

Just Transition, Security and Law

What are the challenges that security and transition create for law?

Thursday 18 and Friday 19 May 2023: Malmaison, Dundee, Scotland



University
of Dundee



Institute for Social Sciences
Research (ISSR)
University of Dundee



Dundee Just Transition Hub
University of Dundee



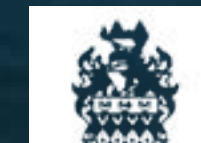
Newcastle
University



RÉGION
Nouvelle-
Aquitaine



UNIVERSITÉ
DE PAU ET DES
PAYS DE L'ADOUR
COLLÈGE SSH



ROYAL
HOLLOWAY
UNIVERSITY
OF LONDON



Manchester
Metropolitan
University



Contents

3	Welcome		
4	The Organising Committee		
5	Organization and Sponsorship		
6	Programme		
7	Thursday 18 May 2023		
9	Keynote Talk: Dr Ameena Camps		
10	Panel 1: Environment, Human Rights, Security		
10	1. Transitioning just transitions and security in the energy sector		
11	2. Hydropower or Bust: The Rights Dilemma		
11	3. Is the transition to electric vehicles a just transition if the deep seabed has to be mined to provide the necessary rare metals and minerals?		
13	4. Building A Pathway towards Just Energy Transition: Analysis of Indonesia's Carbon Regulatory Readiness to achieve Decarbonisation		
15	5. Uncovering the Environment: The Use of Public Access to Environmental Information		
18	Panel 2: European Perspectives		
18	1. The Hydrogen Regulatory Framework as a Driver for Energy Justice		
19	2. Advancing the global agenda on climate change, biodiversity and human rights through new EU legislation		
20	3. Every Problem is an Opportunity in Disguise: The Concept of the Just Energy Transition		
22	Keynote talk: Prof Darren McCauley		
23	Panel 3: ESG and Just Transition		
24	1. Just Transition and Sustainable Finance		
24	2. The Workforce Engagement Mechanisms in the UK: A Way Towards More Sustainable Companies?		
25	3. The limits of due diligence approach in funding just transition		
25	4. Just Transition in an Oil City: Elaborating on the Just Transition Principles		
26	5. The place of land use in Scotland's Just Transition – Natural Capital and the rise of the 'Green Laird'		
27	Keynote talk: Dr Sufyan Droubi		
28	Roundtable: Challenges for Research and Education		
31	Panel 4: Young Scholars' Perspectives		
32	1. Sustainability and the Maritime Sector		
32	2. Time to think like philosophers: The Ethical Justifications for Human Rights to Sustainable Energy		
33	3. Polish nuclear power program between the Green Deal and the war in Ukraine		
34	4. Current Trends In Energy Justice and Energy Law in India And USA: Sustainability and Just Transition		
34	5. To What Extent Does the Abandonment of the Energy Charter Treaty Benefit the Green Economy?		
37	Special Panel: Just Transition, Circular Economy, and Crises		
39	Keynote talk: Prof Cecilia Tortajada		
40	Keynote talk: Prof Raphael J Heffron		
42	Panel 5 – Young Scholars' Perspectives		
42	1. Africa in Search of a Just Transition; The Role of Legal Education		
43	2. A Just Transition in an Unjust World: Perspectives from the Global South		
44	3. Women and Energy Transitions		
45	4. The Key Just Transition Challenge for Small-Island Developing States (SIDS)		
45	5. Energy law for the energy transition: How is the legal and institutional framework prepared for promoting renewables and just transition in the petrostates?		
46	6. A just transition and pastoralism: Evaluating the place of global and local play and policy options – A case study of Kenya,		
50	Panel 6: Latin American Perspectives		
50	1. Barriers and Enablers for Large-Scale CCS Activities in Brazil: An Institutional and Stakeholder Analysis,		
50	2. Powering Progress: New Business Models for Energy Transition in Latin America		
52	3. The policy environment as the key factor for highly capital intensive power generation projects: The case of offshore wind in Brazil,		
53	4. New carbon capture technologies and legal security: the case of BECCS technology in Brazil,		
54	5. Brazilian Energy Transition Through Green Hydrogen Regulation, Karen Kristensen Medaglia Motta, Hirdan Katarina de Medeiros Costa,		



Welcome



Dr Sufyan Droubi

Director, Just Transition Hub
School of Humanities, Social Sciences and Law,
University of Dundee

Welcome to the conference on Just Transition, Security and Law

What are the challenges that security and transition create for law?

This event continues the work of the Just Transition Hub, University of Dundee, of promoting collective, interdisciplinary research and teaching on issues related to just transition to a low carbon economy. Led by Sufyan Droubi, Fernando Lannes Fernandes and Edzia Carvalho, the Just Transition Hub has become a meeting point internally and externally for researchers on the just transition, fostering new collaborations in within and outside the academia.

This international, interdisciplinary conference epitomises all these aspects. Organised by the Just Transition Hub in partnership with the Université de Pau et des Pays de l'Adour, Newcastle University, Royal Holloway University of London and Manchester Metropolitan University, the conference counted with the sponsorship of the Society of Legal Scholars, Zero Waste Scotland and the Institute for Social Sciences Research (ISSR).

In what has now become a characteristic of our events, the conference brings scholars from across disciplines and practitioners together to discuss the different the intersections between just transition, security, and law. With a roundtable on challenges for education and research, the conference promotes a reflection about challenges that researchers and educators face in tackling and enabling a just transition. With two dedicated panels, the conference gives voice to young scholars, and with a panel specially designed with Zero Waste Scotland, it promotes the dialogue between civil society organisations and academics.

I hope that you can enjoy the conference and engage with the discussions.

We look forward to welcoming you to Sunny Dundee



The Organising Committee



Dr Sufyan Droubi
Director, Just Transition Hub
University of Dundee



**Dr Fernando Lannes
Fernandes**
Director, Just Transition Hub
University of Dundee



Dr Edzia Carvalho
Director, Just Transition Hub
University of Dundee



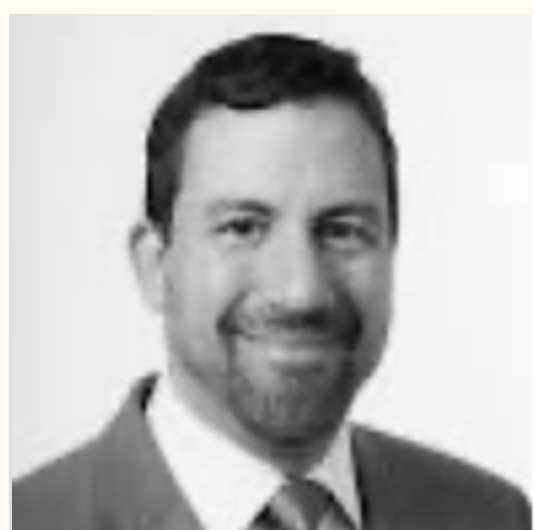
Prof Raphael Heffroni
Université de Pau et des Pays
de l'Adour



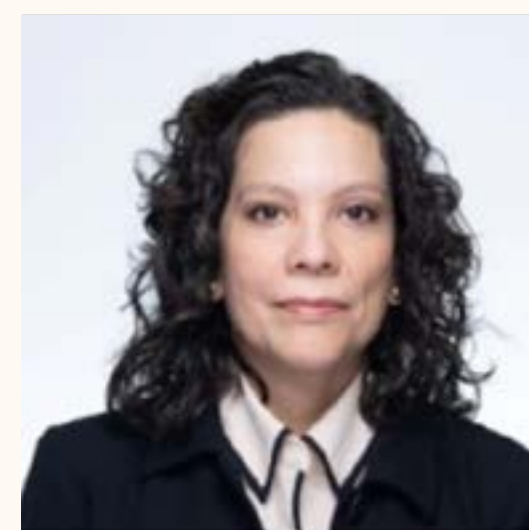
Prof Darren McCauley
Newcastle University



Prof Jill Marshall,
Royal Holloway University
of London



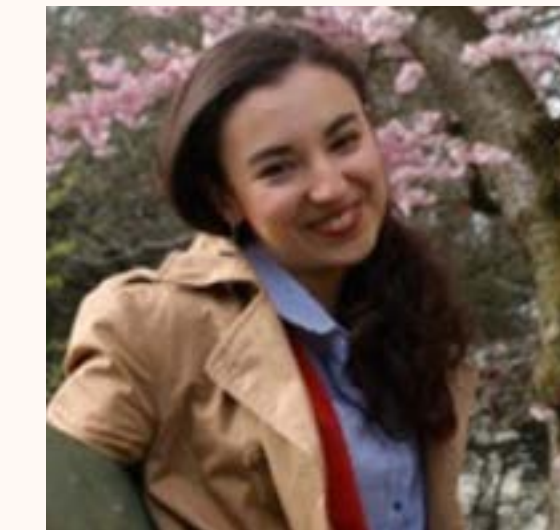
**Dr Leonardo Valladares
Pacheco de Oliveira**
Royal Holloway University
of London



**Dr Cecilia Juliana
Flores Elizondo**
Manchester Metropolitan
University



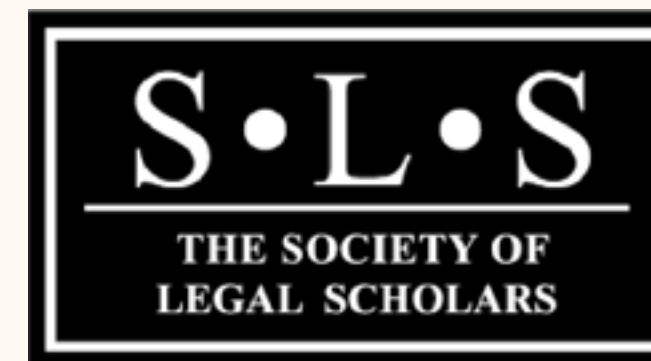
Ruth Lelei
University of Dundee



**Dr Emmanuelle
Santoire**
Université de Pau et des Pays
de l'Adour



Organization and Sponsorship



Programme

Thursday 18 May	
08:00	Registration opens. Teas, coffee, and pastries
08:45	Welcome note, Dr Sufyan Droubi, Prof Sarah Hendry, University of Dundee
09:00	Keynote talk: Dr Aameena Camps, Commissioner, Just Transition Commission, Scotland
09:45	Panel 1 – Just Transition, Security and Human Rights
11:15	Mid-morning teas, coffee, and snack
11:30	Panel 2 – European Perspectives
13:00	Lunch
13:45	Keynote Talk: Prof Darren McCauley, Newcastle University
14:30	Panel 3 – ESG and Just Transition
15:45	Afternoon teas, coffees, snack
16:00	Keynote Talk: Dr Sufyan Droubi, University of Dundee
16:45	Roundtable: Challenges for research and education
17:45	Day 1 closes
19:30	Dinner

Friday 19 May	
08:00	Arrival teas, coffee, and pastries
09:00	Panel 4 – Young scholars’ perspectives
10:30	Mid-morning teas, coffee, and snacks
10:45	Special Panel: Just Transition, Circular Economy, and Crises, Zero Waste Scotland and Just Transition Hub
12:45	Lunch
13:30	Keynote Talk: Prof Cecilia Tortajada, University of Glasgow
14:15	Keynote Talk: Prof Raphael Heffron, Université de Pau et des Pays de l’Adour
15:00	Afternoon teas, coffees, snack
15:15	Panel 5 – Young scholars’ perspectives
16:45	Panel 6 – Latin American Perspectives
18:00	Conference closes, Info about evening plans



Thursday 18 May 2023

Welcome

Dr Sufyan Droubi

Just Transition Hub, School of Humanities, Social Sciences and Law,
University of Dundee

Prof Sarah Hendry

School of Humanities, Social Sciences and Law,
University of Dundee



University
of Dundee



Institute for Social Sciences
Research (ISSR)
University of Dundee



Dundee Just Transition Hub
University of Dundee



Newcastle
University



RÉGION
Nouvelle-
Aquitaine



IVERSITÉ
DE PAU ET DES
PAYS DE L'ADOUR
COLLÈGE SSH

UMR 6031
TREE



ROYAL
HOLLOWAY
UNIVERSITY
OF LONDON



Manchester
Metropolitan
University



S•L•S
THE SOCIETY OF
LEGAL SCHOLARS



Panel 1: Environment, Human Rights, Security



University
of Dundee



Institute for Social Sciences
Research (ISSR)
University of Dundee



Dundee Just Transition Hub
University of Dundee



Newcastle
University



RÉGION
Nouvelle-
Aquitaine



UNIVERSITÉ
DE PAU ET DES
PAYS DE L'ADOUR
COLLÈGE SSH

UNIR 2031
TREE



ROYAL
HOLLOWAY
UNIVERSITY
OF LONDON



Manchester
Metropolitan
University



S•L•S
THE SOCIETY OF
LEGAL SCHOLARS



Keynote Talk: Dr Aameena Camps

Chair: Dr Sufyan Droubi
University of Dundee

How can we achieve a just transition in an unjust world?

Abstract. The Just Transition Commission II is an independent advisory body established for the lifetime of this Parliament, bringing together a range of voices and experiences, providing expert scrutiny and advice on Scottish Government's just transition plans. For the Scottish Government a just transition is both the outcome – a fairer, greener future for all – and the process, working in partnership with those impacted by the transition to net zero. However, how can the just transition be realised when widening inequalities are evident and existing transition injustices remain unaddressed? This presentation will discuss examples of inequalities and injustices in Scotland, as well as just transition opportunities, based on personal experiences working in the community sector in the Western Isles and evidence gathering during the work of the Commission.

Dr Aameena Camps is Research Analyst at Zero Waste Scotland and Commissioner for Just Transition Commission, Scotland, with over 15 years of experience in energy, climate change mitigation and local development, working across a variety of sectors such as government, community and academia, both locally and internationally. Recent accomplishments include the delivery of Uist Wind: a challenging community owned wind farm which aims to generate over £2 million in community benefit over the life time of the project, and was presented with the Best Engagement Award at the Scottish Green Energy Awards in 2020. A geoscientist by training, with a PhD in carbon capture and storage. Also an active volunteer on a number of community based initiatives including as a Director of Community Energy Scotland and as a member of the Scottish Islands Federation Island Decarbonisation Working Group.



Panel 1: Environment, Human Rights, Security

Chair: Prof Jill Marshall
Royal Holloway University of London

1. Transitioning just transitions and security in the energy sector

Alexandra Harrington, Lancaster University

Abstract. Much of the attention paid by the international community, and national communities, to energy transitions has been to the need for a shift from carbon intensive forms of energy to green or renewable energy sources. This is a critical area of focus and has moved law, regulation and policy across the global and national spheres toward encouraging advancements in green and renewable energy. In itself, this can be seen as advancing elements of justice within the parameters of energy law and practice, including an emphasis on the links between energy law and just transitions, with inherent connections to human rights concerns.

However, left out of these discussions and legal systems to date has been the understanding that green and renewable energy sources will not remain static and, indeed, the ways in which international laws are focused on promoting continuous

innovation in these sources of energy. As a result, law and regulation often seeks to control certain forms of green and renewable energy – such as solar or wind energy – without considering the reality of technology and capacity transitions in these sectors in the short and long-term. At the same time, the ways in which just transitions in the energy sector are reflected in law and regulation tends to focus on transitioning away from one source and toward another without an understanding that this type of transition will most likely be cyclical as technologies advance and adapt. This gap necessarily has significant potential impacts for the workers and communities that are involved in the initial transition in energy production and subsequent transitions.

Due to the critical – and often volatile – role of energy in national and regional security, this gap is also a threat to the ability of States and regional entities to properly plan for the energy security of their infrastructures and citizens. While energy security laws, policies and studies tend to focus on the shift to a new form, or even a number of forms, they do not typically address the ways in which future forms of energy and the transition to it will impact on energy security. This necessarily has related connections to questions of energy justice and

concepts of intergenerational and intragenerational equity. This presentation will highlight the need to shift the international and national understanding of just transitions in the content of green and renewable energy so that it includes the reality of multiple transitions as a matter of legal and regulatory policy. It will examine how various national and regional laws and policies, such as the European Green Deal and associated instruments, include energy security and just transitions in their terms but fail to address the transitional nature of renewable and other energy sources along with the associated impacts. Further, the presentation will provide suggestions for methods of legal, regulatory and policy development that includes just transitions for multiple transitions in the energy sector that also entrench energy security across generations.

Alexandra R. Harrington is a Lecturer in Law (Environment) at Lancaster University Law School and Chair of the IUCN World Commission on Environmental Law Agreement on Plastic Pollution Task Force. She has held two Fulbright terms in Canada at the Balsillie School of International Affairs, focusing on global governance issues, including the 2018 - 2019 Fulbright Canada Research Chair in Global Governance. She is the Director of Studies



Panel 1: Environment, Human Rights, Security

for the International Law Association of Colombia, International Legal Advisor, University of Silesia Just Transitions Committee, and sits on the editorial boards of multiple academic publications.

Dr. Harrington is the author and co-editor of several books, including *International Organizations and the Law*, *International Law and Global Governance: Treaty Regimes and Sustainable Development Goals Interpretation*, *Just Transitions and the Future of Law and Regulation*, and several forthcoming monographs relating to intergenerational equity, transitional justice, international organizations governance, and just transitions. She routinely advises international organizations and governments on legal issues relating to climate change, governance issues, environmental law, sustainable development and international human rights law. She holds a Doctorate of Civil Law (McGill University Faculty of Law), in addition to a JD, LL.M. and BA degrees in Politics and History.

2. Hydropower or Bust: The Rights Dilemma, Regina M. Paulose International Criminal Law Attorney, US

Abstract. Hydropower energy has been touted one of the greatest successes to meet the demands of the green energy transition. While hydropower dams represent “old technology” in the green energy market it is still a highly sought solution, despite significant environmental risks and the continued problems posed by climate change. This paper will focus on how hydropower as an energy source has led to a plethora of rights violations and how the international community must properly respond to these challenges, first by reconvening the World Commission on Dams Forum to appropriately incorporate new international norms and second, how the environmental impact assessment process runs afoul of the truth in most cases. The presentation will focus on the sinking town of Joshimath in India.

Regina Paulose is an International Criminal Law Attorney based in the United States. She mainly works on issues related to international and transnational crimes. She is the editor and a contributor to *Green Crimes and International Criminal Law* published by Vernon Press.

3. Is the transition to electric vehicles a just transition if the deep seabed has to be mined to provide the necessary rare metals and minerals?

Sue Farran, Newcastle University

Abstract. Addressing global warming by reducing carbon emissions is recognised as a necessary step to try and ensure the survival of the planet. Integral to this, it is essential that those who have contributed most to global warming undertake fundamental changes in the way their economies and societies operate. Among the numerous solutions proposed is a reduction in fossil fuels, especially in transport systems. This includes moving away from vehicles dependent on diesel and petrol to electric vehicles. This apparently ‘green’ solution may come at a grave environmental cost however, especially in those parts of the world already vulnerable to climate change. This is because the demand for the rare metals and minerals required to make electric vehicle batteries could, if the EV revolution takes off, outstrip current supply, and/or current supply chains – which are heavily dependent on China, are disrupted. Consequently, new sources need to be found. One alternative is territorial



Panel 1: Environment, Human Rights, Security

mining – notably proposed for parts of Cornwall in the UK, or mining in the deep sea, where sources of the necessary metals and minerals have been identified on the seabed, in seamounts and along volcanic ridges. The location of these minerals is in the Exclusive Economic Zones (EEZs) of states, including small island states, developing states and coastal states, and in deep under sea trenches in areas beyond national jurisdiction beneath what is commonly referred to as the global commons.

Where seas lie within national EEZs they fall within the jurisdiction of the state. Where the seas fall outside these jurisdictions, they come under the governance of the International Seabed Authority (ISA) established under the United Nations convention on the Law of the Sea. In both cases providing an effective legal framework for a just transition to deep sea mining presents challenges. In the first case because of resource constraints – both in drafting and enforcing the law, especially in the case of small island states and developing state's, and in the second case because the ISA has been slow to develop a regulatory framework for extractive mining particularly around issues such as environmental protection and the equitable sharing of benefits. For least developed and

developing state's, especially small island states the contemporary drive to transition from carbon fuel-driven vehicles to electric ones might seem like a godsend, not because these vehicles will become commonplace in their small islands, but because this appears to be an opportunity to benefit from the wealth of the seas on their doorsteps. However, there are many who advocate for a moratorium on mining the seabed. Due to the very practical difficulties of scientific exploration in these zones, it is argued that too little is known about the marine life in its depths or the interlinked ecosystems that depend on the tiny creatures living in the mud and silt of deep trenches.

Many species have yet to be discovered. There is also too little known about the potential environmental damage that could be caused by the large machines that would be used for deep-sea mining, or the pollution that could be caused by the plumes of mud and water that are discharged back into the ocean once mineral bearing rocks have been harvested. There is also concern that many of those countries whose seas would yield these riches, lack the knowledge, expertise, or resources to carry out this form of mining and so would – as with much terrestrial mining – be dependent on

foreign consortia and agencies not only to undertake exploratory mining and produce reports on the potential environmental impact of mining activities but also the mining activities themselves. Backed by investors and private capital as well as public-private partnerships, these mining consortia will be keen to ensure that shareholders are well rewarded. The royalties promised as a reward to governments whose seas are exploited may be a very small percentage of the takings. Nor may these financial rewards reach those whose coastal and marine-dependent livelihoods are adversely affected by possible environmental damage. The issue of deep-sea mining to support the transition away from fossil fuels in the transport sector in favour of electric vehicles comes at an environmental cost and it is not those who benefit from electric vehicles who will be the first to suffer. Rather it is coastal communities and islanders, often in the least developed parts of the globe who will bear the brunt of this shift, just as they currently bear the brunt of climate change and environmental damage caused by developed economies.

Sue Farran is Professor of Comparative and Plural Law at Newcastle University and currently an AHRC/ ESRC funded Research Fellow at the Foreign,



Panel 1: Environment, Human Rights, Security

Commonwealth and Development Office of the U.K. government. Her Fellowship draws on several decades of research and publication focussed on Pacific island states across a range of issues including human rights, family law, environmental law, intellectual property and terrestrial and marine natural resources.

4. Building A Pathway towards Just Energy Transition: Analysis of Indonesia's Carbon Regulatory Readiness to achieve Decarbonisation,

Shannon Suryaatmadja, Etheldreda E. L. T. Wongkar, Kimp Yustisiana D. Hermawan, Azzahra Nawadinta, Alya S. Ambong, Carbon Ethics, Indonesia

Abstract. Indonesia's response towards the global effort towards low-carbon transition was to take several steps in ensuring the realisation of decarbonisation, with its national commitment to achieve a net zero target by 2060. A main framework to create its national carbon pricing mechanism was then introduced in 2021 with the enactment of a law designed to determine the economic value

of carbon, along with a goal to begin implementing carbon valuation in early Q4 of 2022. Such ambitious objectives demand a regulation system with feasibility for its implementation, especially in consideration of remaining uncertainties in Indonesia's green energy regulation. The energy sector has been placed as the prime sector in leading the low-carbon initiative, as it is settled as a key target with increased decarbonisation goals from 2018 to 2021. Since then, there have been regulations put in place to escalate decarbonisation from the energy sector. A ministerial-level regulation for the power plant sub-sector in 2022 elaborates the planning, implementation, monitoring, and evaluation mechanism of power plant, along with issuance of emission ceiling for coal-fired power plants which signify that carbon trading for this business may commence soon. In the financial sector, per 2023, there are to accommodate the carbon trade market through the country's Financial Services Authority (OJK). This article seeks to evaluate Indonesia's transition to a low-carbon energy sector by using primary and secondary data analysis. Initial findings show huge market potential, recognised by the government with its attempt to apply carbon economic value. There

is also competition in the private sector to grab this segment, such as the sales of Renewable Energy Certificate (REC) done by PT PLN (Persero), Indonesia's state-owned electricity company, which increased fivefold from 308,000 MWh in 2021 to 1.7 million MWh in 2022. However, this potential may prove hard to optimally realise since PT PLN (Persero) holds a monopoly, leaving 22 other large companies obliged to sign REC sale and purchase agreement with PT PLN (Persero) to become resellers—virtually creating a dependency on one institution for this specific type of green energy proliferation. The regulations point to a similar trend; in the energy sector, the government has absolute power. Per date of this abstract, there is also no official recognition of verifying institutions to measure emissions performance in the private sector. With the above considerations, this article will have a scope of analysis to determine: (i) Indonesia's market readiness, (ii) current and upcoming regulatory progress, (iii) institutional compatibility of the implementing bodies, and (iv) trade-offs faced by stakeholders. In doing so, the authors shall use case studies of previous and current transition endeavours. This article shall conclude by pinning threats to secure energy access which may be mitigated by regulatory means.



Panel 1: Environment, Human Rights, Security

Shannon Suryaatmadja is a Sr. Legal Specialist at CarbonEthics, focusing on reviewing agreements and legal research for internal and external publications. She has previous working experience in a government institution, a prominent law firm in Indonesia, and a well-established company. Shannon has been passionate about learning how the legal domain interacts with other disciplines to develop sustainable lifestyles for society since her summer course program in Hungary on Sustainable Development Law. Aside from her work at CarbonEthics, she currently does independent research and teaches students at elementary, secondary, and tertiary levels on critical thinking with particular focus on environmental issues and human rights.

Etheldreda E L T Wongkar (Chenny) is an active figure of central issues related to environmental governance and climate justice. Currently she works as a legal consultant to the Ministry of Environment and Forestry, Republic of Indonesia and Legal Analyst at Carbon Ethics. Previously she was the Head of Environmental Governance and Climate Justice at the Indonesian Center for Environmental Law. Chenny currently serves as a member of the IUCN World Commission on Environmental Law and

Sakharov Community under the coordination of the European Parliament. She is active in the movement for the realization of climate justice in Indonesia and ASEAN, as well as conducting research and legal assistance on the drafting of several regulations and policy in the field of environment and climate change. In addition, Chenny is also active as a speaker and writer in a few forums and publications both on an international and national scale. Her publication can be found here: <http://surl.li/gstff>

Azzahra Nawadinta (Zahra) is a recent graduate from the Faculty of Law, Gadjah Mada University, with a concentration in international law and a passion for international law, human rights, and sustainability. She successfully completed this degree within 3.5 years and graduated with honours (cum laude). During her studies, she was awarded a student research grant and conducted research related to international economic law in the Research and Publication Unit. She previously was also a delegate in an International Model United Nations, representing the country allocation to the forum that discusses an issue related to women and children. Currently, she works as a Corporate Legal Analyst at CarbonEthics, primarily conducting research on laws impacting climate change and

corporate sustainability, as well as running projects for clients and the public. Zahra is also a volunteer at the Dreamhouse Indonesia Foundation which focuses on the fulfilment of the human rights of children.

Alya S. Ambong is a Legal and Policy Specialist at CarbonEthics. In aims to follow her great interest in environmental sustainability and national development, she has pivoted her career to contribute to the fight against climate change. She began her career as an associate to a prominent corporate and commercial law firm based in Jakarta, Indonesia, where she focused on providing legal services surrounding general corporate matters, investment, and employment law for various clients, both global and domestic. Currently, she specializes in providing legal assistance and advice for the execution of nature-based projects, as well as consultancy services in the environmental field. Alya is currently focusing on the topic of forestry and carbon pricing law and policies in Indonesia.

Kimp Yustisiana Dewinta Hermawan (Kimp) is a legal consultant focusing on the environment, renewable energy, and climate-related projects. She graduated from the International Undergraduate Program, Faculty of Law, Universitas Gadjah Mada



Panel 1: Environment, Human Rights, Security

and passed the Indonesian Bar Exam in 2020. Kimp is passionate about giving legal advice, conducting legal research, and international affairs. She hopes to work in a global environment, and she is committed to creating change in society through her involvement in CarbonEthics as a Legal Advisor. Her prior work experience includes being an Associate in the Project, Energy, and Infrastructure practice at a prominent law firm and an Assistant Manager at one of Indonesia's national banks. Kimp is an awardee for the 2023 YSEALI Professional Fellowship Program 2023 under Sustainable Development and the Environment Institute. She will be pursuing a higher degree at the University of California, Berkeley and plans to focus on environmental issues and sustainable development for her future career.

5. Uncovering the Environment: The Use of Public Access to Environmental Information Sean Whittaker, University of Dundee

Abstract. Environmental information acts as the fundamental starting point for transitioning into a low-carbon society and for achieving sustainable development. Without access to environmental information, the general public will be unaware

or ill-informed of any plans, policies or decisions that will impact on the environment at a local, national, or international level. Further, without access to such information the general public are unable to effectively participate in environmental decision-making procedures; denying the public the opportunity to have their voices heard and withholding valuable insights which can improve the quality of the final environmental decision. These benefits of guaranteeing access to environmental information can broadly be described as empowering the public to engage with government and to demand a healthy environment which is suitable for their needs. Yet these benefits only arise if the assumptions which underpin the operation of the right are met – a situation which is presumed to occur but has yet to be tested in practice.

Perhaps more problematic is the fact that the right to access environmental information is inherently anthropocentric in nature – placing humanity at the core of its focus and potentially undermining its environmental aims. By studying how the public right of access to environmental information is used in Scotland, significant mismatches have been identified between the ideas behind the creation of this right, as typified in the Aarhus Convention, and

how it operates in practice. Contrary to expectations, most users do not primarily act as environmentally motivated citizens seeking environmental benefits. Those accessing information for professional purposes feature heavily and users are generally driven by their personal or professional motivations. While environmental concerns are often significant, and users of the right may bring environmental benefits, users' primary focus is on how any disclosed information will help them achieve their goals. This view of the right to environmental information leads to a divergence in how the “success” of the right is viewed, particularly when contrasted against the views of public authorities and with the environmental aims of the right itself. In addition to considering how the public engages with the right to environmental information, this paper also utilises Actor-Network Theory to analyse the different roles of and relationships between various human and non-human actors. Consideration of the role of non-human actors, such as technologies or the environment itself, suggests that the right primarily provides transparency and accountability rather than securing true environmental gains – contrary to the environmental aims of the right and of the Aarhus Convention. In conjunction with the



Panel 1: Environment, Human Rights, Security

non-environmental motives driving most users to seek out environmental information, this brings into question the necessity for a separate right to environmental information with its own legal framework. More fundamentally, this analysis also brings into question the extent to which the right contributes to society's transition into a low-carbon society and to the achievement of sustainable development.

Dr Sean Whittaker was conferred his PhD in Environmental Law from University College Cork in 2018, under the supervision of Professor Áine Ryall. Following this, he worked as a postdoctoral research assistant at the University of Dundee on the “Uncovering the Environment: The Use of Public Access to Environmental Information” Economic and Social Research Council-funded project. This project led to the publication of a book titled Freedom of Environmental Information: Aspirations and Practice, which Dr Whittaker co-authored alongside Professor Colin Reid and Dr Jonathan Mendel. Currently, Dr Whittaker is a Lecturer in Law at the University of Dundee and is the Executive Director of the Centre for Freedom of Information, which is based at the University of Dundee.



Panel 2: European Perspectives



University
of Dundee



Institute for Social Sciences
Research (ISSR)
University of Dundee



Dundee Just Transition Hub
University of Dundee



Newcastle
University



RÉGION
Nouvelle-
Aquitaine



IVERSITÉ
DE PAU ET DES
PAYS DE L'ADOUR
COLLÈGE SSH

UNAR 6031
TREE



ROYAL
HOLLOWAY
UNIVERSITY
OF LONDON



Manchester
Metropolitan
University



S•L•S
THE SOCIETY OF
LEGAL SCHOLARS



Panel 2: European Perspectives

Chair: Dr Leonardo Valladares Pacheco de Oliveira
Royal Holloway University of London

1. The Hydrogen Regulatory Framework as a Driver for Energy Justice, Scott Fotheringham, Ernst & Young LLP

Abstract. With the built environment accounting for around 40% of carbon emissions, mostly from space heating, the transition from traditional gas-fuelled boilers to low carbon heating is vital if net zero targets are to be achieved. Moving in this direction, the UK Building Regulations (the so called “Future Homes Standard”) are such that by 2025, the only compliant form of heating for new homes will be a heat pump. The 2025 Buildings Regulations do not require a heating change for the 26 million existing properties in England and Wales. Such a change would require an extensive insulation package, costing between £10,783 and £48,190 depending on property, this is in addition to the £8,750 to £14,900 for an air sourced heat pump. These costs will exclude most households in the UK, creating an inequality of opportunity to access low carbon heating. Additionally, there is circa 860TWh of gas used in the UK annually, compared to 290TWh of

electricity. Therefore, switching to heat pumps would require considerable capital investment in the electricity network. Thus, the retention of the gas network, migrated to transport hydrogen provides equality of opportunity to access low carbon heating, as extensive retrofitting of insulation and an expensive heat pump is not required. This paper thus considers the key building blocks of a hydrogen regulatory framework to provide energy justice and learn lessons from the renewable energy regulatory framework. As such, it is argued, the key building blocks of the regulatory framework are as set out. Clear & Consistent Direction: In developing a hydrogen market, it is important to set a clear and consistent direction to give industry and investors reasonable certainty of business and commercial outcome which will facilitate additional investment. The regulatory framework will need to be underpinned by legislative amendments to the Energy Act structure. Auction Process: The recent rise of auctions to allocate support payments for renewable energy projects have created a competitive environment that pressures the industry into accepting higher risks and lower returns, with banks reducing their debt margins. Therefore, the hydrogen regulatory framework should set out an

auction process for largescale support contracts so as to facilitate the development of the most capital efficient projects. Support Contract for Green Hydrogen: Putting in place an off-take contract for the hydrogen produced, this contract being backed in a similar way to the Low Carbon Contract Company (LCCC) provides a contract for difference for renewables. The contract would need to set-out the duration of financial support, the strike price (and indexation), network connection provisions, metering, and quality. The contract would form the basis of the allocation of concessions, assuming a favourable decision to allow up to 20% blending in the UK gas network, would underscore the development of 10GW of hydrogen production capacity by 2030 in line with Government ambitions. A review of the December 2022, Heads of Terms for Low Carbon Hydrogen Production Business Model will be undertaken. Looking at the need to link the hydrogen business model to the electricity market, specifically renewables as the “fuel” for green hydrogen. Network Code: The network code would be a key interface agreement between the hydrogen producer and the transport network operator. The code would need to set out the gas-grid injection tariffs, the need for participation of electrolyzers in



Panel 2: European Perspectives

grid-balancing schemes. Financial Support: The paper reviews the need for capital expenditure subsidies, tax rebates and waivers, exemption from electricity policy costs, and supply licence exemptions. Wider Planning Permissions and Water Extraction Requirements: In order to achieve a fully functioning hydrogen production facility there is a need to obtain the necessary planning permissions and water extraction licences. The timing of these permissions and licences need to comply with any milestone requirements set out in the Heads of Terms for Low Carbon Hydrogen Production. The paper will demonstrate that the hydrogen regulatory framework should account for the interactions between techno-economic criteria so that the right policies and framework will be in place to support the development of green hydrogen facilities.

Scott Fotheringham is a Director at Ernst & Young in London, focusing on power and utility M&A transactions, as well as renewable energy regulation. Scott has previously worked for EDF Renewables (Commercial Manager for offshore wind farms), Shell Energy Europe (focusing on LNG) and National Grid (where he started as a power systems engineer, before becoming the Head of Transmission Pricing & Regulation). Scott is an electrical engineer,

qualified barrister, has an MBA and a PhD in Law from Anglia Ruskin, completed in 2019.

2. Advancing the global agenda on climate change, biodiversity and human rights through new EU legislation, Ernesto Bonafe, University of Dundee

Abstract. The new Global Biodiversity Framework aims to reduce the extinction of species by 2050 and restore 30% degraded ecosystems globally by 2030. Adopted in Montreal in December 2022, it complements the Paris Agreement seeking to hold the increase of global temperature well below 2 degrees Celsius. Both texts are complementary and self-reinforcing as biodiversity helps fight climate change and vice versa. Countries will have to adopt national biodiversity finance strategies and action plans, along with the nationally determined contributions to reduce greenhouse gas emissions. Implementation will require consistent action at international and national levels, creating a transnational legal system to underpin a just transition, where the environment is protected, and energy supply is ensured. This paper will explore further the interaction of legal systems by looking into the adoption and implementation of

EU legislation. The focus will be on some legal texts recently adopted, particularly: 1) the new regulation to minimise EU-driven deforestation and forest degradation, which is to bring down greenhouse gas emissions and biodiversity loss, 2) the new rules for companies to respect human rights and the environment in value chains, in Europe and beyond, and 3) the carbon border adjustment mechanism to avoid carbon leakage and encourage international partners to establish carbon pricing policies to fight climate change. The three instruments have in common the European Green Deal, but since then, the policy context framing the referred legal measures has evolved with the adoption of the 'Fit for 55' legislative package, the REPowerEU Plan and more recently the Green Industrial Plan. Reaching Net Zero requires new oil and gas development to stop immediately, the International Energy Agency concluded before the war in Ukraine. Indeed, the objective to end dependence on Russian energy imports has led the EU and its member states to seek alternative oil and gas suppliers. The EU aims to engage with energy producing countries in a holistic approach, dealing with both conventional and clean energy sources, including low carbon and renewable hydrogen. But this also raises questions regarding



Panel 2: European Perspectives

the implementation of the referred carbon border tax, not least because some countries have already expressed some concerns from an international trade perspective. On the other hand, there is a link to be clearly established between the new rules to fight agriculture-driven deforestation and the recent experience using commodities as biofuels or to produce biofuels (such as wood pellets or derivatives of soy and palm oil) to achieve renewable energy targets. The regulation on corporate sustainable governance and related legislation address climate, environmental and human rights concerns by tackling global supply chains of companies operating in the internal market. The EU is struggling to ensure security of energy supply following the fallout of the war in Ukraine, but it seems determined to use its leverage (political, financial, and regulatory) to advance the global agenda on climate, biodiversity and human rights. This will not ensure, however, that third countries, economic players and civil society organisations will agree and embrace the new EU rules. Energy and legal security, environmental and human rights protection, will be tested.

Ernesto Bonafé is an associate senior researcher at CEPMLP, University of Dundee, and the associate editor of the journal *Global Energy Law and Sustainability* of Edinburgh University Press. Previously, he was the project manager of the Extractives Hub funded by the UK government and hosted at CEPMLP, also involving a joint project with the International Bar Association on the governance of extractive industries. Dr Bonafé has worked as a legal and policy expert in several EU-funded projects on sustainable energy in Africa and the Mediterranean. As head of the Expansion Unit at the Energy Charter Treaty Secretariat in Brussels, he coordinated the outreach activities in countries from Africa, Asia, and Latin America. Prior to this, he was as a researcher and training coordinator at the Florence School of Regulation in Italy. Early career experiences included junior positions in law firms in Brussels and Spain, and internships at the European Commission in Brussels and the Cabinet of the current President of the European Court of Justice in Luxembourg. Dr Bonafé holds a PhD in Energy Policy and EU Law from the Law Department at the European University Institute in Florence, Italy, an LLM in EU Law from Université Libre de Bruxelles, Belgium, and a Law Degree from University of Valencia, Spain.

3. Every Problem is an Opportunity in Disguise: The Concept of the Just Energy Transition Thomas L Muinzer, University of Aberdeen

Abstract. As European environmental governance seeks to drive the decarbonisation of the energy sector in the interest of mitigating climate change, the 'just energy transition' (JET) is a concept that is starting to pervade climate, energy and environmental scholarship to a greater and greater degree at present. It is often difficult, however, to interpret clearly and precisely what this increasingly common term is intended to mean. This paper will explore the JET as a scholarly concept and as a compound discursive term, identifying problems that arise in research and scholarship where semantic and associated analytical precision is lacking or unclear. Such problems include the disruption of the ability to construct scholarly hypotheses and theories that allow testable propositions to be utilized with reference to the term. But out of such problems come opportunities in going forward.



Panel 2: European Perspectives

Thomas L Muinzer FRSA is Co-Director of the Aberdeen University Centre for Energy Law, based at the University of Aberdeen, Scotland, where he works as a Senior Lecturer in Energy Transition Law. His teaching, research and consultancy work focuses most particularly on climate and energy decarbonisation law and policy. He is the author of the first monograph on the world's first example of national framework climate legislation: *Climate and Energy Governance for the UK Low Carbon Transition: The Climate Change Act 2008* (Palgrave: UK, 2018). He is also Contributing Editor to the first book-length study of national Climate Change Acts from around the world: *National Climate Change Acts: The Emergence, Form and Nature of National Framework Climate Legislation* (Hart/Bloomsbury: UK, 2021). Thomas is a Founder Member of the Scottish Climate Emergency Legal Network.



Keynote talk: Prof Darren McCauley

Chair: Dr Irene Antonopoulos

Royal Holloway University of London

Data-Driven Justice: Empowering Civil Society to Hold Governments Accountable for a Just Transition,

Abstract. This paper explores the concept of a just transition and the role of data-driven justice in empowering civil society to hold governments accountable for achieving this goal. The importance of data in ensuring a just transition is discussed, and examples of data-driven justice initiatives in the UK and beyond are presented. It develops a case study example based on a collaborative initiative with Solidar, a European civil society organisation. Recommendations are provided for promoting data-driven justice. Overall, it seeks to raise awareness of the potential of data-driven justice to empower civil society and hold governments accountable for a just transition.

Darren McCauley is Professor of Environmental & Social Justice at Newcastle Law School, and convenor for the research group 'Environmental Challenges and Law'. His work seeks to uncover, interrogate, and develop new policy and regulatory solutions to rising global inequalities. Conceptually, he has developed the inter-disciplinary frameworks of energy justice, just transition and sustainability with other leading scholars. Empirically, he has used mixed methods approaches to exploring the actions of government, business, and activists, within Europe, and more recently in Africa, Southeast Asia, US, and the Arctic. His mixed methods research agenda focuses on investigating what a just transition to a low carbon future looks like from a global perspective. He works closely with international organisations, both private and public, to co-develop research and ensure maximum impact from his work. Research throughout his career has been made possible by a wide range of external sponsors (see ORCID for some examples) including (among others) British Academy, ESRC, EPSRC (now RCUK), GCRF, H2020 and Horizon Europe funding programmes, Leverhulme, Dutch Council NWO, UK Energy Research Centre, the Carnegie Trust, and the Royal Society of Edinburgh. He holds several external expert positions, including on the Arctic

project EU Polarnet. He keeps an active role as Co-I on Horizon projects JUSTNORTH (6.2 million euros) 2020-2024 and PROBONO (26.4 million euros) 2022-2026. He held several full-time academic positions before joining Newcastle. He took lectureships at Queens University Belfast and the University of Stirling, before taking up the position of Senior Lectureship at the University of St. Andrews. He helped to develop many different initiatives on sustainable development. After ten years there, he held the position of full professor in the Management of International Social Challenges at Erasmus University Rotterdam (EUR). He was the academic director of the Erasmus Initiative and strategic research pillar Global Social Challenges (GSC). He then joined Newcastle Law School in January 2023.



Panel 3: ESG and Just Transition



University
of Dundee



Institute for Social Sciences
Research (ISSR)
University of Dundee



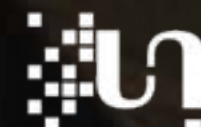
Dundee Just Transition Hub
University of Dundee



Newcastle
University



RÉGION
Nouvelle-
Aquitaine



IVERSITÉ
DE PAU ET DES
PAYS DE L'ADOUR
COLLÈGE SSH

UMR 6018
TREE



ROYAL
HOLLOWAY
UNIVERSITY
OF LONDON



Manchester
Metropolitan
University



Panel 3: ESG and Just Transition

Chair: Prof Raphael Heffron
Université de Pau et des Pays de l'Adour

1. Just Transition and Sustainable Finance, Prof Iain MacNeil, University of Glasgow

Abstract. Finance has been a key conduit for sustainability policy at least since 2005 when the UNEP Finance Initiative sponsored the Principles for Responsible Investment. More recently, so-called ESG investing has emerged as a global driver of the transition to sustainability in the private sector and has prompted important regulatory interventions, especially in the EU. Yet the concept of Just Transition remains relatively underdeveloped in the discourse and practice around ESG investing. While initiatives linked to Just Transition are increasing in both public and private sectors, they often frame the concept in a form that is very close to sustainability policies such as net zero, circular economy or renewable energy. This prompts the question whether Just Transition can be distinguished conceptually from sustainability and how the two policy domains relate to each other in the world of finance.

Iain MacNeil is the Alexander Stone Professor of Commercial Law at the University of Glasgow. His teaching, research and consulting are focused on corporate governance and financial regulation. He began his academic career after a decade working in financial markets. He has undertaken research and collaborated with colleagues in Australia, Canada, China, Hong Kong, and the United States. Iain is an experienced PhD supervisor and many of his former students have progressed to academic appointments around the world. He has been at the forefront of the development of postgraduate taught programmes at the University of Glasgow, founding the LLM Corporate & Financial Law in 2009. As Head of School from 2015-2019 he piloted the introduction of a Common Law LLB and led a major expansion in staff recruitment. Beyond the University of Glasgow, Iain has several roles. He is a Trustee of the British Institute of International and Comparative Law (BIICL), and Chair of the International Securities Regulation Committee of the International Law Association (ILA). He was Deputy Chair of the Hong Kong RAE Law Panel in 2020 and of the UK REF Law Panel in 2021. He has acted as Senior Adviser on several projects examining national compliance with EU financial sector Directives.

2. The Workforce Engagement Mechanisms in the UK: A Way Towards More Sustainable Companies? Katarzyna Chalackiewicz-Ladna, University of Glasgow

Abstract. Workforce play an important role in companies, even though their direct involvement in corporate governance processes seems invisible or marginal. While shareholder primacy has been justified by the mistaken argument that shareholder interests converge with those of the company, it is rather the interests of company workers that are most closely aligned with those of the company and the company's long-term success. Arguably, the role of workforce can be crucial in addressing new challenges faced by companies and in implementing initiatives within the framework of corporate sustainability. In 2018, the UK Corporate Governance Code introduced for the first time – through Provision 5 – workforce engagement mechanisms. The aim of this study is to analyse empirically the implementation of these mechanisms by FTSE100 companies in 2020 – the second year this provision is in force. We view the Provision 5 workforce engagement tools as one of the available channels



Panel 3: ESG and Just Transition

leading towards the “Entity Model” of ESG (a model that locates accountability more clearly with the board alongside other forms of strategic decision-making), with the aim of making suggestions on how to improve participation during decision-making when using engagement mechanisms. Provision 5 is not only a stakeholder empowerment tool but can be seen more broadly as the start of a process of experimentation to determine the best ways to engage all stakeholders in board decision-making. Finally, Provision 5 can provide an effective model for the development of the social dimension of sustainability, which to date has attracted less attention in the ESG model of sustainability.

Katarzyna Chalaczkiwicz-Ladna was appointed to the position of Lecturer in Commercial Law in August 2018. She previously worked as a Visiting Lecturer and Tutor at the University of Edinburgh and a Research Associate, Visiting Lecturer and Graduate Teaching Assistant at the University of Glasgow. Katarzyna’s research concentrates on accountability of the board of directors, sustainable development, and company law in comparative dimension more broadly. She obtained her PhD from the University of Edinburgh in 2016. Katarzyna’s doctoral research was comparative in nature, addressing the extent

to which UK, German and Delaware law imposes obligations on directors to consider the long-term consequences of their decisions.

3. The limits of due diligence approach in funding just transition, Giedre Jokubauskaite, University of Glasgow.

Giedre Jokubauskaite joined the School of Law at the University of Glasgow in September 2018. Prior to this, she was a Post-Doctoral Research Associate on the AHRC-funded project ‘Constructing Authority in International Law’ at Durham Law School. She completed her PhD at the University of Edinburgh in 2016. Before joining academia in the UK, she worked as a civil society advocate in Lithuania, Ukraine, Cameroon, and Germany. In 2019 Giedre was a Visiting Research Fellow at the University of Rosario (Botoga, Colombia), and a visiting Teaching Fellow at the University of KIMEP (Almaty, Kazakhstan). Her current research focuses on the link between bottom-up resistance, international law, and sustainable development. Since 2020, she is a Principal Investigator on the AHRC/DFG-funded research project ‘The Law of Protracted Conflict: Understanding Humanitarian-Development Divide’ (Endless Conflicts).

4. Just Transition in an Oil City: Elaborating on the Just Transition Principles. Daria Shapovalova, University of Aberdeen

Abstract. Energy transition processes can particularly be challenging in petro-regions where fossil fuel production often is the main source of employment and economic benefit. There are further close cultural ties between the industry and the community through identity and sense of belonging. This paper is part of an interdisciplinary project studying energy transition in oil cities. It uses rapid evidence review to assess the challenges of a just transition in petro-regions. It focuses on the Northeast of Scotland to consider the role of the Just Transition principles and to critical analyse of the wider regulatory framework considering these principles.

Daria Shapovalova joined the Aberdeen School of Law in 2017 and is a senior lecturer in energy law. She is the co-director of the Aberdeen University Centre for Energy Law and coordinator of the University’s Just Transitions Lab. Daria coordinates the Energy LLM theme and leads courses on energy and environmental law. Daria’s main research interests are in energy, environmental law and human rights.



Panel 3: ESG and Just Transition

Her current research is on the climate change and energy law with a focus on just transition. Daria has published extensively on Arctic governance, regulation of petroleum production, and climate change law. Daria holds an LLB (National Law Academy of Ukraine, 2012) and an LLM in Public International Law (University of Groningen, 2013), and a PhD in Law (University of Aberdeen, 2017). She gained professional experience in energy consultancy and legal practice. Daria is a Fellow of the Higher Education Academy. She is a member of the UK Environmental Law Association, World Commission of Environmental Law, and International Law Association.

5. The place of land use in Scotland's Just Transition - Natural Capital and the rise of the 'Green Laird'

Calum Stewart, University of Glasgow

Abstract. As a finite resource, land is at the root of many competing needs. Therefore, the ownership of land and its resulting uses have important consequences for a just transition. Scotland's unequal pattern of land ownership, whereby around 400 landowner's own half of all private rural land,

means that the scale of land use decision making powers is imbalanced. There is a danger that communities are frozen out of land use decisions, particularly relating to the transition to net zero. The nomenclature 'Green Lairds' - evoking comparisons with the historical Highland Clearances - has been controversially adopted by some commentators to denote the increasing amount of investors purchasing large tracts of land in Scotland for 'natural capital' projects, including tree planting and peatland restoration, in part to meet ESG commitments. The socio-political overtones of this terminology highlight the possible negative effects of natural capital investments on communities, including exclusion both from the land use decisions and from many of the benefits stemming from such decisions. There is clearly a need to consider the effects that such land use change may have on local communities. Scotland has an extensive land reform agenda which seeks to empower communities through certain legal measures, yet questions remain over whether this policy landscape is adequately addressing the growing calls for natural capital investments to contribute to a just transition.

Calum Stewart is a PhD Researcher at the University of Glasgow. His main interest is in Scots property law, particularly land ownership, and its interaction with climate change objectives. He recently completed an LLM (Res) from the University of Glasgow in 2022, entitled 'The Capacity of Scotland's Community Right to Buy Legislation to Contribute to Ecological Sustainability'. He has previously had roles in the Scottish Law Commission, where he was involved in property law projects relating to compulsory purchase and commercial leases, and the Scottish Land Commission, where he was a Land Rights and Responsibilities Advisor. Calum is also a qualified Solicitor, having achieved his qualification in 2019, wherein he specialised in property law.



Keynote talk: Dr Sufyan Droubi

Chair: Prof Raphael Heffron
Université de Pau et des Pays de l'Adour

Transforming education for just transition

Abstract. This paper brings the fundamentals of the **CCR Education Framework**, which has been developed by the speaker in collaboration with colleagues, to promote a reflection about the importance of education, and the challenges that it faces, as an enabler of a just transition to a low carbon economy in a period marked by economic, political and social crises.

Sufyan Droubi is Reader in Law at the School of Humanities, Social Sciences and Law, and one of the founding directors of the Just Transition Hub, University of Dundee. His research addresses the intersections of law and social, climate and environmental justice in the context of a transition to a low-carbon economy. He carried his previous studies in law at the Pontifical Catholic University of São Paulo. Fully qualified lawyer in Brazil since 1996, he has a solid practice in international, economic, and business law including in the energy sector. Sufyan has published extensively in public international law and on just transition to a low-carbon economy.



Roundtable: Challenges for Research and Education

Roundtable:
Challenges for Research and Education

Chair: Prof Sarah Hendry,
University of Dundee

Dr Sufyan Droubi,
University of Dundee.

Prof Raphael Heffron,
Université de Pau et des Pays de l'Adour.

Prof Jill Marshall,
Royal Holloway University of London.

Prof Darren McCauley,
Newcastle University.

Dr Cecilia Juliana Flores Elizondo,
Manchester Metropolitan University.

Prof Iain McNeil,
University of Glasgow.

Ms Ruth Lelei,
University of Dundee.

Ms Deborah Mooney,
Zero Waste Scotland.

Sarah Hendry Professor of Law, School of Humanities, Social Sciences and Law, University of Dundee. Sarah is an academic lawyer specialising in water and environmental law. She is the Head of Dundee Law School. In that role she is involved in the design and delivery of the LLB and LLM programmes at Dundee. Sarah also works within the Centre for Water Law, Policy and Science, which is hosted at Dundee. Her research interests in Scots, EU and comparative water law extend across both water resources and water services. Sarah is Scottish Editor for the Journal of Water Law and the Journal of Environmental Law and Management, and co-convenor of the UK Environmental Law Association Scots Law water topic group. She was a member of the Scottish Customer Forum, and of the Irish Government's Expert Commission for Water. She is Vice Chair of the Specialist Group on Governance and Regulation for the International Water Association.

Raphael Heffron is Professor in Energy Justice, the Social Contract and Sustainability at the Université de Pau et des Pays de l'Adour, Pau, France. He is also Jean Monnet Professor in the Just Transition to a Low-Carbon Economy awarded by the European



Roundtable: Challenges for Research and Education

Commission (2019-2022). In 2020, he was appointed as Senior Counsel at Janson law firm in Brussels (Belgium). Professor Heffron is a qualified Barrister-at-Law, and a graduate of both Oxford (MSc-Christ Church) and Cambridge (MPhil-Darwin & PhD-Trinity Hall). He also holds degrees from the University of St. Andrews (MLitt), and Trinity College Dublin (BA, MA). His work all has a principal focus on achieving a sustainable and just transition to a low-carbon economy, and combines a mix of law, policy and economics. He has published over 180 publications of different types and is the most cited scholar in his field worldwide for energy law, energy justice and just transition worldwide (2900+ Scopus/5600+ Google Scholar) with translated work in multiple languages including Chinese, Italian, French, Spanish, Portuguese, Arabic and Persian. Professor Heffron has given just over 190 keynotes or guest lectures in 52 countries worldwide.

Jill Marshall is a full time Law Professor researching the role law plays in creating, allowing, representing and protecting certain aspects of our human identity and personal freedom with emphasis on the connections between law and humanity, care and belonging. Her work particularly focuses on gender justice, women's human rights, privacy, expression,

and sexual violence in conflict and includes analysis of International law, global justice and human rights in their complexities of real life situations. She teaches International human rights law, jurisprudence or philosophy of law, and the English Legal System. She has an unusual combination of experience as an International litigation solicitor at top global law firms before she entered academia. She retains her practising certificate and has worked as an ad hoc consultant at an award winning human rights and social justice law firm based in central London. Professor Marshall has given expert opinion by invitation to the Equal Opportunities Committee of the Parliamentary Assembly of the Council of Europe on Islamophobia, with emphasis on the Islamic headscarf debate on which she has written widely. Her opinion was endorsed by the Chair of that Committee in the Chair's Report. She has worked with a variety of consultation processes on equalities related issues. Professor Marshall is the founding author, module convenor and chief examiner for the University of London International Programmes at Masters level for the Human Rights of Women, and at undergraduate for Jurisprudence. She was guest contributor to UCL's Gender masters' programme for many years, and has held visiting

positions at the Inter Disciplinary Center in Israel, Hong Kong University Space, and the PACE New York Law School programme in London. She has been interviewed by the media on areas relating to her research and is the creative founder of the Legal Ideas Factory: www.legalideasfactory.com.

Cecilia Juliana Flores Elizondo joined Manchester Metropolitan University in July 2021. Previously, she held Research Associate positions at the University of Manchester in three funded research projects. She has taught at the University of Manchester, the China-EU School of Law and the Universidad Autónoma de Tamaulipas. She holds a Ph.D. in Law and an LLM in International Business Law from the University of Manchester and an LLB from the Universidad Autónoma de Tamaulipas (Mexico). Her research has been cited in policy briefings produced for the UK Parliament and she has been invited to discuss food and farming policy to the Department for the Environment, Food and Rural Affairs (DEFRA). Having qualified as a lawyer in Mexico (2001), she practised law in various law firms before entering academia. Cecilia is co-director of the International Investments in Latin America Network and contributes as trade development editor for the Manchester Journal of International Economic



Roundtable: Challenges for Research and Education

Law. Cecilia remains affiliated to the Manchester International Law Centre. Cecilia specialises in International Law and her research focuses on issues concerning international economic law and the international governance of food systems. In her research, Cecilia foregrounds the role of international law in hindering or facilitating the transformation into healthy and sustainable food systems, the fairness of such transitions and food security. She is interested in the dynamics between diverse legal and regulatory regimes, their impact on food policy and the vulnerabilities of food systems.

Iain MacNeil joined the School of Law, University of Glasgow, in 2003 and was appointed to the Alexander Stone Chair of Commercial Law in 2005. He is a graduate of the Universities of Glasgow (LLB) and Edinburgh (PhD). Iain's early career was as an investment analyst in the City of London covering the insurance sector. He took up his first academic appointment following completion of his PhD on The Legal Framework for the EU Single Market in Insurance. Iain served as Head of School from 2015-2019 and is now Head of the Corporate & Financial Law Research Group. Iain's primary interest and expertise lies in corporate governance, financial regulation and investment. He has published widely

and in particular he has explored the interaction between hard and soft law in this sphere, as well as the influence of international standards. His recent publications focus on sustainable finance and stakeholder interests in corporate governance. Beyond the University of Glasgow, Iain has several roles: he is an honorary professor at the National Law University Delhi; a member of the advisory board of the Centre for Business Research at the University of Cambridge; a trustee of the British Institute of International and Comparative Law; and Chair of the International Securities Regulation Committee of the International Law Association (ILA). He recently served as Deputy Chair of both the 2020 Hong Kong Law RAE Panel and the 2021 UK Law REF Panel. He has acted as Senior Adviser on several EU projects examining national compliance with EU financial sector Directives.

Ruth Lelei is a PhD candidate at the University of Dundee. She received her Bachelor's degree in Law from Kabarak University, Kenya and holds an LLM in international commercial law from the University of Dundee. Her research interests revolve around international law, legal education, African approaches to international law, critical pedagogies, climate change, indigenous knowledges and

decolonisation. She is particularly interested in exploring how law and legal education can be used as tools to promote sustainable development, protect the rights of indigenous and marginalized communities and in addressing the challenges posed by climate change.

Deborah Mooney works within the Education & Skills team at Zero Waste Scotland, largely focusing on Climate Emergency Skills Action Plan (CESAP) priorities, such as the Green Internship Scheme and Circular Economy Construction Retrofit Training Programme. With a wider objective of informing and influencing the education landscape in Scotland, Zero Waste Scotland aims to have circularity embedded and implemented in all learning, no matter the subject or level. Deborah has a background in sustainability within education and has also previously worked for community organisations in the digital and financial inclusion sectors.



Panel 4: Young Scholars' Perspectives



University
of Dundee



Institute for Social Sciences
Research (ISSR)
University of Dundee



Dundee Just Transition Hub
University of Dundee



Newcastle
University



RÉGION
Nouvelle-
Aquitaine



IVERSITÉ
DE PAU ET DES
PAYS DE L'ADOUR
COLLÈGE SSH

UNIR 8031
TREE



ROYAL
HOLLOWAY
UNIVERSITY
OF LONDON



Manchester
Metropolitan
University



Panel 4: Young Scholars' Perspectives

Friday 19 May 2023

Chair: Prof Darren McCauley
Newcastle University

1. Sustainability and the Maritime Sector Ryan Holmes, GCU London

Abstract. This research examines aspects of the maritime sector in the context of the ongoing low carbon transition that is impacting international transport. It highlights and explores aspects of historic energy transitions, technological developments and current conditions of maritime governance and practice. In doing so it underscores and infers opportunities for shaping a transition to more sustainable forms of shipping.

Ryan Holmes is currently a Lecturer at GCU London. He previously worked at Erasmus University Rotterdam and for the Stockholm Environment Institute based at the University of York. Ryan completed a PhD at the Department of Geography & Sustainable Development at the University of St Andrews. His previous academic work includes an MSc in Energy Management from the University of Stirling, an MBA from Troy University, and a BBA from

the University of Mississippi. Through his research at St Andrews Ryan is proud to be affiliated with the Arctic Research Centre and Marine Alliance for Science and Technology for Scotland (MASTS). Prior to continuing his graduate studies in the United Kingdom, Ryan worked for over 7 years in the energy sector in the United States.

2. Time to think like philosophers: **The Ethical Justifications for Human Rights to Sustainable Energy,** Stephanie Pouhe, University of Dundee

Abstract. In the sustainability agenda, energy presents issues at various levels. The need to guarantee sustainable energy for all humans goes far beyond the climate change agenda, considering issues with availability, accessibility, and affordability as well as environmental concerns from the human rights perspectives. People's ability to meet their basic human needs and maintain their dignity is severely impacted by the energy crisis, energy poverty, unfair access to and price of energy, and associated environmental harm. Research, publications, and policy papers frequently make implicit mention of the right to energy, but

rarely from the perspective of international human rights. Also, there are significant technical and economic studies that generally ignore moral considerations. Energy poverty's effects on people's health, education, and gender equality have been extensively mainstreamed, but again with a focus on interconnected human rights like the right to health and the right to development without considering a universal human right to sustainable energy. Therefore, beyond the practical and technical aspects, the paper navigates the ethical grounds for human rights to promote universal acknowledgement of the right to sustainable development, based on Bhat's philosophical approach to legal research. According to human rights theorists such as Nickel J, Forst, Besson, Donnelly, and Griffin, a human right has three main moral purposes: to uphold human dignity, advance equality, and ensure that people can live decent lives. From this point on, the article unfolds how access to sustainable energy has the potential to safeguard fundamental human needs, and human integrity, and ensure equality or justice. A sound foundation for reflection and discussion about universal recognition of a human right to sustainable energy for all.



Panel 4: Young Scholars' Perspectives

Stephanie Ngo Pouhe is PhD candidate at the Centre of Energy, Petroleum and Mineral Resources Law and Policy (CEPMLP), University of Dundee. Her research interest turns around the social and human rights aspects of the energy transition. She holds an LLM in Oil and Gas Law and Policy from the CEPMLP, a Master 1 in Business Litigation and Arbitration, and a Bachelor in Political and Juridical Sciences from the Catholic University of Central Africa, Yaoundé. Stephanie is also working as a research assistant for the Business and Human Rights Centre (BHRRC). Business & Human Rights Resource Centre is an independent non-profit organization that promotes greater awareness and informed discussion about human rights issues relating to business.

3. Polish nuclear power program between the Green Deal and the war in Ukraine, Artur J. Tynski, University of Silesia, Poland.

Abstract. The European Green Deal has created new conditions for the development of the power and heating sector throughout the European Union. Poland, as a country with a traditionally coal-based energy mix, has been particularly affected by the new trends. As a result, Poland has opted for strong development of renewable energy

sources, especially photovoltaics (especially in a distributed model: prosumers, energy communities). In 2015, Poland had only 30 MW of photovoltaic capacity, and by the end of 2022, more than 10 000 MW. The escalation of the war in Ukraine in 2022, however, has created a greater need for energy security, relying on a steady and controlled supply of electricity. The Polish public supports the construction of nuclear power plants at 86%, a record high compared to Western societies. Public sentiment goes hand in hand with the needs of industrial companies. To date, Poland has no nuclear power plant. Currently, government-controlled companies have begun two major investments in traditional nuclear power plants. One power plant in cooperation with the U.S.-based Westinghouse is being built in the north of the country. The other plant, being built in cooperation with Korea's KHNP, is being built in the central part of the country, now traditionally associated with lignite power plants. In addition, several large industrial companies have begun their own investments in small modular reactors from which to build small nuclear power plants. In parallel, a new nuclear law is being worked on in the Polish parliament. All the above-mentioned factors mean that Poland from a country without

nuclear power plants may become a country based on an energy mix: photovoltaics, wind turbines and nuclear power. The purpose of my paper is to present current legislative changes and political trends in the development of nuclear power in Poland. In preparing the paper, the author analysed source documents, including European law, Polish legislation, reports of analytical institutions, as well as scientific publications. In the analysis of the objective, a comparative method and a dogmatic method were used. As a result, the author created a model showing the direction of development of atomic law in Poland.

Artur Tynski is a PhD-candidate at the Faculty of Law and Administration of the University of Silesia in Katowice, a graduate of the College of Individual Interdisciplinary Studies at the University of Silesia in Katowice in the fields of law, philosophy. Scholarship holder of the Minister of Science. Author of scientific and popular science texts on energy transition. Professionally, coordinator at XOOG Fund, dealing with energy communities and renewable energy sources.



Panel 4: Young Scholars' Perspectives

4. Current Trends In Energy Justice and Energy Law in India And USA: Sustainability and Just Transition,

Mohammed Asif, Aligarh Muslim University, India

Abstract. In the subject of energy policy, energy justice is now a well-established research topic. Even Nevertheless, there are still only a few conceptual and analytical frameworks being used in the field of energy justice research. Energy research tries to apply justice ideas to energy policy, energy production and systems, energy consumption, energy activism, energy security and climate change. The environmental justice and climate change movements have longstanding scholarly and grassroots traditions that energy justice draws on. Energy justice, energy equity, and energy democracy are frequently framed by those involved in the movement for the switch from fossil fuels to renewable energy as components of a larger “just transition” to a low-carbon regenerative economy that will address the injustices of the fossil-fuel energy system and extractive economy across various sectors. In this essay, the researcher evaluates the prevailing developments in energy justice and Energy legislation in terms of fairness,

sustainability, and accessibility. They account for the reality of various energy markets as well as the Sustainable Development Goals (SDGs) in this assessment. In the Introduction, various methods for determining energy justice are discussed; these methods are detailed in the following chapters. Four themes—distributive, procedural, restorative, and recognition justice—are the foundations of the various approaches to justice. These themes are explored in theoretically informed chapters as well as in case studies based on local and national experience. Reviews distributive, procedural, and recognition justice in three dimensions as well.

Mohammed Asif is a doctoral candidate (UGC-JRF Fellow) at the faculty of law, Aligarh Muslim University (India) specialising in energy laws, environmental governance and climate change and is also doing a P.G. diploma in energy law from Maharashtra National Law University, (MNLU). Asif holds an LLM in international treaty law, international Organisations and IPRs from the University of Delhi (DU). He has attended and presented papers at national and international conferences and recently presented papers in Italy, Turkey, and Azerbaijan's Universities. Asif has been privileged to be a part of

the editorial board of the law society and various committees and has been recently working on the research paper energy laws and climate change regime. He is also very interested in environmental law and its international and intergovernmental treaties about climate change i.e., UNFCCC, Kyoto Protocol, Paris Agreement, and different COPs.

5. To What Extent Does the Abandonment of the Energy Charter Treaty Benefit the Green Economy?

Melike Batmazoglu, Royal Holloway, University of London

Abstract. The European Union (EU) has been leading a fight against the climate change and has a political goal to achieve “climate neutrality” by 2050. This climate neutrality has an objective to revive the green economy by promoting renewable energy investments. To consolidate this objective, the EU introduced and enacted the European Climate Law (Regulation (EU) 2021/1119). Furthermore, due to the Russian invasion in Ukraine, the EU introduced REPowerEU plan to terminate its dependence on



Panel 4: Young Scholars' Perspectives

Russian oil and gas and prioritise green economy with renewable energy investments. Even though the EU wishes to regulate its energy investment policies, it still has obligations under the Energy Charter Treaty (ECT). The ECT had a modernization process which concerned the EU's climate neutrality policies. The EU's climate neutrality policies triggered the ECT modernization process which has been postponed since November 2022. The EU's "brainchild" has become a controversial treaty due to its neutrality towards renewable energy and fossil fuel investments with its investor-state dispute settlement (ISDS). Furthermore, some EU Member States such as Spain, Poland, France and Germany have declared that they are planning to withdraw the ECT because it is outdated, and it makes climate action difficult due to the new flexibility mechanism for fossil fuel investments. In particular, the fact that the flexibility mechanism provision is not mandatory, and it does not constitute a reason for EU Member States to remain in this treaty voluntarily. Therefore, the neutrality towards renewable energy and fossil fuel investments remains. Nevertheless, this still might be seen as a progress because the flexibility mechanism enables the parties to phase-out fossil fuel investments and subsidies gradually

after 10 years entry into force in contrast to the old ECT which protects fossil fuel investments for an indefinite time. Recently, the European Commission have decided to follow the European Parliament's recommendation for withdrawing the ECT and recommended a coordinated withdrawal from it. Although there is an inter-se agreement solution, inter-se agreement has two sides. First dimension is the intra-EU inter-se agreement and with this option the EU may regulate its targets in green economy by phasing out fossil fuels completely. Second dimension is the extra-EU inter-se agreement and this one can be challenging due to the political will of non-EU countries. In other words, the EU has to convince other parties to be on the same page in relation to the green economy. On the one hand, terminating the ECT membership may be beneficial for climate change. On the other hand, the ECT has been the major treaty which regulates the investment protection and mostly renewable energy investors have been benefiting from the ECT's protection. Apart from investment protection, renewable energy investments are connected to sustainable development and climate change. For this reason, the withdrawal from the ECT might not only create legal uncertainty for renewable energy

investors, but also promotion and protection of green economy might not benefit from it. This article aims to discuss the possible outcomes related to the abandonment of the ECT to the green economy and renewable energy investments.

Melike Batmazoglu holds a law degree from Istanbul Kultur University and LLM in international commercial law from City University of London. Batmazoglu is currently a PhD student at Royal Holloway, University of London. His thesis focuses on how the European Union's investor-state dispute resolution system (ISDS) can impact the future of renewable energy disputes initiated under the Energy Charter Treaty's ISDS system.



Special Panel: Just Transition, Circular Economy, and Crises



University
of Dundee



Institute for Social Sciences
Research (ISSR)
University of Dundee



Dundee Just Transition Hub
University of Dundee



Newcastle
University



RÉGION
Nouvelle-
Aquitaine



UNIVERSITÉ
DE PAU ET DES
PAYS DE L'ADOUR
COLLÈGE SSH

UMR 6031
TREE



ROYAL
HOLLOWAY
UNIVERSITY
OF LONDON



Manchester
Metropolitan
University



THE SOCIETY OF
LEGAL SCHOLARS



Special Panel: Just Transition, Circular Economy, and Crises

Chair: Dr Edzia Carvalho

University of Dundee

- **Panelists:** Dr Aameena Camps, Research Analyst Zero Waste Scotland, Dr Marisol Lopez, Zero Waste Scotland, Lanre Shittu, Zero Waste Scotland, Anastasios Markopoulos, Zero Waste Scotland, Mari Todd, UHI Inverness
- **Preliminary findings on Just Transition, Circular Economy and Crises,** Dr Sufyan Droubi and Dr Fernando Fernandes.

Iain Gulland is Zero Waste Scotland's founding Chief Executive and was the Programme Director of the predecessor programme, WRAP Scotland. Previously Iain worked with initiating recycling systems in the public, private and third sectors and led the Community Recycling Network, Scotland until 2008. Iain has recently been appointed President of the Association of Cities and Regions for Resource Management (ACR+) and is a member of several Scottish Government Programme Boards including those covering low carbon and manufacturing. Iain was named the 'most influential person in the UK waste and resource efficiency sector' by Resource Magazine (2014) and was granted fellowship of the Chartered Institution of Waste Management in 2016.

Marisol Lopez is a research analyst at Zero Waste Scotland with experience within academia and the Third Sector. Her research has primarily focused on driving social justice through service provision and policy. Within Zero Waste Scotland, she is working on research projects to support a fair transition to a circular textiles industry, to evaluate and support the transition to reusable drinks cups, and to

understand sustainable decision-making in times of crisis. A social researcher by training, Marisol holds a PhD in Human Geography. Her previous roles have included working alongside the United Nations to tackle tax abuse in developing countries, conducting research with Dundee Women's Aid to develop a policy framework for gendered service provision, and working with the Dundee Fairness Commission to evaluate local service provision and develop policy.

Lanre Shittu is a Research Analyst at Zero Waste Scotland. An environmental management researcher with experience in academia, Lanre has expertise in Circular Economy, waste and resources management, environmental impact assessment, environmental auditing as well as environmental awareness and pro-environmental behaviour change. Lanre holds a PhD in Engineering and the Environment from the University of Southampton and has carried out research on electronic waste (e-waste) management with emphasis on urban mining and product reuse. At Zero Waste Scotland, he works on projects related to maximising value from waste and extended producer responsibility.



Special Panel: Just Transition, Circular Economy, and

Anastasios Markopoulos is a member of Zero Waste Scotland's Research and Analysis team and serves as an Assistant Analyst. Since 2019, Anastasios has been involved in a number of circular economy related projects spanning a range of topic areas in sectors including health, textiles, and construction. His role has centred on managing and conducting research to support development of environmental policy and adoption of circular economy practices. Most recently, his time has been spent on overseeing delivery of Zero Waste Scotland's national waste composition analysis programme, which aims to deliver an updated estimate of Scotland's household waste composition. Prior to joining Zero Waste Scotland, Anastasios was Environmental Sustainability Officer at Glasgow Kelvin College and was responsible for promoting circularity in estates management and education for sustainability, respectively. Previous to his work at Glasgow Kelvin College, Anastasios completed his doctoral research in the field of integrated building simulation, with a

focus on indoor air quality in social housing. He has held further posts in academia, working on local, Scottish-based projects with local authorities and the private sector; and partnering in internationally organised studies, on the themes of sustainability, energy consumption, and environmental monitoring.



Keynote talk: Prof Cecilia Tortajada

Chair: Mr Andrew Allan
University of Dundee

Impacts of megatrends in the water sector

Abstract. Water security (or lack of water available in the quantity and quality needed for all uses) is one of the most pressing issues facing the planet. This has been exacerbated by extreme droughts and floods such as the 2022 droughts in California and countries in Western Europe, and floods in Australia and Pakistan the same year. Megatrends or large and often interdependent physical, social, economic, technological, and political changes, have traditionally put pressure on water security, increasing the difficulty to meet water supply, food, energy, and environmental demands. These large changes have exposed the vulnerability of human and ecological systems to rapid change and the need for adaptation and mitigation responses. It is known that population growth, urbanisation, economic development and infrastructure and technological developments will determine the

vulnerability of human and ecological systems to impacts resulting from extreme droughts and floods. This presentation will discuss policy agendas, the main tool available to nations and states to address vulnerabilities, set priorities and provide guidance for decision-making that is more robust.

Cecilia Tortajada is a professor in Practice-Environmental Innovation, School of Interdisciplinary Studies with a Bachelor of Science degree on biology at the National Autonomous University of Mexico; and masters' degrees on agricultural sciences at Colegio de Postgraduados, Mexico and Kagawa University, Japan; water resources management, Royal Institute of Technology, Stockholm, Sweden; and law and public policy, University of Zaragoza, Spain. Double doctorate on philosophy and technology, at the Royal Institute of Technology (KTH), Stockholm, Sweden.



Keynote talk: Prof Raphael J Heffron

Chair: Dr Sufyan Droubi,
University of Dundee

Professor Raphael Heffron is Professor in Energy Justice, the Social Contract and Sustainability at the Université de Pau et des Pays de l'Adour, Pau, France. He is also Jean Monnet Professor in the Just Transition to a Low-Carbon Economy awarded by the European Commission (2019-2022). In 2020, he was appointed as Senior Counsel at Janson law firm in Brussels (Belgium). Professor Heffron is a qualified Barrister-at-Law, and a graduate of both Oxford (MSc-Christ Church) and Cambridge (MPhil-Darwin & PhD-Trinity Hall). He also holds degrees from the University of St. Andrews (MLitt), and Trinity College Dublin (BA, MA). His work all has a principal focus on achieving a sustainable and just transition

to a low-carbon economy, and combines a mix of law, policy and economics. He has published over 180 publications of different types and is the most cited scholar in his field worldwide for energy law, energy justice and just transition worldwide (2900+ Scopus/5600+ Google Scholar) with translated work in multiple languages including Chinese, Italian, French, Spanish, Portuguese, Arabic and Persian. Professor Heffron has given just over 190 keynotes or guest lectures in 52 countries worldwide



Panel 5: Young Scholars' Perspectives



University
of Dundee



Institute for Social Sciences
Research (ISSR)
University of Dundee



Dundee Just Transition Hub
University of Dundee



Newcastle
University



RÉGION
Nouvelle-
Aquitaine



IVERSITÉ
DE PAU ET DES
PAYS DE L'ADOUR
COLLÈGE SSH

UMR 8031
TREE



ROYAL
HOLLOWAY
UNIVERSITY
OF LONDON



Manchester
Metropolitan
University



Panel 5 – Young Scholars’ Perspectives

Chair: Dr Fernando L Fernandes
University of Dundee

1. Africa in Search of a Just Transition; The Role of Legal Education, Ruth Lelei, University of Dundee

Abstract. In Africa, the severity of the impacts of climate change is hard to ignore as is evidenced by the various environmental catastrophes that continue to plague the continent. For the African continent, climate change has therefore ceased being a problem of the future and has become a problem that needs to be addressed with utmost urgency if we are to imagine a future for the continent. In response to this, calls to transition to more sustainable, low-carbon futures have engulfed the continent and, the world at large in attempting to avert further ecological disasters. This has in turn driven the demand for the ‘critical minerals’ required in realising this transition which, unlike fossil fuels, are geographically concentrated in the Global South. This has sparked concerns about the likelihood of the energy transition exacerbating existing injustices and inequalities i.e., human rights abuses and environmental destruction, in resource-rich countries. African governments, scholars, civil

society, and activists are now deeply engaged in pursuing a just transition in endeavouring to avoid replicating the same injustices that the transition aims to address. This paper, however, focuses on another important actor that can be vital in ensuring a just and smooth transition in the African continent, the African law school. Can the African law school mount a response for justice and change through curriculum and pedagogy? Is the legal education able to reconcile with the crisis that we are currently in? and, is it possible to make legal education in the African continent relevant at a time of crisis as well as for an uncertain future? In answering these questions, a just framework will be vital as a theoretical framework in thinking about the future by; addressing present inequalities and injustices, reflecting on the aspect of the urgency of the crisis as well as in giving us a glimpse of the places and people who are susceptible to injustice as the energy transition gathers pace. The contemporary African law school as it stands, has failed to counter a substantial response to the climate crisis that we now find ourselves in, opting to maintain its disciplinary silences that has its foundation in the colonial and neo-liberal era. This structure of the law school has thus become an obstruction in addressing the climate crisis that we now face as it

continues to deliberately propel the conversations on climate change and the need for a just transition to the sciences. In the quest for justice and change, there is an urgent need for legal education to transcend the boundaries it has been founded on if it is to become an important actor in delivering a just transition for the African continent. This requires moving beyond the theories and doctrines that structure the law and legal education to make visible that which has remained hidden in the curriculum. It also involves foregrounding and addressing in the legal curriculum, present and historic inequalities, issues of power, oppression, inequality, and marginalization that is likely to accompany the energy transition, especially for the communities that have been underserved and the countries in the global South that will be at the heart of the exploitation and extraction of the critical minerals needed for the transition. It also entails creating new knowledges that prioritize justice given that the future law students will be practicing law in a world at the grip and mercy of climate change. Realising justice and change through legal education will also mean empowering a generation of leaders and policy makers who will be vital in delivering a just transition, as well as giving the future generations the agency to hold governments accountable, demand for



Panel 5 – Young Scholars’ Perspectives

transparency and, to enable the current generation to understand the urgency and criticality of the current situation in attempting to imagine a different future for the African continent, as the climate crisis calls us to do.

Ruth Lelei is a PhD candidate at the University of Dundee. She received her Bachelor’s degree in Law from Kabarak University, Kenya and holds an LLM in international commercial law from the University of Dundee. Her research interests revolve around international law, legal education, African approaches to international law, critical pedagogies, climate change, indigenous knowledges and decolonisation. She is particularly interested in exploring how law and legal education can be used as tools to promote sustainable development, protect the rights of indigenous and marginalized communities and in addressing the challenges posed by climate change.

2. A Just Transition in an Unjust World: Perspectives from the Global South, Caroline Lichuma, Georg-August University of Göttingen

Abstract. Over the past few years, and in response to the climate emergency that we find ourselves in, significant momentum has built around the idea of a just transition. The ILO defines a just transition as “greening the economy in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities, and leaving no one behind.” One significant development towards a just transition is the recent wave of mandatory Human Rights and Environmental Due Diligence Laws (mHREDD) that have taken Europe by storm in the recent past. Diverse countries such as France, Germany and Norway have enacted due diligence laws imposing mandatory obligations on in-scope companies. In addition, the EU is currently in the process of drafting a Corporate Sustainability Due Diligence Directive (CSDDD) that will likely catalyze legislative action in EU countries that are yet to enact due diligence laws, and even beyond the EU as a result of the “Brussels effect.” Arguably, an integral part of these mHREDD laws is the notion of a just transition, particularly through the “creation of decent work and quality jobs in the context of the implementation of climate change mitigation

policies.” Yet, in this regard, legitimate concerns can and should be raised about how progress towards a just transition can be made, given the structural imbalances and power asymmetries that plague the global order, often pitting the interests of global south rightsholders against large and often powerful Global North Transnational Corporations (TNCs). This contribution will interrogate the progress towards binding due diligence obligations in Europe to offer some tentative insights on whether such laws are capable of fulfilling their just transition targets, given the continuing disenfranchisement of global south rightsholders from the law making and implementation processes. In other words, the analysis will revolve around whether it is possible to contribute to a just transition (within the context of due diligence laws) given the unjust structure of the global legal order that continues to privilege TNCs at the expense of global south rightsholders.

Caroline Lichuma received her LLB from the University of Nairobi, her LLM from the New York University and is a PhD Candidate at the Georg-August University of Göttingen. At present she



Panel 5 – Young Scholars’ Perspectives

is a Research and Development Specialist at the University of Luxembourg. Her current research is in the broad area of business and human rights with a focus on national, regional, and international efforts to increase corporate accountability for human rights and environmental abuses.

3. Women and Energy Transitions, Kaushalya Herath, University of Dundee

Abstract. How women are impacted from energy transitions is an area of research that requires more attention in addressing just and inclusive transitions from fossil fuel-based energy to renewable sources. Due to women’s roles in both productive and reproductive spaces, their use of energy in household spaces can be different from men. Hence how women are impacted by the energy transitions requires critical investigation. This type of studies also requires an intersectional approach of research to evaluate how women from different geographical locations, class, income, educational background, age, and civil status are impacted in different aspects of the Just Transition Framework;

distributional, procedural and recognitional justice. Although the just energy transition debate is more prevalent in the global North, the impacts of the transitions are both local and global. Also, the knowledge from the global south may even inform some of the elements of the just transition framework more comprehensively. The aim of this research paper is not only to understand how the energy transitions are affecting women in different regions of the globe and how women are coping up with the issues, but also to evaluate what aspects of women and energy transition research require more attention. The study is conducted as a narrative literature review. Literature focused on energy transition in different countries covering diverse communities and intersectional identities of women will be chosen for the study. As this is a broad topic, the narrative literature review method will be more beneficial for the study. The study summarizes the experiences of women in just energy transitions as discussed in the existing literature. Through such experiences, experts in the field can learn about the issues regarding the energy transitions. Inquiring the experiences of women across geographies

and communities and understanding the coping mechanisms by women both in Global North and the Global South will make the transition processes more inclusive and just. However, women are not only victims in the energy transition processes, but they are also active agents of transitions with various coping mechanisms. The coping mechanisms by women as agents of transition in different parts of the globe will inform the policy makers in facilitating the more ground level and localized approaches through creating high levels of procedural justice in the process. The literature review will identify the areas that needs to be focused and discussed in future research. This paper focuses on both structural issues and the agency of individual women and women as communities in relation to just energy transitions.

Kaushalya Herath is a PhD student at the University of Dundee, UK. She has a Bachelors in Town and Country Planning from the University of Moratuwa, Sri Lanka, and Master’s in Urban and Regional Planning from Ball State University, USA. Her Scholarly interests are in urban planning, gender studies, peripheral marginalities, inclusive cities, and



Panel 5 – Young Scholars’ Perspectives

people’s spaces. Before commencing her PhD, she worked as a lecturer at the University of Moratuwa, Sri Lanka and teach (part time) at University of Dundee, Scotland.

4. The Key Just Transition Challenge for Small-Island Developing States (SIDS), Alicia Philips, Université de Pau et de Pays de l’Adour.

Abstract. The climate is set to affect SIDS in a major way with economic, social and governance challenges. In this paper, these are detailed in terms of the move to a just transition to a low-carbon economy. Many of these countries face a myriad of challenging financial issues and therefore some type of access to climate finance is necessary. However, such resources need to have clear pathways whereby the strategy of expenditure follows the forms of justice that align with the just transition: i.e., procedural, restorative, distributive and recognition. Further, there has to be a special direction around cosmopolitan justice given its importance to SIDS and the need for far greater collective cooperation in the challenges they face.

Alicia Phillips is a PhD Researcher at the Université de Pau et des Pays de l’Adour, France. As part of the international Energy Justice & Social Contract, CNRS & TREE project, Alicia’s research explores the nexus between human rights, climate change and energy justice across jurisdictions such as Latin America, the EU, Africa, and the Asian South Pacific Islands. A lawyer by profession, Alicia completed her legal studies in Trinidad & Tobago, the West Indies. She has published in premier journals including the International Energy law Review, and the Journal of Energy and Natural Resources Law. In the past she has completed consultancy work on human rights and the extractive industries.

5. Energy law for the energy transition: How is the legal and institutional framework prepared for promoting renewables and just transition in the petrostates? Qaraman Hasan, John Hopkins University.

Abstract. With increasing climate change issues and global responses to the phenomenon, energy transition is inevitable for all countries worldwide, requiring a radical shift toward renewable energies. This radical shift will significantly affect major oil-

producing countries (Petrostates). However, energy transition should be understood in a broad context because it leads to changes in three interconnected dimensions. Firstly, major energy system elements, such as production equipment, market, and distribution infrastructure, need to be changed. Secondly, the actors and their behaviours will need to change with the energy transition. Finally, the transition leads to changes in socio-technical aspects of energy, including changes in regulations and institutions of the energy system. Thus, how do the Petrostates adapt to the transition, and how their institutions and legal framework is prepared for energy transition and promoting renewables? Are these laws and regulations services just transition inside petrostates society? The paper focuses on two main themes. First, the data from the International Country Risk Guide (ICRG) will be used to show the significant gap in institutional capacity between petrostates and non-petrostates in the world. Second, it evaluates the current law and regulations related to the energy and renewable industry in the petrostates to discover how these regulations are achieving just transition in these states. Institutions have a significant role in creating justice in society. According to Rawls, the



Panel 5 – Young Scholars’ Perspectives

conditions that are crucial in this regard are that (1) everyone accepts and knows that others accept the same principles of justice, and (2) the basic social institutions generally satisfy and are generally known to satisfy these principles. Moreover, institutional quality is strongly linked to economic growth and avoiding the resource curse. To date, there is a substantial amount of evidence suggesting that institutional quality is critical in mitigating the resource curse. As well as the resource curse, the low institutional capacity leads to a loss of capability to implement policies and environmental destruction in most emerging economies. In addition, the petrostates are among the countries with the poorest records for renewable energy-related legislation and climate laws. According to the Grantham Research Institute database, which recorded around three thousand laws and policies for all countries worldwide, Iraq has one, Libya two, Kuwait three, and Saudi Arabia and Oman seven. These are all the countries that have the highest GDP from oil rent. In contrast, non-petrostate countries like Spain has 66, the United Kingdom 61, France 66 and Israel 24 climate law and policies. Enactment of legislation and design policies related to climate change and renewable energy is one of the early

stages of knowing the motivations and seriousness of each country regarding energy transition and promoting renewables in a just transition. The concept of just transition should cover justice among states and extend to justice within each state because the implications of the energy transition could be quite significant for some marginalized groups inside petrostates, which heavily depend on oil revenue. This is the central gap in the literature due to limited empirical research and studies on petrostates. Here, institutions and regulations should be prepared to facilitate the energy transition and achieve just transition at the same time. As well as enacting new laws or amendments to current laws, establishing new institutions and increasing their capacity is crucial to achieving just transition as “a fair and equitable process” in the transition to a low carbon economy.

Qaraman Hasan is a Postdoctoral fellow at the School of Advanced International Studies (SAIS), Johns Hopkins University in Washington DC. At SAIS, Qaraman supervises several projects related to energy transition in petrostates and just transition. Previously, He was a law lecturer at the University of Raparin in the Kurdistan Region of Iraq. He studied Doctoral of Philosophy (PhD) in environmental law

at Te Piringa - Faculty of Law at the University of Waikato, New Zealand. Qaraman also holds a double master’s degree in international law and international relations. He is actively researching and publishing on energy law, environmental law, energy transition and climate change issues.

6. A just transition and pastoralism: Evaluating the place of global and local play and policy options – A case study of Kenya,
Halima I. Hussein, Université de Pau et de Pays de l’Adour, Rose J. Birgen, Natural Justice Kenya

Abstract. The law as it stands was never meant to address climate change. States are constrained to implement available laws under international, regional, and domestic regimes to mitigate sources of climate change and to provide for adaptation in diverse livelihood sectors such as pastoralism. In Kenya, a plethora of laws govern the sector - the Paris Agreement, 2015; the African Continental Free Trade Agreement, 2018, the Climate Change Act, 2016 and devolved climate change laws, contextually different in various counties, govern adaptation measures pertaining to the support of



Panel 5 – Young Scholars’ Perspectives

pastoralism in semi-arid Kenya. The Constitution of Kenya 2010, the supreme law of the land, does not once make mention of an existential risk in its national policy domain since 1992, climate change. Instead, it provides that the protection of the environment and natural resources will be a function reserved for national government, whilst animal husbandry, is a function reserved for county (devolved) governments. We cannot talk about a just transition without talking about the very community livelihoods that have been negatively impacted by climate change. Pastoralists are among the poorest and most vulnerable populations on the continent. Decades of marginalization, misguided policies, underinvestment, and now climate change, have resulted in the deterioration of this ancient livelihood. According to a study by the International Livestock Research Institute (2011), Kenyan pastoralists are losing over 302,000 KES annually per household in market value (\$3,000 US) due to livestock loss. In periods of severe drought, herd losses can exceed 60%. With approximately seven million pastoralists in Kenya and more than 250 million across the continent, it represents billions in expenditures and lost resources Africa-wide. With

no resources to help their herds withstand drought, and limited knowledge of pasture availability within their traditional grazing areas throughout the year, pastoralists are experiencing significant herd losses and turning to negative coping strategies - such as seeking pasture outside traditional lands leading to conflict, overgrazing depleted grasses, eating less and out-migration. Why is this important? Kenya, and indeed African pastoralists have been an invaluable part of the economic security and biodiversity of Africa’s drylands for generations. Pastoralist production systems provide 60% of the beef and 70% of the milk for sub-Saharan Africa alone and comprise 10-44% of GDP in African countries. Effective pastoralism with respect to a just transition can mean revival of an economic powerhouse for Africans, to distribute even more funds for adaptation. The law as it stands is the biggest impediment to this food and economic security as well as adaptation. This paper seeks to interrogate a new paradigm in which legal processes and instruments can be designed to be adaptive and responsive to the ever-changing climate change. It proposes abandoning the traditional sense of climate change law and policy making

as we currently know it to be, and inculcating a human rights and community approach to sustain a traditional livelihood that supports Kenya’s and Africa’s millions.

Halima I. Hussein is an energy and environmental law practitioner based in Kenya. She is passionate about affecting and effecting sustainable laws and policies that positively change the trajectory of community lives and livelihoods. She is a Partner at Hawa & Hussein Advocates LLP, a private law firm that specializes in commercial and environmental transactions and litigation, and also leads Uhai Initiative, an NGO aimed at legally empowering communities in marginalized regions in Kenya effectively participate in project and governance decisions that affect their lives and livelihoods. She is a current PhD student at Universite de pau et de pays de l’adour conducting research on energy justice and international development. She is also a Chevening Scholar with a Master of Laws in Energy and Natural Resources Law from Queen Mary, University of London and a Bachelor of Laws from the University of Nairobi. She is an Advocate of the High Court of Kenya.

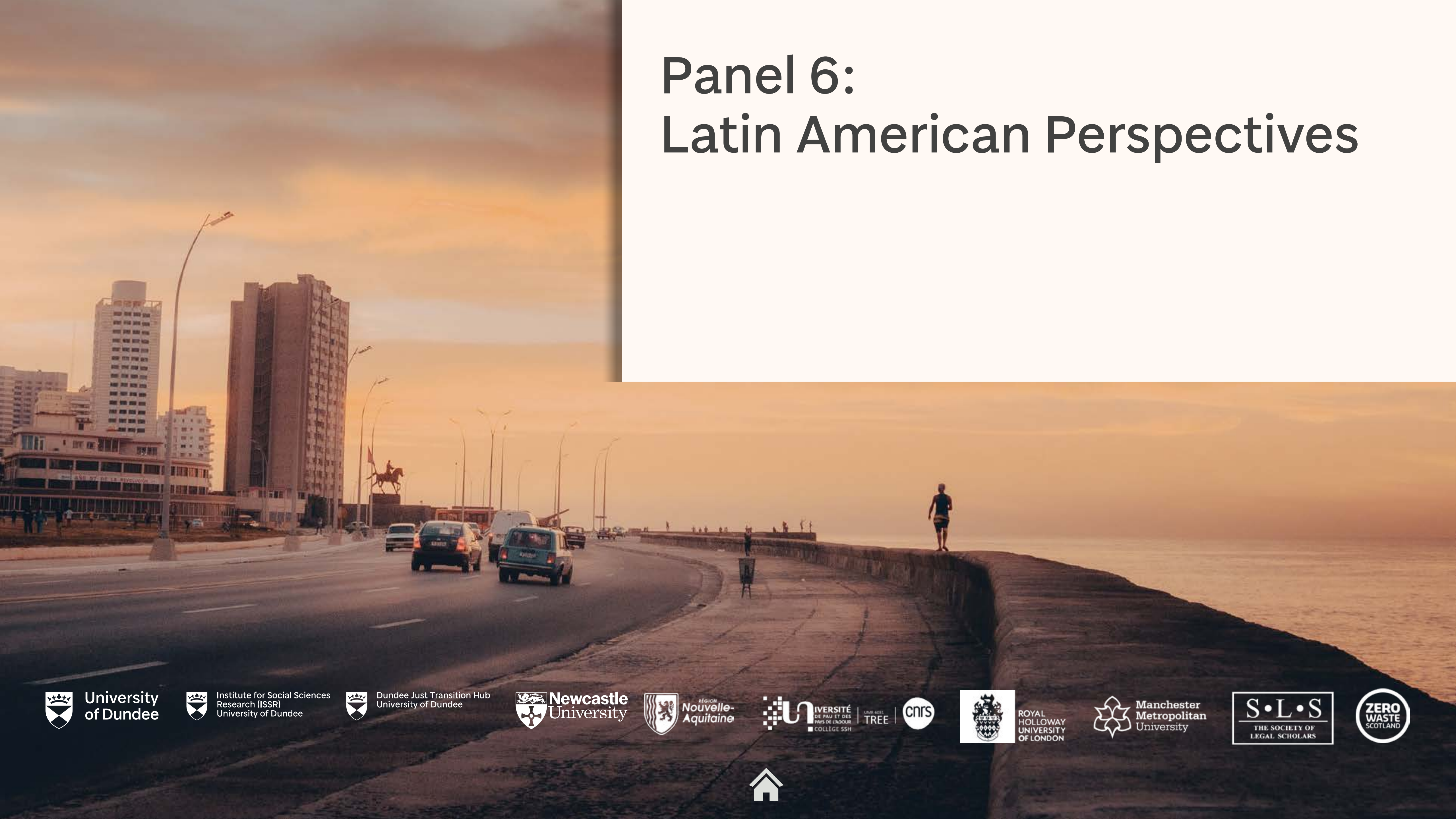


Panel 5 – Young Scholars’ Perspectives

Rose J Birgen is an Environmental and Climate Justice lawyer. She is currently a Programme Manager, Standing with Communities programmatic stream, at Natural Justice in Kenya. Through the Legal Empowerment programme that she leads, her work is focused on supporting the Kenyan citizenry to use environmental laws and human rights to ensure their increased participation in environmental decision-making. She is an advocate of the High Court of Kenya, holding a graduate degree (LL.B) from Moi University, a PG-Dip from the Kenya School of Law and a Masters in Marine and Environmental Law (LLM) from the University of Cape Town.



Panel 6: Latin American Perspectives



University
of Dundee



Institute for Social Sciences
Research (ISSR)
University of Dundee



Dundee Just Transition Hub
University of Dundee



Newcastle
University



RÉGION
Nouvelle-
Aquitaine



UNIVERSITÉ
DE PAU ET DES
PAYS DE L'ADOUR
COLLÈGE SSH

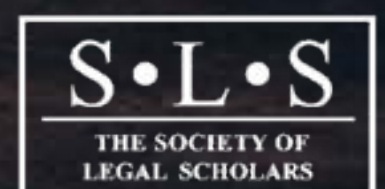
UMR 6031
TREE



ROYAL
HOLLOWAY
UNIVERSITY
OF LONDON



Manchester
Metropolitan
University



Panel 6: Latin American Perspectives

Chair: Dr Cecilia Juliana Flores Elizondo,
Manchester Metropolitan University

1. Barriers and Enablers for Large-Scale CCS Activities in Brazil: An Institutional and Stakeholder Analysis, Israel Lacerda de Araujo, University of São Paulo

Abstract. The urgent need to address climate issues has made greenhouse gas removal (GGR) process a critical priority for engaged countries. Carbon Capture and Storage (CCS) has emerged as a key technology for achieving net-zero emissions, but understanding stakeholder perceptions of this approach is critical for effective decision-making and the long-term success of Brazil's climate policies. However, it remains unclear what are the barriers and enablers for CCS large-scale activities in Brazil from the perspective of major emitting hard-to-abate sectors. The conference paper aims to investigate the institutional framework and stakeholder's perception from the energy sector to better understand the decision paths to the prospective CCS large-scale activities as an emerging economy. Overall, our study highlights the need for coordinated efforts from government, industry, and research stakeholders to effectively implement CCS

in Brazil and achieve its climate policy goals. Our analysis revealed that one of the main challenges to implementing CCS in Brazil is the high cost of implementing complex institutional arrangements for dealing with climate change policies, the role of fossil fuels in the energy transition as a critical issue, and the constraints for increasing consumers costs in electricity, fuels, and commodities. Additionally, low-hanging fruits in the bioenergy sector in its carbon market policy (RenovaBio), the research and development policy and the international market for bioenergy may represent an important vector to the CCS technology. For that, key projects must address the access of geological formations, the property rights, long-term liabilities under political bases, and carbon pricing on bioenergy or low carbon products.

Israel Lacerda de Araujo is an accomplished geologist with a wealth of experience in research and academia. He holds a Master's in Applied Geosciences from the University of Brasília, where he gained valuable knowledge and skills in geology, environmental policy, and sustainable development. Additionally, he obtained a Ph.D. in Sciences from the University of São Paulo, where he focused on researching climate change, mitigation instruments, and governance of natural resources. Araujo's

expertise extends to the international stage, as a visiting researcher at the Center for Environmental Policy at Imperial College London and Energy. During his time at Imperial College, he researched carbon capture, utilization, and storage (CCUS, CCU), as well as bioenergy with carbon capture and storage (BECCS). He believes that the study of climate change, natural resource governance, and decision-making processes have the potential to drive significant advancements in these critical areas. Currently, he is Legislative Adviser at the Brazilian Federal Senate."

2. Powering Progress: New Business Models for Energy Transition in Latin America Niels Van Der Wijk & Lourdes Diaz- Monsalvo, Ongresso Energy

Abstract. The digital world has transformed the electricity sector in recent years, and its advances have allowed the creation of more efficient and profitable power generation systems. Digital technologies, such as Distribution Automation Systems (DAS) and Smart Grids, are transforming the way electrical power is distributed and the way people consume energy (International Energy



Panel 6: Latin American Perspectives

Agency, 2017). For example, home automation technology allows consumers to control home energy devices and systems, such as thermostats and appliances, to reduce energy consumption. According to Navigant Research (2018), the digital transformation has become a key driver for the energy sector, enabling greater efficiency and cost savings. Digitalisation allows the transformation of the processes and operations of companies in the electricity sector. They provide data analysis tools to optimise operations management, improve the efficiency of electric power production and distribution, and reduce costs. In addition, companies can use digital technology to improve interaction with their customers, allowing them to access real-time information about their electric energy consumption, providing tools to control and give them access to real-time information about their electric energy consumption, and offering them tools to control and manage their consumption. In this sense, this document takes a tour of the potential of digital models of the electricity sector in Latin America for renewable energies (García, Montoya, & Garcia-Sanchez, 2020). The Inter-American Development Bank (2019) stated that the digitalisation of the electric power sector in

Latin America and the Caribbean is a crucial step towards improving efficiency and sustainability. The justification for this research is that the automation and digitalisation of renewable energy systems are becoming essential. In the energy industry in Latin America, the digitalisation of its electrical network (Mexico, Colombia, Argentina, and Brazil), the expansion of its monitoring networks, and the guarantee of the right to development of the inhabitants. The methodology to establish the conclusions is based on the indicators of energy justice and data on access to energy services, quality of service, equity in the distribution of costs and benefits, and community participation in decision-making. Afterwards, results on advances in digitalisation, automation and other digital services in the electricity sector from renewable energies, the positive and negative implications for energy justice in Latin America are identified. Energy justice seeks that all people have access to affordable, reliable, and sustainable energy equitably, regardless of geographic location, socioeconomic status, or race; in this sense, guaranteeing that the energy supply is reliable and sustainable is the basis of this. The challenge for regulation is to find a balance between the need to guarantee energy security and energy

justice in the context of energy transition towards cleaner and more sustainable energy sources; This is how this writing exposes the opportunities that the digital world has in the Latin American energy sector.

Niels Van der Wijk holds a Bachelor of Business Administration in International Business and Management Studies from Stenden University in the Netherlands and is an entrepreneur in the field of renewable Energy in Latin America.

Lourdes Diaz-Monsalvo is a lawyer with a law degree from the Catholic University of Colombia with specializations in Public Management from UNAD, a master's degree in Public Policy from the Catholic University of Uruguay, and a master's degree in Mining-energy Law from the Externado University of Colombia with specializations in Social Movements, Human Rights and resistance to Neoliberalism from the University of Buenos Aires.



Panel 6: Latin American Perspectives

3. The policy environment as the key factor for highly capital intensive power generation projects: The case of offshore wind in Brazil, Lucas Ramos Deliberali Barbosa, Hirdan Katarina de Medeiros Costa, University of São Paulo.

Abstract. Offshore wind energy is increasingly under the strategic gaze of international leaders and policymakers. The reason is that this type of power generation has become a critical factor in mitigating the effects of climate change due to the low GHG emissions during the project's entire life cycle and, additionally, because of the superiority of wind resources over the oceans. However, it will be necessary to reach 2000 GW of installed capacity by 2050 to limit the increase in global temperature to 1.5°C, which highlights the importance of creating policies for the sector, especially in emerging economies. In Brazil, there is no offshore wind farms in operation. However, new studies highlight a potential of 700 GW along the coastline, which may increase the security of the power supply and reduce GHG emissions. The Brazilian offshore wind regulation has two essential instruments in different stages: Decree 10,946 (currently valid) and Bill 576/2021 (under analysis by

the House of Representatives). Facing the growth of the international market, the Ministry of Mines and Energy published Decree 10,946 in January 2022, which resulted in an increase in the number of interested companies and 176.5 GW in projects submitted, with higher concentrations in the South and Northeast of the country. At the same time, decree 10,946 did not produce enough confidence, which generated the need to publish Ministerial Orders 675 and 676 by the Ministry of Mines and Energy. The Ordinances provided more details about the procedure for tendering and instituted the creation of an online platform called the Unique Portal for Management of the Use of Offshore Areas for Power Generation (PUG-offshore), aiming to facilitate the process of obtaining permissions for the projects among the various organs of the federal government linked to the administration of the spaces that will be impacted by the developments. It is also worth mentioning that Brazil is advancing in the discussions of bill 576/2021, to consolidate all these instruments into a single regulatory model for offshore wind that will allow attracting new investment funds. This paper presents a literature review of policy-making strategies in mature markets, particularly those that address LCOE

(levelized cost of energy) reduction mechanisms in the face of the highly capital-intensive needs of offshore wind farms. The analyses present new pathways for offshore wind in Brazil to enhance the participation of renewable sources in power supply. The results revealed that national targets for offshore wind and frameworks with clear permitting and auction rules drove developers in mature markets. In Brazil, the publication of the Decree brought more clarity about the rules and permits required for project development; however, further clarification is still needed on one of the competition models proposed by the Ministry of Mines and Energy. Additionally, it is necessary to create incentives for the industrial and port sectors to meet the demands of offshore wind farms throughout their life cycle and provide details about the connection to the grid. It is expected that with the advancement of the debates to improve the Decree and the Law Proposals, there will be a greater consonance between the government and the private sector, considering the common objective of the parties in making the energy transition viable and, in line with international sustainability frameworks, to make the power supply less dependent on fossil fuels.



Panel 6: Latin American Perspectives

Lucas Ramos Deliberali Barbosa is a master's student in Energy Planning at the Institute of Energy and Environment at the University of São Paulo (USP) and graduated in Electrical Engineering (2020) at The City University of São Paulo (UNICID) with an academic exchange (2016) at the University of Salamanca (USAL) in Spain. His dissertation deals with the development of offshore wind energy in Brazil in the context of energy transition. Currently, he is also a researcher at the Research Center for Greenhouse Gas Innovation (RCGI), focused on the analysis of national and international policies for greenhouse gas mitigation.

Hirdan Katarina de Medeiros Costa: Lawyer and Consultant. Lecturer at the Institute of Energy and Environment at the University of São Paulo (USP). Master's and PhD in Energy from the Graduate Program in Energy at the University of São Paulo (PPGE/USP). PhD internship at the University of Oklahoma (OU) Law School, USA. LLM in Energy and Natural Resources Law from OU. Master of Laws (PUC/SP). Post-Doctorate in Sustainability from the School of Arts, Sciences and Humanities at USP (EACH/USP). Post-doctorate in Energy from the Institute of Energy and Environment at USP.

Currently, Visiting Researcher at PRH33.1 ANP/FINEP/ IEE and Professor at PPGE/USP. Researcher at the Research Center for Greenhouse Gas Innovation (RCGI). Member of the Brazilian Association of Energy and Environmental Law (ABDEM). Member of the Brazilian Institute of Energy Law (IBDE), where she coordinates the Energy Law Journal and thematic courses on energy. Member of Laclima. Expert reviewer. Winner of the Vale Capes Award for Doctoral Thesis in 2013.

4. New carbon capture technologies and legal security: the case of BECCS technology in Brazil, Andrieza de Aquino Eslabao, University of São Paulo.

Abstract. Dealing with the effects caused by the Anthropocene era and the current climate crisis will require more than adapting existing activities to a low-carbon framework, but also developing new technological, energy, social, and economic options that contribute to this common goal. The law, as a framework that regulates the activities of the state, also needs to follow and handle such changes. Instead of a rigid and obsolete structure

concerning social demands, one that brings security and flexibility to allow adaptations to develop is necessary. The absence of clear rules and dynamic mechanisms often prevents the development of scientifically and technologically mature technologies from advancing. In this sense, this study addresses the importance of regulation for the expansion of BECCS technology (bioenergy with carbon capture) in the Brazilian context. In doing so, a literature search from an exploratory approach is convenient. The results suggest that, despite presenting itself as a great opportunity and negative emissions in the face of the potential already evidenced in the country, the BECCS technology is not supported by existing regulations to expand. It is concluded by the need for new studies and formulations that can indicate the regulatory paths to make the activity socially and economically viable and environmentally and legally safe.

Andrieza de Aquino Eslabão is a PhD candidate in Energy at the University of São Paulo (IEE-USP). Master in energy and sustainability from the Federal University of Santa Catarina (UFSC), Master of business administration in environmental management from the Federal University of Paraná (UFPR), postgraduate degree in civil procedural law



Panel 6: Latin American Perspectives

from Faculdade Cesusc (CESUSC), law degree from the Federal University of Pelotas (UFPel). Member of the Research Center for Greenhouse Gas Innovation.

5. Brazilian Energy Transition Through Green Hydrogen Regulation, Karen Kristensen Medaglia Motta, Hirdan Katarina de Medeiros Costa, Patricia Helena Lara dos Santos Matai University of São Paulo.

Abstract. The concern about climate change and greenhouse gas emissions (GHGs) has become increasingly relevant, especially with the increased frequency of extreme events of nature. This issue has been on the agenda of discussion and policymaking, especially since the 1970s, with the Stockholm Conference, in particular. Since then, heads of state and supranational organizations have joined efforts to reconcile national policies with international environmental concerns, to effectively cooperate countries and define the main mitigation policies. In view of this, green hydrogen production has an important role in the energy transition, since most renewable sources are intermittent and, according to the Hydrogen Council (2020), it can contribute to reduce GHGs by 60% by 2050, considering

the demand by the progressive increase of the world population to approximately 11 billion people (National Energy Plan 2050). Hydrogen produced from the electrolysis of water using renewable sources, also called green hydrogen, has been identified as a strategic substitute for fossil fuels to obtain clean energy in the long term for sectors that are difficult to decarbonise and as an energy storage technology. There is on Brazil, therefore, the expectation of being one of the largest suppliers of this element, given the local wealth of renewable resources and the consequent competitiveness of generation and production (Ten Year Energy Plan 2031). These characteristics, aligned with the fall in costs and improvements in efficiency, make this technology stand out in the construction of energy policies, especially since the Paris Agreement. In this sense, Brazil presented at the UN, in 2021, two voluntary commitments, called “energy compacts” relating hydrogen to achieve the goals established by the Sustainable Development Goal No. 7 (MME, 2021). According to data from IEA (2019), it is expected that by 2030 more than 80% of primary energy resources will be associated with fossil fuels, generating the maintenance of the current framework of increasing greenhouse gas emissions.

In addition, the forecasts of increased global energy demand for the coming years, associated mainly with population growth and the industrialisation process, lead to estimates of increased emissions by up to 85%, according to studies by the Global CCS Institute (2022). Similarly, according to the International Energy Agency, in 2018, the world demand for hydrogen was 115 Mt, 73 Mt of which was pure hydrogen (IEA, 2019). Ammonia production for fertilizer and oil refining accounted for 96% of pure hydrogen demand. Demand for hydrogen in mixtures with other gases, on the other hand, was 42 Mt, with methanol production accounting for 29%, direct reduction in the steel industry accounting for 7%, and the remainder in other miscellaneous uses (IEA, 2019). In this way, the European Union, Japan, the USA (CAMPOS; LEÃO; AMORIM, 2021) and even Brazil are inserting hydrogen production as a decarbonisation solution in the energy market in order to reach the commitments established in the Paris Agreement and in their respective NDCs. Therefore, the aim is to discuss possible ways for Brazil in face of the recently implemented energy policy: the National Hydrogen Program (PNH2) (MME, 2021).



Panel 6: Latin American Perspectives

Karen Kristensen Medaglia Motta: Lawyer. Master's student on Green Hydrogen Regulation in Brazil at the Energy and Environment Institute of the University of São Paulo. Integrates the research network of the Global Network for Human Rights and the Environment (GNHRE) and the Advocacy group of the Research Centre for Greenhouse Gas Innovation (RCGI/USP). She is associated with the Latin American Climate Lawyers Initiative for Mobilizing Action (LACLIMA); the Brazilian Association of Energy and Environmental Law (ABDEM) and the Brazilian Institute of Energy Law Studies (IBDE). She is a member of the Permanent Commission on Environment and the Commission of Infrastructure and Sustainable Development of São Paulo State Bar Association, Brazil. She has experience as a researcher in research groups on environmental law, climate change, energy and Environmental, Social and Governance at the University of São Paulo (USP), São Judas Tadeu University (USJT), Federal University of Santa Catarina (UFSC) and State University of Rio de Janeiro.

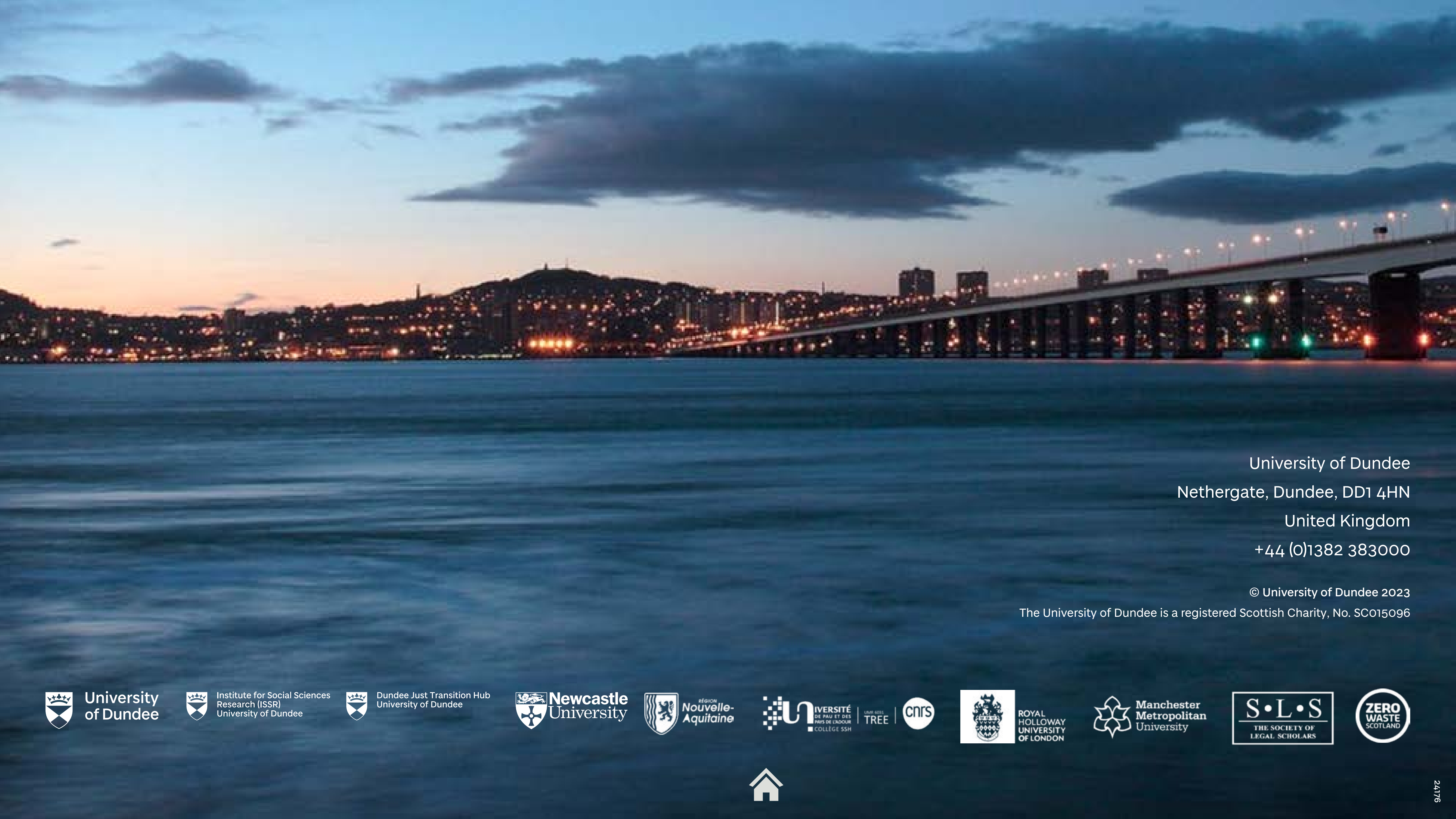
Hirdan Katarina de Medeiros Costa: Lawyer and Consultant. Lecturer at the Institute of Energy and Environment at the University of São Paulo (USP).

Master's and PhD in Energy from the Graduate Program in Energy at the University of São Paulo (PPGE/USP). PhD internship at the University of Oklahoma (OU) Law School, USA. LLM in Energy and Natural Resources Law from OU. Master of Laws (PUC/SP). Post-Doctorate in Sustainability from the School of Arts, Sciences and Humanities at USP (EACH/USP). Post-doctorate in Energy from the Institute of Energy and Environment at USP. Currently, Visiting Researcher at PRH33.1 ANP/FINEP/ IEE and Professor at PPGE/USP. Researcher at the Research Center for Greenhouse Gas Innovation (RCGI). Member of the Brazilian Association of Energy and Environmental Law (ABDEM). Member of the Brazilian Institute of Energy Law (IBDE), where she coordinates the Energy Law Journal and thematic courses on energy. Member of Laclima. Expert reviewer. Winner of the Vale Capes Award for Doctoral Thesis in 2013.

Patricia Helena Lara dos Santos Matai: Bachelor in Chemistry (1978), Master in Engineering (1992), PhD in Engineering (1998) and Professor (2016) from the University of São Paulo. She is a lecturer at the Department of Mining and Petroleum Engineering of the Polytechnic School of USP. She

is a professor and advisor at the Postgraduate Program in Energy at USP where she teaches and advises students in master's and doctoral programs. She was president of the Basic Cycle Commission of the Polytechnic School of USP from 2008 to 2011. She was coordinator of the undergraduate course in Petroleum Engineering at the Polytechnic School of USP between 2012 and 2019. Develops research in surfactants, petroleum chemistry and renewable and non-renewable energies. She is currently vice head of the Department of Mining and Petroleum Engineering at the Polytechnic School of USP, representative of associate professors to the Congregation of the Polytechnic School and representative of the Department of Mining and Petroleum Engineering (PMI) in the Course Coordination Committee. He is member of the PMI Council and alternate member of the Energy Program Coordinating Committee (CCP) of the Institute of Energy and Environment.





University of Dundee
Nethergate, Dundee, DD1 4HN
United Kingdom
+44 (0)1382 383000

© University of Dundee 2023
The University of Dundee is a registered Scottish Charity, No. SC015096



University
of Dundee



Institute for Social Sciences
Research (ISSR)
University of Dundee



Dundee Just Transition Hub
University of Dundee



Newcastle
University



RÉGION
Nouvelle-
Aquitaine



IVERSITÉ
DE PAU ET DES
PAYS DE L'ADOUR
COLLÈGE SSH

UMR 6031
TREE



ROYAL
HOLLOWAY
UNIVERSITY
OF LONDON



Manchester
Metropolitan
University

