] Hague District Court (*rechtbank Den Haag*) 26 May 2021, ECLI:NL:RBDHA:2021:5339 (*Shell*).

[3] See: shell.com/media/speeches-and-articles/articles-by-date/the-spirit-of-shell-will-rise-to-the-challenge.html (last accessed on 13 December 2021).

[4] In Dutch: *Afdeling Bestuursrechtspraak van de Raad van State.*

(ENGOs) that did not participate in the decision-making process regarding a project related to the environment still enjoy standing before the administrative court (*Varkens in Nood-ruling*).[5] The second instance revolves around the necessity to conduct an environmental assessment in the sense of the Strategic Environment Assessment Directive (SEA Directive) for general rules that set conditions for new developments, such as windmill parks (*Nevele-ruling*).[6]

2. Standing in environmental matters before the administrative court

On 14 January 2021, the CJEU issued the *Varkens in Nood*-ruling, which revolved around a decision to authorize the expansion of a pig farm in the south of the Netherlands. Several ENGOs including the 'Stichting Varkens in Nood' (Varkens in Nood) – a foundation committed to improving the living conditions of pigs on pig farms – appealed against this authorization at the local administrative court.

During the procedure, the case quickly turned to the question whether the appeal of the ENGOs was admissible at the administrative court. Under article 6:13 of the Dutch General Administrative Law Act[7] (GALA) only interested parties[8] that have submitted views[9] during the preparatory procedure may bring an action against the decision adopted as a result of that procedure unless they cannot reasonably be criticized for not having objected. This article *inter alia* requires ENGOs and other parties to submit a view on the preparatory decision in the context of the uniform public preparation procedure of section 3.4 GALA in order to gain access to the administrative court.[10] Varkens in Nood did not submit a view which led to their appeal being declared inadmissible.

[5] CJEU 14 January 2021, C-826/18, ECLI:EU:C:2021:7 (*Varkens in Nood*). See e.g. Rob Wertheim, 'C-826/18, Stichting Varkens in Nood and others v College van burgemeester en wethouders van de gemeente Echt-Susteren (Judgment of 14 January 2021) – Case Note', *Review of European Administrative Law (REALaw)* 2021/3; V.M.Y. van 't Lam & S. Ravelli, 'Personenfuik uniforme openbarevoorbereidingsprocedure afdeling 3.4 Awb ex artikel 6:13 Awb is in strijd met het Verdrag van Aarhus', *Milieu en Recht* 2021/40; A.G.A. Nijmeijer & H.D. Tolsma, 'Omgevingsvergunning. Niet-belanghebbende heeft toegang tot de bestuursrechter', *AB Rechtspraak Bestuursrecht* 2021/202.

[6] CJEU 25 June 2020, C-24/19, ECLI:EU:C:2020:503 (*Nevele*). See for an overview of the judgment e.g. Lorenzo Squintani, 'Case Law of the Court of Justice of the European Union and the General Court. Reported Period 01.01.2020–01.09.2020', *Journal for European Environmental & Planning Law* 2020/17, pp. 453-455; R.H.W. Frins & A.G.A. Nijmeijer, 'Van Nevele naar Delfzijl en verder', *Milieu en Recht* 2021/120.

[7] In Dutch: *Algemene wet bestuursrecht*. A (non-official) translation of this Act can be found on: acm.nl/sites/default/files/old_publication/publicaties/15446_dutch-general-administrative-law-act.pdf (last accessed on 13 December 2021).

[8] In Dutch: belanghebbende.

[9] In Dutch: *zienswijze*.

[10] In Dutch: de uniforme openbare voorbereidingsprocedure.

Varkens in Nood appealed against this decision and argued that the necessity to participate in the uniform public participation procedure to gain access to the administrative court violated *inter alia* article 9(2) of the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention).[11] This provision grants members of the public concerned rights to challenge the substantive or procedural legality of decisions, acts or omissions subject to the public participation provisions referred to in article 6 of this Convention. This argument of Varkens in Nood ultimately led the Limburg District Court to submit six preliminary questions to the CJEU, as the authorization to expand a pig farm falls under the scope of this article. One of the preliminary questions was whether the Aarhus Convention should be interpreted in such a way that it precludes a provision of national law that makes access to justice dependent on the submission of a view during the preparatory procedure. An interesting question, as the Council of State had never indicated that a conflict existed between Dutch administrative procedural law and the Aarhus Convention on this matter.[12]

In its judgement, the CJEU ruled that national provisions that require participation in procedures preparatory to the contested decision as a condition for access to the administrative court indeed violate article 9(2) Aarhus Convention, which raised questions on the validity of article 6:13 GALA in the context of the uniform public preparation procedure, both for the *Varkens in Nood*-case as well as for Dutch administrative procedural law in a more general sense. The Council of State answered these questions in various judgments in the spring of 2021, particularly in those of 14 April and 4 May 2021.[13]

On 14 April, the Council of State ruled that article 6:13 GALA is contrary to article 9(2) Aarhus Convention as it makes the admissibility of judicial proceedings brought by the public concerned conditional on their participation in the procedure that is preparatory to a decision.[14] As a consequence, it ruled that article 6:13 GALA needs to be amended by the legislator. Until the article is amended, the

[11] CJEU 14 January 2021, C-826/18, ECLI:EU:C:2021:7.
[12] Council of State 2 December 2015, ECLI:NL:RVS:2015:3703, paras. 21.1-21.6.
[13] Council of State 14 April 2021, ECLI:NL:RVS:2021:786; Council of State 4 May 2021, ECLI:NL:RVS:2021:953.
[14] Council of State 14 April 2021, ECLI:NL:RVS:2021:786, par. 4.4.

Council of State opts for an – in its own words – 'generous interpretation' of the Aarhus Convention.[15] The Council of State considered that it can be excessively difficult to determine upfront in general which decisions fall within the scope of the Aarhus Convention, as this requires an individual assessment of each of the many procedures that exist in the field of planning and environmental law.[16] It therefore provided that article 6:13 GALA is not to be invoked at all against the public concerned in – in principle – all cases that fall under Dutch planning and environmental law.[17] Subsequently, the Council of State ruled that the Dutch practice of the 'components funnel'[18], which is based on the (to be amended) article 6:13 GALA cannot be invoked against the public concerned. According to this 'components funnel', complaints are only admissible if they are directed against the same aspects of the contested decision as the aspects that were criticized during the procedure preparatory to the decision.

From the judgment of the Council of State of 4 May, it became clear that the consequences of the CJEU's *Varkens in Nood*-ruling even go beyond this. The Council of State considered that article 1:2(1) GALA, which defines the concept of the interested party, is partially inapplicable as a result of article 9(3) Aarhus Convention, namely in cases that follow the uniform public preparation procedure of section 3.4 GALA which allows 'anyone' – so not only interested parties – to submit a view.[19] This applies to cases that follow the uniform public preparation procedure of section 3.4 GALA, which grants that 'anyone' may submit a view. Individuals who are not considered interested parties within the meaning of article 1:2(1) GALA, but who do submit a view, are therefore now in a position to litigate at the administrative court. They now have the right to present arguments regarding both the formal and substantive aspects of a case to this court.[20] As a result of this judgment, article 8:1 GALA – which prescribes that only interested parties may lodge an appeal – is inapplicable in those cases. This ruling is especially important for ENGOs and others to whom it is not clear in advance whether their interests will be affected by the contested decision.

[15] Idem, par. 4.5.
[16] Idem, paras. 4.7, 4.8.
[17] Idem, par. 4.9.
[18] In Dutch: onderdelenfuik.
[19] Article 1:2(1) GALA stipulates that: '[a]n interested party is understood to mean: the person whose interest is directly involved in a decision.' [translation by LB and BT]
[20] Council of State 4 May 2021, ECLI:NL:RVS:2021:953, par. 4.5.

The foregoing illustrates that the CJEU's *Varkens in Nood*-ruling has far-reaching consequences for administrative procedural law in the Netherlands. Currently, legislation is being prepared that aims to comply with the ruling. It is not yet clear what this new legislation will look like. As long as this new legislation is not in place, several important administrative procedural regulations will not apply, which means that more (E)NGOs and citizens have the opportunity to appeal in cases that fall within the scope of article 6 Aarhus Convention.

3. Environmental assessment for general rules that condition certain developments

The second topic concerns the Council of State's judgment of 30 June 2021 on the appeals of an ENGO and local residents (appellants) against the decisions to authorize the expansion of a windmill park at the south end of Delfzijl (*Windpark Delfzijl Zuid Uitbreiding*).[21] The most relevant appeal was directed against the applicable zoning plan that was used to determine whether a project was spatially acceptable within a municipality – which is one of the main legal conditions for a new development to be eligible for authorization. The City Council of Delfzijl considered the windmill park spatially acceptable by motivating that the applicable zoning plan had been established in accordance with a set of general rules laid down in the Activities Decree Environmental Management[22] and the Activities Order on Environmental Management[23], which are based on the general Dutch Environmental Management Act[24]. These general rules contain norms for various activities including windmill parks, for which norms are laid down regarding noise, cast shadow, glare, and external safety. The legal dispute at hand was whether an environmental assessment based on the SEA Directive had to be conducted for these general rules before they could be used in the zoning plan of Delfzijl to substantiate that the effects of the new windmill park were spatially acceptable. This legal dispute does not stand on its own. The development of new windmill parks often encounters a great deal of resistance by local and regional communities, which expect the windmills to cause nuisance resulting in detrimental effects to their health and lowered house prices.

[21] Council of State 30 June 2021, ECLI:NL:RVS:2021:1395 (*Windpark Delfzijl Zuid*).
[22] In Dutch: Activiteitenbesluit milieubeheer.
[23] In Dutch: Activiteitenregeling milieubeheer.
[24] In Dutch: Wet milieubeheer.

Whereas the Council of State – until very recently – consistently ruled that the SEA Directive did not apply to these general rules, it came to a different judgment in this case, which is a direct result of the CJEU's *Nevele*-ruling.[25] This latter ruling also concerned a windmill park, this time located in the municipalities of Aalter and Nevele (Belgium), where a similar situation occurred. The Belgium Council for consent disputes[26] issued preliminary questions to the CJEU, which ruled that an environmental assessment as meant under the SEA Directive had to be carried out for general rules that applied to the windmill park and that the competent authority had wrongfully failed to do so.

The Council of State considered that the appellants rightfully argued that, as a consequence of the *Nevele*-ruling, the SEA Directive applied to the general rules referred to in the zoning plan of Delfzijl. The omission to carry out the environmental assessment required by this Directive therefore led to the judgment that the City Council could not have assumed that the norms in the general rules actually led to a spatially acceptable situation. This, in turn, led to the zoning plan violating article 3:2 GALA, which requires the competent authorities to provide an adequate statement of reasons when making a decision as referred to in article 3:46 of this Act.

This judgment of the Council of State also has consequences beyond this individual windmill park. The State Secretary of Infrastructure and Water Management[27] has started drafting an environmental report for the general rules, which is expected to take about 1.5 to 2 years.[28] Until then, governments cannot refer to these general rules to authorize new windmill parks. In the meantime, the competent authorities can set their own norms, which they must substantiate properly, if necessary by carrying out their own environmental assessment. The foregoing could have serious consequences for the attainment of objectives regarding the energy transition as the more complex decision-making processes could cause delays in the realization of windmill parks which are considered crucial in this regard.[29] However, it must be noted that whilst the judgment has serious consequences, it only applies to certain windmill parks and, for example, not to individual windmills which are not regulated by the discussed general rules in the zoning plans.

[25] An example is: Council of State 3 April 2019, ECLI:NL:RVS:2019:1064 (*Battenoord*).
[26] In Belgium: Raad voor Vergunningsbetwistingen.
[27] In Dutch: Staatssecretaris van Infrastructuur en Waterstaat.
[28] See: *Parliamentary Papers II* 2020/21, 33612, No. 76.
[29] Ibidem.

The consequences of this judgment for existing windmill parks that have been authorized already through a reference to these general rules are unclear. It is possible to make the argument that under the principle of loyal cooperation enshrined in article 4(3) Treaty on the Functioning of the EU, Member States are obliged to remedy the unlawful consequences of a breach of EU law, in this case the failure to comply with the SEA Directive. It follows from the CJEU's case law that the competent national authorities, including the national courts before which an appeal is made against a national act adopted in breach of Union law, are obliged, within the scope of their powers, to take all necessary measures to remedy the failure of an environmental assessment, which may also lead to the suspension of a permit, if considered necessary.[30] It is therefore questionable whether the permits of existing windmill parks remain unaffected by this judgment. The State Secretary, however, already argued that the judgment does not influence the permits for existing windmill parks and so did the Council of State itself in a video message, where, subtly, the phrase: 'in principle' was added.[31]

The consequences of this judgment for activities other than windmill parks that are authorized through general rules are also unclear. According to the National Committee on Environmental Assessments[32] it is conceivable that environmental assessments will have to be made for other general rules, such as those for odor and light pollution. National environmental standards are currently contained in various laws, decrees, and regulations. The decentralized governments also have their own environmental general rules, for example in environmental regulations on housing, landscape, or windmill farms. Usually, no environmental assessment report is made for these regulations. This judgment may change that.[33]

Conclusion

The foregoing developments lead to the conclusion that Dutch environmental law needs to be amended to fully comply with the rulings of the CJEU in *Varkens in Nood* and *Nevele*. From the perspective of

[30] This is considered explicitly by the Court of Appeal Arnhem-Leeuwarden (*Gerechtshof Arnhem-Leeuwarden*) in its judgment of 30 November 2021, ECLI:NL:GHARL:2021:11070.

[31] *Parliamentary Papers II* 2020/21, 33612, No. 76. See the video message of the Council of State of 30 June 2020, to be found on: raadvanstate.nl (last accessed on 13 December 2021).

[32] In Dutch: Commissie Milieu Effect Rapportage.

[33] See the contribution of 10 August 2021 of the National Committee on Environmental Assessments, to be found on: commissiemer.nl.

environmental protection, both developments can be regarded as positive. It is, however, not yet entirely clear how these amendments will be implemented in current Dutch environmental law and the upcoming Dutch Environment and Planning Act, which will fundamentally restructure Dutch environmental law by – what is anticipated to be – 1 January 2023.[34] Following up on the *Varkens in Nood*-ruling, the legislator could also, for instance, decide in the General Administrative Law Act to not anymore allow 'anyone' to submit a view, but only those who have an interest, which effectively decreases participation rights compared to the situation before the ruling. Whereas the level of environmental protection as a result of the *Nevele-ruling* will not decrease through the additional need to conduct environmental impact assessments, the ruling does bear the risk that authorization procedures of sustainable development projects become rigid for a while - which could impede the much needed energy transition.

[34] In Dutch: *Omgevingswet* (*Governmental Gazette* 2016, 156). A (non-official) translation of this Act can be found on: iplo.nl/publish/pages/191405/environment-and-planning-act-of-the-netherlands-june-2021.pdf (last accessed on 13 December 2021).

Part 4. Short Opinions & Insight Papers

Australia: Greenwashing Laws Finally Enforced with $125 Million Fine Against VW

Michael Adams[1]

During 2010, there were loud cries for specific laws to be passed by the Australian Parliament (Commonwealth and State/Territory) on the concept of "greenwashing". Around the world, consumers and citizens are increasingly concerned about environmental issues and this provides opportunities for additional marketing angles. What has become known as 'green- marketing' has become popular as it attracts environmental conscious consumers to buy green products. Such marketing campaigns have been used to sway public opinion and to endorse an organisation's green credentials.

Many companies have been promoting their green credentials for everything from carbon neutral wine to green cars, and even green financial services. With the expansion of the green market, it is crucial to ensure that green marketing is properly monitored. However, there are not specific items of legislation that regulate this particular area. As a result, a review of the general laws that regulate misleading and deceptive conduct is required to determine whether such laws provide protection to consumers and investors. This is especially important as green marketing may be accompanied by the concept of 'greenwash' where a manufacturer or retailer wishes to promote its green credentials but overstates the benefits and potentially misleads the end consumer.[2]

In corporate governance, it is critical to follow what is known as the "Three Pillars of Governance"[3] which states the relationship between due diligence and compliance for business entities. A board of directors needs to know that the company has compliance programs in place to avoid breaches of the law and this is built into a systematic risk system, commonly known as due diligence.

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[2] Michael Adams and Marina Nehme, No New Specific Legislation required to deal with 'greenwashing' (2011) *Keeping Good Companies* August 419.

[3] Michael Adams, Three Pillars of Corporate Governance (2018) 70(6) *Governance Directions* p302

In Australia, the legal basis of action by the regulator, the Australian Competition and Consumer Commission (ACCC) is predominantly through the power of the Australian Consumer Laws (and in particular section 18 misleading and deceptive conduct provision.[4] Since this research was conducted, there have been many minor cases and enforcement, under civil and some criminal laws.

However, none of the cases could be argued to be a deterrent for major corporations. In November 2021, this attitude changed when the High Court of Australia rejected an appeal by Volkswagen (VW) against the ACCC for imposing a $125 million fine on VW by the Full Bench of the Federal Court of Australia.[5]

VW admitted, originally in the USA and then later in Australia, that its cars had a two-mode software that could hide the true nature of nitrogen oxide emissions. One mode limited the NOx emissions was switched on for regulatory testing purposes and a second mode for cars on the road (emitting much higher levels). It was found that 57,000 cars in Australia between 2011 and 2015 had these higher gas emissions.

Although VW initially fought the case by the ACCC, they agreed to settle for a penalty of $75 million. When this was taken to the Federal Court for ratification (approval) the judge, Justice Foster, stated that the penalty should be $125 million. So as you would expect, VW appealed to the full bench of the Federal Court, arguing that the penalty was manifestly excessive. The Full Court agreed with the earlier judge and kept the $125 million penalty. This will send a very strong message to other manufacturers and producers of products that make claims relating to environmental issues.

It is interesting to note that the discovery of the two-mode software was picked up by the US Environmental Protection Agency in September 2015. The agency issued a notice that VW had installed a so-called "defective device" in vehicles imported and sold in the USA. VW representatives agreed that certain vehicles were not compliant with Australian design rules and temporarily suspended their sales. The software was later that year updated to remove the issue. Volkswagen was fined in the

[4] Marina Nehme and Michael Adams, Section 18 of the Australian Consumer Law and Environmental Issues (2012) 24(1) *Bond Law Review* 1

[5] [2021] FCAFC 49. The special leave application was refused, with costs awarded to the ACCC on 12 November 2021.

USA the sum of US$2.8 billion by American authorities. The Federal Court of Australia was also informed that VW was fined I billion euros in Germany and believe 10.7 million vehicles worldwide had high emissions from 2007 to 2015.

The key section used for such cases in greenwash is section 18 Australian Consumer Law. This is a very proud provisions that deals with misleading and deceptive conduct. The Adams/Nehme research found that the market for 'green' products had drastically expanded over the last decade and this attracted more unsavoury producers and marketers to make misleading statements. There have been some consumer groups and activists that have demanded new laws to prevent greenwash and the authors argued that the existing laws actually cover all the relevant situations. The HCA decision on 12th November 2021 provides a perfect example of the power of this law and its massive penalty will act as a deterrent to dirty producers.

The National Geographic even produce a "Greendex"[6] which provides a worldwide index of consumer choices and the environment. Some 'brown' products, which do environmental damage are sold as having a green (kind to the environment) association to confuse and mislead consumers. Green marketing has become a well-known strategy, but greenwash takes it to a whole new and bad level. This enforcement of $125 million will give the ACCC confidence to enforce the laws and poor corporations to consider the serious consequences of cheating consumers.

[6] https://globescan.com/tag/greendex/

The Building of an International Network to Better Understand Climate Litigation

Maria Antonia Tigre[1]

Despite the scientific certainty on the devastating effects of climate change on human rights, climate ambition in countries around the world remains inadequate to meet the challenge of climate change. Countries' nationally determined contributions (NDCs) still fall short of the 1.5oC goal of the Paris Agreement. The Emissions Gap Report 2021 shows that new national climate pledges combined with other mitigation measures put the world on track for a global temperature rise of 2.7°C by the end of the century. That is well above the goals of the Paris climate agreement and would lead to catastrophic changes in the Earth's climate. To keep global warming below 1.5°C this century, the aspirational goal of the Paris Agreement, the world needs to halve annual greenhouse gas emissions in the next eight years.[2]

Against this background, climate litigation is increasingly becoming a powerful tool to hold States and corporations accountable for their shortcomings in mitigation and adaptation efforts. Individuals, communities, nongovernmental organizations (NGOs), business entities, and subnational governments have turned to the courts to seek relief through the enforcement of existing climate laws; integration of climate action into existing environmental, energy, and natural resources laws; clear definitions of fundamental climate rights and obligations; and compensation for climate harms. As these actions become more frequent in their occurrence, and more numerous overall, the body of legal precedent grows, forming an increasingly coherent field of law.[3]

The growing number of cases brought in courts worldwide shows that a successful case is likely to have an impact beyond its own jurisdiction. A successful legal strategy inspires a comparative exercise to investigate whether a similar approach could be adapted to the particular aspects of a legal system. Similarly, judges are inspired by decisions from other jurisdictions and have frequently referred to

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[2] United Nations Environment Programme, *Emissions Gap Report 2021: The Heat Is On – A World of Climate Promises Not Yet Delivered* (2021).

[3] United Nations Environment Programme and Sabin Center for Climate Change Law, *Global Climate Litigation Report: 2020 Status Review* 4 (2021).

those in their own judgments. The cross-pollination of litigation can occur between national courts, as well as between international, regional, and domestic climate change case law. The emergent cross-fertilization of climate change litigation calls for an enduring conversation between scholars and practitioners engaged in this field.

The Sabin Center for Climate Change Law at Columbia Law School has maintained the Global Climate Change Litigation database[4] ("the database") since 2011. The database represents one of the most comprehensive global studies on climate change litigation and is relied upon by scholars worldwide. The database currently includes 491 global cases from over 40 countries.[5] The database further provides climate litigation cases brought before international and regional courts or tribunals.

In our ongoing effort to enhance the database and advance the dialogue on climate litigation, the Sabin Center has just launched a Global Network of Peer Review Scholars on Climate Litigation ("the Network").[6] The Network includes scholars and practitioners in countries around the world who act as "national rapporteurs" within their country of origin. By representing a country, rapporteurs contribute to updating the Sabin Center's database regularly on new cases arising in their jurisdiction, as well as any developments in ongoing cases. The collaboration between the rapporteurs and the Sabin Center is crucial to ensuring the database is comprehensive and regularly updated.

National rapporteurs are recognized on the Sabin Center's website and become part of a network engaged in tracking, analyzing, and conducting climate change litigation. The Network connects the rapporteurs and invites them to engage in an ongoing conversation about new developments, emerging trends, analytical approaches, and applied research. The conversations between the rapporteurs – either in virtual meetings, written collaborations, public-facing webinars, workshops, or conferences – will likely have a lasting impact on the maturation of climate change litigation worldwide. These conversations are often led through a comparative approach. Departing from the common frame of international law (i.e., the obligations arising from the Paris Agreement and the international

[4] Sabin Center for Climate Change Law, Global Climate Change Litigation Database, http://climatecasechart.com/climate-change-litigation/non-us-climate-change-litigation/.

[5] As of January 11, 2022. This excludes cases in the United States, which are maintained by the Sabin Center in a separate database.

[6] Sabin Center for Climate Change Law, Global Network of Peer Reviewers on Climate Litigation, https://climate.law.columbia.edu/content/global-network-peer-reviewers-climate-litigation.

framework of climate change law), comparative analyses allow for an understanding of the domestication of international norms in different jurisdictions.[7] In addition, this approach facilitates an understanding of legal arguments in climate change litigation and their potential replicability across jurisdictions.

As of January 12th, 2022, the Network includes 52 national rapporteurs covering 40 countries. The Network is currently represented by six countries in Africa, nine in Latin America and the Caribbean,[8] 13 in Europe,[9] one in North America, nine in the Asia-Pacific, and one in the Middle East. The Network includes practitioners, litigators, and academics from diverse career levels. Our expectation is for the number of rapporteurs and jurisdictions covered to increase in the coming months. We are actively seeking volunteers to represent the countries not yet covered by the rapporteurs.[10] Our goal is to have broad and equal geographic representation and enhance the field of study and practice. The Network and any forthcoming work will be crucial to understanding the increasingly novel and ambitious climate litigation strategies being tested worldwide.

[7] Saiger A-J, "Domestic Courts and the Paris Agreement's Climate Goals: The Need for a Comparative Approach" (2020) 9 Transnational Environmental Law 37.

[8] Including the Inter-American System of Human Rights.

[9] Including the European Union and the European Court of Human Rights.

[10] If you would like to join the Network and represent one of the jurisdictions, please check our website.

Part 5: Book Reviews

The Oxford Handbook of International Environmental Law, Lavanya Rajamani & Jacqueline Peel (Eds.), Oxford University Press (2021), 1130p.

Marion Lemoine-Schonne[1] *CNRS - University of Rennes - France*

Multiple impacts of climate change, vanishing biodiversity, increasing freshwater scarcity and severe degradation of marine resources and oceans ecosystems: faced with the unprecedented aggravation of global threats to the environment, the effectiveness of International Environmental Law (IEL) is very modest. However, its development is considerable on a normative and institutional level, with a strong political maturity, among public and private actors, and an awareness of the ecological urgency among the populations which should favor the effectiveness of the norms.

Does IEL fit for the purpose?

To answer this question, the 2nd edition of the Oxford Handbook of International Environmental Law offers a remarkable panorama of analyses "providing durable analysis to assist reader in navigating and reflecting on the field", as was the ambition of the editors, Lavanya Rajamani and Jacqueline Peel, pioneering international law scholars and practitioners/advisors in the service of the environmental cause. In 2007, the first edition of this book, edited by Daniel Bodansky, Jutta Brunée and Ellen Hey, mapped this relatively new field. More than a decade later, the subject matter has expanded considerably, "IEL has acquired further breadth, depth, nuance, complexity, and reach in the last decade" (Rajamani & Peel, p. 2). In a context of profoundly altered international relations (China's role in multilateralism, growing inequalities, difficult convergence of European Union member states, Chapter 37 by S. Maljean-Dubois), the second edition captures the rapid changes and ongoing maturing that characterize the field and provides keys to understanding the strengths and weaknesses of the field, due to causes intrinsic to the subject (Chapter 18 Precaution by J. Peel, Chapter 21 Public participation by J. Ebbeson, Chapter non-compliance mechanism) and to extrinsic causes (non-environmental regimes, Chapter 15 The Role of Science S. Johnston / Chapter 41 Business and Industry by B. Richardson & B. Sjafjell for ex.).

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This monumental work provides a dynamic and synthetic understanding of a subject whose content is very vast, marked by a continuous expansion of the legal toolkit (less new treaties but wider range of regulatory non-binding standards setting instruments, including market based one), innovative implementation strategies and litigation advances to be read on an interscalar level (Part IX).

Among the strong trends, we observe a public-private decompartmentalization, a transnationalization by coalitions of multiple actors, the possibility of experimenting with promising conceptual tools (due diligence), procedural turn as illustrated by the Paris Agreement, which replaces the more classic setting standards in IL, to face (addressing) a complex, polycentric issue, and the lack of political will. IEL has to take up the double challenge of effectiveness and of advancing environmental concerns in concert (climate/biodiversity together, or concept of planetary boundaries for example). The greater deference to national sovereignty, circumstances and capacities is also identified as a new trend of the paradigm shift of IL.

A mature law, a laboratory for innovative implementation strategies

By orchestrating the analyses of 75 authors gathered in 9 parts and 67 chapters, L. Rajamani and J. Peel explore the substance of this mature law that has become pragmatic, on the form Multilateral Environmental Treaty-Making by D. Bodansky, Soft law by A. Boyle, and on the substance (Harm Prevention by J. Brunnée, Good Faith, Differentiation, etc.), as well as on the "subject matter", 7 chapters including aviation and maritime transport.

The book describes the consolidation of the institutional and normative architecture and the development of mechanisms to promote implementation through new models of soft law, often more effective than hard law, procedural strategies of implementation (compliance, non-compliance procedures, transparency procedures, national implementation, financial assistance, which is more effective than traditional technology assistance, and more promising than the market mechanisms which have shown their capacity but also their limits. The combined reading of Part VIII - compliance, implementation and effectiveness (including Chapter 59 National implementation and Financial Assistance (Chapter 54), technology assistance and transfers (Chapter 55), illustrates that problem solving ability varies significantly among MEAs, legal, political, financial and economic tools and in

the time. The function of the current EIL thus appears facilitative and catalytic (Chapter 29 Rajamani and Werksman), aiming to define common objectives and providing a menu of regulatory options rather than top-down prescriptive (Paris Agreement, Minamata Convention which deliberately does not create substantive obligation of result, but poses common objectives and focus on procedural obligations (access-notification-consultation, environmental impacts assessment, transparency).

Who decide?

Governance research (Chapter 4 Multilevel and Polycentric Governance by J. L. Dunoff, Chapter 5 Fragmentation by M. A. Young) still cannot predict which model is more appropriate for which environmental issue, but the mobilization of international actors and institutions together provides "a complex network of regulations that is neither horizontally nor vertically stratified (assuming clearly defined functional pillars). Instead, the network reflects multiple facets that each aim to regulate human activity with a limited number of elements in place to ensure consistency" (Chapter 36, E. Hey, p. 649).

Epistemological foundations of EIL, a plural field

The book explores in an original way the epistemological foundations of the IEL. The diversity of scientific, political, ethical and legal approaches and discourses are apprehended as sources of its best effectiveness in the years to come. Rather than shaping the way we think about international environmental law for the years to come, this book opens many windows that allow us to decentralize our gaze and understand the very diverse influences and values defended behind the discourses and legal tools adopted: historical perspective of the law (Chapter 3 P. Sand), the relative importance and evolution of the discourses that underlie it (Chapter 2 J. Dryzek) and doctrines (D. French), whose effect is more consequential in the international sphere than in the national sphere (discourses of boundaries, promethean response, problem-solving discourses, sustainability and green radicalism). The plurality of values carried by discourses and norms is reflected in the discussions on feminist approaches, ethical considerations (Chapter 13), Global South Approaches (Chapter 11), Earth Jurisprudence, Indigenous people (Chapter 42), human rights values (Chapter 45 J. Knox), along with science, technology, trade, and intellectual property and the model of development. IEL is no longer only anthropocentric, but also eco-centric. However, the cross-reading of Chapters 10 Economics, 41

Business and Industry and 53 Market Mechanisms by M. Mehling reminds the pivotal role of economic perspectives and actors to the shaping of IEL.

Turns to courts at all levels

The last part of the book, devoted to the role of the IEL in national and regional courts on all continents, illustrates the symbolic significance for populations of having recourse to the law before the courts and the concrete legal advances that they bring. The "turns to courts" is also manifested before the ICJ, the WTO dispute settlement system (renewable energy), the ITLOS, regional human rights courts, investments treaties arbitration (Chapters 27 Judicial development, 58 International Environmental responsibility and Liability and 60 Judicial Development and International EL disputes before International Courts and Tribunals). The main effect is to increase the role of judges in the global public order with respect to environmental protection (C. Voigt). It also reveals the need to articulate the global, regional and national scales as the EIL becomes increasingly mature and will never become self-sufficient.

Methodology

Some chapters are particularly exploratory, for example: Earth Jurisprudence by C. Cullinan, Chapter 26 Private and Quasi-Private Standards by J. Scott or Chapter 52 Transparency Procedure by T. Sparks & A. Peters.

The few diagrams in the book are very pedagogical (p. 3 and p. 288). The repetition of identical chapter structures also allows for easy comparative readings in the International Environmental Law in National/Regional Courts section.

On several occasions, the authors call for the development of methodologies to evaluate the effectiveness of environmental law (in relation to other disciplines or approaches or in a complementary manner, Chapter 57 Effectiveness by S. Andresen) or through empirical studies of the behavior of actors, as experiment work in behavioral economics does.

Will small steps be enough to make the IEL more effective? Through due diligence "states are obliged to adopt all appropriate and adequate means at their disposal to avoid environmental harm to other states and areas beyond national jurisdiction may help to address gaps, not as an obligation of result, but a legal obligation of conduct" C. Voigt p. 1020 Chapter 58. Or is it necessary to go towards much more disruptive proposals? J. Viñuales thus calls for awareness on the part of jurists by explaining the asymmetry that structures current environmental law between the priority given to development and the requirements of sustainability (chapter SD, p. 300), "what we call IEL is (...) the law of externalities (...) we have grown so used to this asymmetry that we no longer see it".

In any case, it would be illusory to simplify the law in the face of such a complex environmental issue, which will certainly continue to develop and call upon many specialists to rely on the book to guide them in their research, their studies or their practice.

***Teaching and Learning in Environmental Law: Pedagogy, Methodology and Best Practice*, Amanda Kennedy, Anél du Plessis, Rob Fowler, Evan Hamman, Ceri Warnock (Eds.), Edward Elgar (2021), 321 p.**

Mark Nevitt[*]

Edward Elgar Publishing, in conjunction with the IUCN Academy of Environmental Law Series, recently published *Teaching and Learning in Environmental Law: Pedagogy, Methodology and Best Practice.* This book is a welcome and timely addition to the environmental law literature. It is also the first book to comprehensively explore the unique challenges in teaching environmental law. It will be of immediate interest to environmental law teachers and scholars throughout the world, regardless of experience.

The book is edited by five distinguished professors from Australia and New Zealand with twenty-six authors from five nations: the United States, Australia, New Zealand, Canada, and the United Kingdom. The book is divided into five thematic areas across eighteen chapters, succintly packed within 320 pages.[1] I welcome the sheer breadth and ambition of this book, which addresses just about every question one might have in approaching a new environmental law course or revising an existing one. Because the authors hail from five different nations, the reader is also afforded a diversity of pedagogical perspectives. Well done.

The book begins by contextualizing how environmental law has entered the mainstream academic curriculum of most law schools, while acknowledging that environmental law "is of great scope and it is hard to delineate clear boundaries for the subject."[2] Indeed, environmental law can be a seemingly all-encompassing class with no clear end point. And different schools throughout the world approach the field differently. *Teaching and Learning in Environmental Law* acknowledges this "scoping" challenge while providing a framework to address the difficult choices that professors must make in deciding what topics to cover or omit. Within the United States, for example, natural resources law,

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[1] This includes Values-Based Dimensions of Environmental Law, Formats and Methodologies for Teaching Environmental Law, Teaching of International Environmental Law, Environmental Law at the Postgraduate Level, and Challenges for Teaching Environmental Law.

[2] *Id.* at 1.

international environmental law, and climate change law are often taught as separate courses, but element of these courses can be incorporated within the doctrinal environmental law course. The issue of how much time to spend on climate change within environmental law is particularly vexing, particularly in those nations with a strong Greenhouse Gas (GHG) regulatory regime.

The book acknowledges that some UK-based scholars have demonstrated that environmental law still skews to the margins, but in the U.S. environmental law is increasingly within the academic mainstream. Consider the numbers. There are over 80 specialized environmental law journals at U.S. law schools and a robust scholarly community of environmental law professors – both doctrinal and clinical.[3] Within this past academic hiring year, there was a surge in environmental course interest from students, which corresponded with an uptick in environmental law faculty hiring.[4] Outside the Western world, environmental law environmental law is moving "toward becoming a core subject in the basic legal curriculum" in four of the most populous nations—China, India, Indonesia, and the Philippines. Further, environmental law changes rapidly, and is in area that is in constant conversation with science and other disciplines. This creates both challenges and opportunities. *Teaching and Learning in Environmental Law* addresses this, too. How much attention should be afforded to science, law and economics, and socio-cultural concerns within an environmental law course? By asking these foundational questions, the authors situate the teaching of environmental law within other areas. The authors similarly acknowledge that environmental law professors will often need to go beyond statutes, regulations, and legal doctrine and actively engage with environmental policy and the latest scientific advances.

I also found it helpful that the authors framed the design of the environmental law course in three different areas: purpose, scope, and content. As someone who is updating my environmental law syllabus as we speak, I found this to be a helpful way to take a step back and ask what my goals are for the course and how I might best achieve them.

Several thought-provoking chapters stood out for their novelty and analytical quality.

[3] Michael Blumm, *Environmental Law at 50: Cutting Edge Journal Examining the Central Issues of our Time,* 50 ENV. L. 1 (2020)

[4] Environmental Prof. Blog. https://lawprofessors.typepad.com/environmental_law/

First, in "Values-based dimensions of environmental law," the book addresses the importance of engendering hope in environmental law students. I commend Professors Collins and Stewart in their emphasis on addressing the mental health of their students. Environmental law and climate realities can be difficult and sobering topics. The professors acknowledge this reality while proffering helpful solutions.

Second, I appreciated that the book included a specific chapter on the challenges associated with teaching environmental law via zoom or other online platforms. With the COVID-19 virus and follow-on variants disrupting legal education, environmental law is now being taught in an asynchronous or synchronous manner (or some combination of the two). In "Never mind the platform, here's the pedagogy: e-learning in environmental law," Professors Kennedy and Cosby provide a thorough discussion of e-learning pedagogy specific to environmental law. This will only take on increased importance. How do we teach environmental law effectively, while maintaining a sense of community and meeting the course's underlying learning objectives? Professors Kennedy and Cosby survey the leading online educational literature and apply this to the three theories of learning — behaviourism, cognitivism, and constructivism. The authors are upfront in the challenges to online education, with a rich description of technological pitfalls, issues of academic integrity, and the challenge of ensuring student participation and engagement.

This last issue is of growing importance. As someone who just taught an environmental law course via zoom, I would add that it is important (albeit challenging) to create an inclusive classroom culture online. This takes a bit more work upfront but pays enormous dividends in the online learning experience. The authors rightly conclude:

While e-learning is not without challenge or indeed effort on the part of the educator, in our experience we have found online teaching can facilitate equally rich interaction and collaboration between students and lecturers, as well as provide alternative and scalable options for authentic assessment.

Third, I loved that that book included a chapter on teaching environmental law in Thailand. While it is impossible to address the unique pedagogical approaches to teaching environmental law in *every* nation and classroom, substantively addressing teaching environmental law in Thailand offers rare insights into a Thai law classroom and broadens the book's aperture beyond Western classrooms. Increasingly,

environmental law professors are teaching in classrooms and audiences outside their home nation and academic institution—witness the rise of global environmental law.[5]

Fourth, the book has several chapters on environmental law at the postgraduate level. Environmental law specialization is a growing area of interest, and the book has helpful chapters on supervising doctrinal research and a chapter addressing the importance of professional skills training in LL.M. and related specialty law degrees.

In sum, *Teaching and Learning Environmental Law* is a helpful resource for professors that teach in environmental law and related courses such as natural resources law, international environmental law, and climate change law. I commend this book to all environmental law professors—regardless of experience.

[5] *See* Robert V. Percival & Tseming Yang, *The Emergence of Global Environmental Law*, 36 ECOLOGY L. Q. 615 (2009) (arguing that environmental legal norms have become increasingly internationalized).

Katie SYKES, *Animal welfare and international trade law – The impact of the WTO seal case*, Edward Elgar Publishing, 2021, 224 p.

Marie-Pierre Lanfranchi[(*)]

Depuis plus d'un quart de siècle, la question de la conciliation des disciplines imposées par le droit de l'Organisation mondiale du commerce (OMC) avec les valeurs non économiques d'intérêt général que les Membres de l'OMC souhaitent protéger s'est imposée comme une question de grande importance. Parce qu'il conditionne largement l'acceptabilité sociale et, par là-même, la légitimité des règles commerciales, l'enjeu de la conciliation est en effet majeur. Au cœur du tout premier rapport adopté par le juge de l'OMC (*Essence*, 1996), la question a généré une très abondante littérature qui met néanmoins essentiellement l'accent sur les liens commerce-environnement, comme le rappelle à point nommé l'ouvrage de Katie Sykes (p. 76 notamment). Après ce premier rapport, qui prolongeait déjà les célèbres rapports *Thons-dauphins* de la période du GATT de 1947, la multiplication d'affaires devenues emblématiques (parmi d'autres : *Crevettes, Produits biotechnologiques, Thons*) dans un contexte de forte consolidation du droit international de l'environnement, explique naturellement ce fort tropisme. Par contraste, la réflexion autour des liens droit international du commerce-protection du bien-être animal, sans être oubliée (voir la bibliographie citée à la note 67, p. 78), est restée, jusqu'à une époque récente, largement plus marginale. Prenant appui sur ce constat, Katie Sykes se propose donc, au travers de cet ouvrage, de rendre « plus visible » (p. 79) cette question. Autant dire que cette publication, d'excellente facture, remplit parfaitement l'objectif.

Dans une introduction courte mais convaincante puisqu'elle stimule l'envie de poursuivre la lecture, l'auteure précise clairement le propos de son ouvrage. Il s'agit d'interroger les liens entre le droit international du commerce et le bien-être animal, non pour en livrer une présentation linéaire, mais à l'appui d'une véritable thèse. A rebours des interprétations fréquemment avancées, selon lesquelles le droit international du commerce constituerait une menace pour le bien-être animal (voir en ce sens : pp. 6 et ss. puis 73 et ss., 117), l'ouvrage se propose en effet de montrer que de telles règles constituent en réalité un facteur de progrès : le droit international du commerce serait même l'un des seuls champs,

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et l'Organe d'appel de l'OMC l'une des seules arènes du droit international, qui aient permis de faire avancer efficacement le bien-être des animaux à l'échelle internationale, au cours de ces dernières années. Confirmant l'affirmation du rapport *Essence* selon laquelle le droit de l'OMC n'est pas « isolé cliniquement » (et bien que l'image ne soit pas convoquée par l'auteure), le propos vise à montrer que les relations commerce-bien-être animal seraient bien davantage placées sous le signe du soutien mutuel que sous celui du conflit.

La thèse défendue ici permet alors d'inscrire la réflexion dans un propos plus vaste. A travers la question des liens commerce-bien-être animal, il s'agit d'interroger plus généralement le processus de formation des normes juridiques relatives au bien-être animal en droit international (p. 16) et la mesure dans laquelle le droit international du commerce contribue à ce processus. Originale, subtile et ambitieuse, la démarche s'avère convaincante ; elle est servie par un propos clair, fouillé et très pédagogique (au point d'en être parfois un peu redondant). Autant -et même davantage- que la substance des règles internationales intéressant le bien-être animal, l'ouvrage met en exergue le processus de formation de ces normes, dont l'auteure n'a de cesse de rappeler tout au long de l'ouvrage la nature émergente, peu consolidée.

Au fil d'une démonstration patiente, Katie Sykes convainc en effet le lecteur de l'importance de l'approche formelle. L'existence d'un consensus international autour du principe général selon lequel les animaux devraient être traités avec humanité, qui, pour l'auteure ne prête guère à discussion (p. 46), n'a en effet généré, pour l'heure, qu'un droit international rare, de portée limitée (telles les règles de la CITES) ou formellement non contraignant (tels les codes adoptés dans le cadre de l'Organisation internationale de la santé animale). Cet état des lieux (p. 29 puis pp. 41 et ss.) est néanmoins habilement présenté dans un chapitre dédié au « droit global animalier » (chap. 4), par référence aux travaux d'Anne Peters auxquels l'auteure se réfère à juste titre abondamment. Ainsi, si les règles juridiques internationales consolidées dédiées au bien-être animal restent rares, elles s'inscrivent néanmoins aujourd'hui dans un ensemble plus vaste de travaux en sciences sociales, de textes et propositions d'origine privée (notamment : Déclarations universelles relatives aux droits des animaux ou au bien-être animal), visant à promouvoir le bien-être animal à l'échelle internationale.

Le point de vue de l'auteure est alors que ce corpus de normes sociales, qui ne sont assurément pas des normes juridiques (p. 57), influence le droit international -spécifiquement le droit international du commerce- et interagit avec celui-ci. De telles interactions, convoquées au sens de la théorie du droit

international « interactionnel » (*interactional international law*[1]), dont les grandes lignes sont rappelées (trop ?) longuement dans un chapitre 3, contribuent à la consolidation juridique et à l'universalisation de ces normes molles.

Sur ces bases, l'analyse proprement dite des liens droit international du commerce-bien-être animal peut alors être engagée. Elle démarre à la page 73, lorsque l'auteure, qui a pris soin de rappeler l'origine et les grandes lignes de l'évolution du droit international du commerce (était-il bien nécessaire de remonter jusqu'aux théories d'A. Smith et D. Ricardo ?), présente tour à tour les grands enjeux puis les principales dispositions pertinentes du droit de l'OMC. L'auteure qui a, plus en amont dans l'ouvrage, rappelé que le mandat de l'OMC n'est pas la défense du bien-être animal, dresse un inventaire très pédagogique des dispositions pertinentes, notamment celles au cœur de l'affaire des *Produits dérivés du phoque*. Objet d'un chapitre dédié (chapitre 7), l'affaire se trouve ainsi mise habilement en perspective, puisque l'auteure aura aussi au préalable donné un aperçu très fouillé de l'ensemble des différends (réalisés ou potentiels) relatifs à l'articulation commerce-protection animale à l'OMC (chapitre 6). Un ultime chapitre interroge alors fort logiquement les accords commerciaux régionaux (ACR) postérieurs à l'affaire, montrant comment et la mesure dans laquelle celle-ci en a influencé le contenu (incorporation de dispositifs dédiés au bien-être animal).

L'ambition de l'ouvrage dépasse on le voit largement la question de l'impact de l'affaire des *Produits dérivés du phoque* (le sous-titre de l'ouvrage était-il bien nécessaire ?) et on peut regretter que la question de la définition du bien-être animal ne soit posée que tardivement (p. 147), pour être traitée uniquement sous l'angle de ce qu'en dit le juge de l'OMC. L'ouvrage porte d'ailleurs souvent sur des questions plus générales de protection animale.

Ces réserves, tout à fait marginales, n'empêchent donc pas de recommander chaleureusement la lecture de cet ouvrage riche, très informé et solidement argumenté. De l'étudiant au juriste confirmé en passant par le défenseur du bien-être animal, un large public y verra à juste titre un ouvrage de référence.

[1] Développée par Jutta Brunnée et Stephen J. Toope, *voir notamment : Legitimacy and legality in international law*, Cambridge : Cambridge University Press, 2010

Kate Miles (ed.), ***Research Handbook on Environment and Investment Law*****,**
Edward Elgar, 2019, 576 p.

Sean Stephenson[(*)]

With the rise of investor-state dispute settlement foreign investment protection and the environment have been increasingly entangled. This entanglement has translated into an increasing amount of environmentally related investment disputes, or at least disputes that have some nexus with the environment and international environmental law. In this light, the Research Handbook on Environment and Investment Law ("the Handbook)," edited by the formidable Kate Miles, provides a much needed analysis on the relationship between investment law and some of the core sub-fields of environmental law, along with sections on disputes, regional developments and critique.

The Handbook is structured in four parts. Part I addresses the relationship between international investment and environmental law. It includes chapters on sustainable development, water, climate change, biodiversity, and human rights. Part II relates to disputes, with chapters on arbitral procedure, investment protections and the environment, the use of science in dispute settlement, the new mega-regionals and the green economy. Part III provides a select analysis of regional perspectives on investment and environment, covering India's model BITs, stabilization clauses in African energy contracts, environmental concerns in China's investment treaties, balancing investment and environment in the EU, and how investment tribunals have balanced environmental claims in Latin America. Part IV offers a more expansive analysis of the investment-environment relationship based on the themes of identity, critique, and conceptualization. It covers gender, local and indigenous communities, and socially and environmentally responsible investment.

The Handbook forms part of a growing body of academic literature on the topic on investment law and the environment,[2] which also includes a number of papers[3] and blog posts. The Handbook is the first

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[2] See e.g. Jorge Vinuales, *Foreign Investment and the Environment in International Law*, CUP 2010; Saverio Di Benedetto, *International Investment Law and the Environment*, Elgar 2013; Yulia Levashova, Tineke Lambooy, Ige Dekker, eds, *Bridging the Gap Between International Investment Law and the Environment*, Eleven, 2016.
[3] See e.g. *Journal of World Investment and Trade*, Special Issue, Adjudicating Environmental Disputes Through Investment Treaty Arbitration 18(1), 2017.

edited book on the topic. As such, it provides varying perspectives on the interaction and intersections on the relationship between investment law and the environment. This includes several of the same investment awards being looked at from differing perspectives.

From the outset, Miles frames the Handbook in the context of fragmentation, bringing two silos of international law together. The discussion and analysis between the investment and environmental law regimes in Part I is the Handbook's most important contribution to the current literature. While the literature on the relationship on investment and environmental law has generally increased, for example relating to climate change, the Handbook's chapters on sustainable development, climate and biodiversity offer a succinct analysis of the interaction between investment and these sub-regimes of international environmental law that is frequently overlooked. These chapters provide a strong base for further research in these areas. It should be noted that it appears the Handbook's chapters are largely written by investment law scholars, with the analysis stemming from an investment law perspective, i.e., how environmental law has been interpreted in the context of trade and investment agreements or investment treaty disputes. One questions whether the analysis may differ if not approached by investment based thinkers. Further, the Handbook is not a general reference for all investment and environment issues. Key areas such as oceans or the atmosphere are not covered by the Handbook.

On disputes, despite having commentary on relevant investment treaty awards in many chapters, the Handbook only formally addresses substantive protections and procedure in two chapters. Minimizing the focus on investment disputes may have been a specific editorial choice given the above mentioned existing literature on the topic. That being said, the Handbook does focus on other often overlooked areas such as the role of science and cutting edge analysis on how investment-environment has been incorporated into mega-regional agreements.

The regional perspectives section provides interesting accounts on differing regional investment developments. The section highlights some key divergences between regions, although the chapters substantially differ in scope. For example, for Africa, the Handbook's chapter is focussed on energy related contracts, and stabilization clauses, rather than any African investment disputes or international instruments, or common policy. Comparatively, the Latin American chapter analyzes investment claims throughout entire the region, and the chapter on the EU provides an EU focused analysis. The Handbook structure is notable in this part as the Handbook provides no greater analysis on the

implications or divisions in regional positions on investment. Such a lacunae demonstrate the challenges of the Handbook model.

The Handbook's thematic part addresses an expanded view of what constitutes the environment. Generally, connections between investment disputes and the environment may be made more readily with certain chapters such as the chapters on local communities and aboriginal groups or cultural heritage. Other chapters focus on more elusive topics such as gender or social and environmental responsible investment. Nevertheless, the Handbook usefully highlights these frequent environmentally related or adjacent issues.

Overall, the Handbook is a valuable resource. It provides a detailed and probing analysis of various facets of the investment-environment relationship, despite some chapters being slightly editorial. The Handbook's key added value is its analysis on investment and environmental law regimes. More generally, while the Handbook provides certain analysis focussed on reconciling investment and environmental law protections it is largely limited to a *lex lata* analysis, rather than providing a *lex ferenda* vision for how investment and environmental norms, principles, and treaties may be harmoniously applied or interpreted. In this regard, scholars and academics searching for strong base material in these areas will find the Handbook useful, but the Handbook, for the most part, does not go on to chart new territory on investment and environment. Given the rapid acceleration of investment into environmentally sensitive or environment adjacent projects the investment-environment nexus will surely continue to grow and the Handbook provides an overall solid starting place for those seeking understand the legal relationship between the two regimes.

Introducing Aubin Nzaou-Kongo

Our new co-editor Aubin Nzaou-Kongo will be working with the IUCN team to editing to 13th edition of the journal that comes out next year.

Aubin Nzaou-Kongo is a Marie Sklodowska-Curie Fellow in Law, Fellow at the Environment, Energy, and Natural Resources (EENR) Center, and Fellow at the Center of U.S. and Mexican Law at the University of Houston Law Center. He is also an Assistant Professor at the School of Law and Fellow at the Center for International Law at the Université Jean Moulin Lyon 3, and a Visiting Assistant Professor of Law at the School of Law at the University of Savoie Mont-Blanc. Prior to joining these academic institutions, he was an Assistant Professor at the School of Law, Economics and Management at the University of Nîmes, and at the School of Law at the University Lumière of Lyon 2. Dr. Nzaou-Kongo was formerly a Visiting Assistant Professor at Senghor University (Egypt), and at the School of Law at the University of Sonfonia (Guinea), as well as a Visiting Scholar at the Research Center for Environmental and Urban Planning Law (SERES), and a Fellow at the Interdisciplinary Research Institute for Legal Science at the School of Law at the Catholic University of Leuven (Belgium).

Dr. Nzaou-Kongo received his Ph.D. in International Law from the Université Jean Moulin Lyon 3. He is currently a member of the World Commission on Environmental Law (WCEL), a Fellow of the Platform on International Energy Governance, and a member of the Association of International Petroleum Negotiators (AIPN), American Society of International Law (ASIL), African Society of International Law (AfSIL), and French Society for International Law (SFDI).