CHAPTER 2
Arbitration in Climate Change Finance

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The exponential growth of climate change-related investments will prompt an increase in the relating disputes. Arbitration has the potential to become a favoured resolution mechanism for this type of disputes. The investment arbitration framework is particularly adapted for the expectation both of investors and of host States. International investment agreements include substantive protections that could provide a basis for investors to advance claims against States based on environmental and climate change-related losses. Likewise, the same framework could also provide for a defence, and potentially for grounds for a counterclaim, to respondent States which have adopted environmental regulations in compliance with climate change undertakings. Investors may find it difficult to argue that they had been unaware of the States' international obligations to take measures against climate change. Remarkably, out of the eleven investment arbitration cases where respondent States have raised counterclaims, the only two that were successful were based on environmental arguments.

This chapter makes the case for the suitability of the arbitral procedure for climate change disputes, with parties being able to choose experts in the field as arbitrators or possibly challenge arbitrators for their lack of specialist expertise. Transparency of the proceedings and public participation should be further encouraged by arbitral institutions in order for arbitration to gain legitimacy in resolving climate change disputes.

'I ask all of you to use the great power of arbitration to help the world overcome conflict and hatred and build a future of dignity for all on a healthy planet.' These powerful words closed former United Nations Secretary-General Ban Ki-Moon's address at the twenty-third Congress of the International Council for Commercial Arbitration.[1] Secretary-General Moon's words are undoubtedly the most inspiring message that the arbitration world could hope for, especially during this moment, in which the

1. Arbitration Institute of the Stockholm Chamber of Commerce, *Ban Ki-Moon Commends International Arbitration* (24 May 2016).

arbitration world must assume its responsibility to shape a better dispute resolution system for climate change disputes.

Arbitration has a key role to play in the resolution of climate change disputes. This is even more critical given that disputes are expected to multiply given the exponential increase of green investments. For instance, in 2018, climate-related investments – or 'climate finance' – amounted to USD 546 billion worldwide.[2] In Europe alone in the first quarter of 2020, inflows to sustainable funds represented EUR 30 billion.[3]

This chapter supports the case for arbitration as a preferred dispute resolution mechanism in climate change disputes, both as it now stands and as it should evolve. To that end, it will first address how the United Nations Framework Convention for Climate Change (UNFCCC) and the Paris Agreement's inducement for green investments will likely lead to a multiplication of disputes [§2.01].[4] It will then discuss the role of international arbitration in the resolution of climate change disputes, showing that the investment arbitration framework is particularly adapted for climate change-related disputes for both investors and host States [§2.02]. We close with a reflection on the procedural features of arbitration that particularly suit climate change disputes and the need for arbitral institutions to prepare to administer these disputes [§2.03].

§2.01 CLIMATE FINANCE: A CATALYST FOR CLIMATE CHANGE DISPUTES

Since the adoption of the UNFCCC in 1992, the world has witnessed a substantial increase in public and private funding of green investments and projects [A]. This increase in green finance and investments will inevitably lead to further climate change-related disputes [B].

[A] Financing a Green Transition

The current level of climate finance falls short of what is needed to comply with the commitments undertaken by the States Parties to the Paris Agreement,[5] as estimates of investment needed to reach the Paris Agreement's temperature reduction goals range between USD 1.6 trillion and USD 3.8 trillion annually from now to 2050.[6] To that end, Article 9(1) of the Paris Agreement imposes concrete obligations on developed

2. Climate Policy Initiative, *Global Landscape of Climate Finance*, Report, p. 2 (2019).
3. A. Mooney, P. Temple-West, *Climate Change: Asset Managers Join Forces with the Eco-Warriors*, Financial Times (26 July 2020).
4. United Nations Framework Convention for Climate Change (9 May 1992), T. S. No. 30822; Paris Agreement (12 December 2015), T. S. No. 54113.
5. Climate Policy Initiative, *Global Landscape of Climate Finance*, *supra* footnote 2, p. 3.
6. *Ibid*.

countries to increase their contributions to support developing countries' undertakings to mitigate climate change and to make a green energy transition.[7]

With massive investments needed, a number of climate change treaties have established dedicated public funds to stimulate climate finance.[8] The UNFCCC pioneered the use of financial mechanisms to combat climate change by creating two separate entities: the Global Environment Facility (GEF) and the Green Climate Fund (GCF). Since its creation in 1994, the GEF has financed over 4,800 projects in 170 countries by providing USD 20.5 billion in grants and USD 112 billion in co-financing.[9] The GCF, for its part, seeks to finance developing countries in their commitment to combat climate change and to promote private financing in these countries.[10]

Other United Nation (UN) entities encourage climate finance by providing grants and support mechanisms. The United Nations Development Programme (UNDP), for instance, has dedicated USD 2.3 billion for climate change-related projects.[11] Likewise, in 2008, the World Bank established two additional funds through the Climate Investment Funds, namely the Clean Technology Fund and the Strategic Climate Fund.[12] Overall, the World Bank dedicated over 30% of its financing to climate change-related projects in 2018 and 2019, reaching USD 20.5 billion in 2018 and USD 17.8 billion in 2019.[13] To ensure sustainability of public climate finance through these funds, and to stimulate green investments on a long-term basis, the UN bodies in charge – and particularly the UNDP – should endeavour to ensure the good governance of its climate funds. Allegations of fraud, such as those recently raised against the GEF, risk weakening this crucial system and slowing down public climate finance. Should the UNDP fail to react with the appropriate level of seriousness, these risks will be further heightened.[14]

According to the European Commission, the European Union (EU), its Member States and the European Investment Bank are the largest contributors of public climate financing in developing countries.[15] In 2019 alone, they injected up to EUR 23.2 billion

7. Wendy J. Miles, N. Swan, 'Climate Change Financing and Dispute Resolution', *Finances in International Arbitration*, p. 324 (Tung, Fortese et al., Kluwer Law International 2019): *Mitigation* investments aim at reducing or preventing greenhouse gas emissions, while investments for *adaptation* consist in the modification of existing infrastructures to minimise global warming and climate change.
8. *See* Article 9 paras 8 and 9 of the Paris Agreement.
9. Global Environment Facility, https://www.thegef.org/about-us (accessed 15 October 2020).
10. Green Climate Fund, https://www.greenclimate.fund/about (accessed 15 October 2020).
11. Wendy J. Miles, Nicolas Swan, 'Climate Change Financing and Dispute Resolution', *supra* footnote 7, p. 326.
12. Alexander Thompson, 'The Global Regime for Climate Finance: Political and Legal Challenges', *Oxford Handbook of International Climate Change Law*, p. 178 (Carlane et al., Oxford University Press 2016); Climate Investment Funds, *Timeline*, https://www.climateinvestmentfunds.org/timeline-cif (accessed 15 October 2020).
13. World Bank, *World Bank Group Exceeds its Climate Finance Target with Record Year*, 19 July 2018; World Bank, *Climate Finance*, https://www.worldbank.org/en/topic/climatefinance (updated 4 October 2019).
14. E. White, L. Hook, *UN Body Accused of Climate Project Fraud*, Financial Times (1 December 2020).
15. European Commission, *International Climate Finance*, https://ec.europa.eu/clima/policies/international/finance_en (accessed 15 October 2020).

in climate finance.[16] EU institutions also continue to pursue green finance efforts. For instance, in July 2020, the President of the European Central Bank (ECB), Christine Lagarde, announced that the EUR 2.8 trillion ECB asset purchase scheme will be used to promote green objectives more efficiently and to fight climate change.[17] The President of the Deutsche Bundesbank, Jens Weidmann, suggested that the ECB should only purchase securities or accept them as collateral for monetary policy purposes if their issuers meet certain climate-related reporting obligations.[18] A further step that could be taken would be for financial institutions and their regulators to use ratings only from credit rating agencies that include climate-related financial risks in their credit assessments.

However, the private sector remains the greatest contributor to climate finance. In 2017 and 2018, 56% of climate finance contributions came from the private sector, representing USD 326 billion per year on average.[19] Private climate finance has also been boosted by the green bond market. Bond financing and refinancing projects, along with business activities promoting efforts against climate change, are available on this expanding market which, according to the Organisation for Economic Co-operation and Development (OECD), has already exceeded USD 80 billion labelled green bonds in 2020.[20] This significant growth in the green bond market led to the creation of 'Green Bond Principles' by the International Capital Market Association,[21] the purpose of which is to provide relevant information to bond issuers, allowing their bonds to be labelled as a green bond, and to help investors assess the environmental impact of their investment.[22]

[B] Expecting the Increase in Climate Finance Disputes

This staggering growth in green investments will undoubtedly lead to a proportional increase in disputes. In its November 2019 report 'Resolving Climate Change Related Disputes Through Arbitration and ADR',[23] the International Chamber of Commerce (ICC) Arbitration Commission predicted that climate change disputes may arise in a broad variety of sectors, including energy, urban and infrastructure, land use systems, industry and new technologies, financing, and insurance.[24]

16. European Council and Council of the European Union, *Climate Finance: EU and Member States' Contributions Continued to Increase in 2019*, Press Release (29 October 2020).
17. R. Khalaf, M. Arnold, *Lagarde Puts Green Policy Top of Agenda in ECB Bond Buying*, Financial Times (7 July 2020).
18. J. Weidmann, *Central Banks Cannot Solve Climate Change on Their Own*, Financial Times (19 November 2020).
19. Climate Policy Initiative, *Global Landscape of Climate Finance*, *supra* footnote 2, p. 13.
20. Wendy J. Miles, Nicolas Swan, 'Climate Change Financing and Dispute Resolution', *supra* footnote 7, pp. 328-329; OECD, *Growing Momentum for Sovereign Green Bonds* (29 September 2020).
21. International Capital Market Association, *Green Bond Principles* (2018).
22. *Ibid*.
23. International Chamber of Commerce, *Resolving Climate Change Related Disputes Through Arbitration and ADR*, ICC Commission Report (2019).
24. *Id.*, p. 65, paras 25, 56, 63, 65, 67, 73.

Similarly, the Arbitration Institute of the Stockholm Chamber of Commerce (SCC) has identified three categories of potential climate change disputes (or 'green technology disputes'): those which arise directly or in connection with an international climate agreement or policy, disputes that are technical in nature, and non-technical disputes.[25]

According to the SCC, disputes directly related to international climate agreements and policies will increase, as States Parties to the Paris Agreement have enacted more than 1,500 national regulations relating to climate change.[26] To date, most of the disputes in this category relate to carbon emission trading schemes established under Article 17 of the Kyoto Protocol and Article 6 of the Paris Agreement. However, as the regulations promulgated to enact these were lacking, disputes relating to these programmes unsurprisingly arose, involving issues ranging from unit registration and issuance to the revocation of trading-related decisions.[27]

Arbitration has been used frequently to resolve carbon trading disputes. The Permanent Court of Arbitration (PCA) has administered nine contract-based cases relating to carbon emission trading.[28] Similarly, the SCC has administered a dispute pertaining to a party's failure to transfer emission rights on time within the EU emissions trading scheme, which resulted in the other party's payment of a penalty to the Environmental Protection Agency.[29] Recourse to arbitration in carbon trading disputes is not surprising, as carbon trading exchanges, such as the Intercontinental Exchange, sometimes impose dispute resolution through arbitration on their users.[30]

Regarding technical disputes, the SCC's docket includes cases involving software systems for the regulation of wind turbines, along with a case dealing with a partnership for the construction of a wind farm.[31]

Finally, with respect to non-technical disputes, the SCC provides the example of cases arising from the unpaid delivery of wind energy converters and from a distribution agreement providing for the exclusive distribution of bioenergy products.[32]

Alongside these green *technology* disputes, the number of green *investment* disputes is also on the rise, as revealed by institutions' own statistics. For instance, between 2012 and 2018, 28% of cases registered by the SCC fell within the category of

25. S. Dwi Andrina, *Green Technology Disputes in Stockholm*, Arbitration Institute of the Stockholm Chamber of Commerce (2019).
26. S. Field, H. Laufer, *Climate Change, the Environment and Commercial Arbitration*, Kluwer Arbitration Blog (9 March 2020).
27. Wendy J. Miles, Nicolas Swan, 'Climate Change Financing and Dispute Resolution', *supra* footnote 7, p. 339.
28. *Id.*, pp. 339-340; J. Levine, C. Pondel, *Updates on the Changing State of the Climate and International Arbitration*, 1 ACICA Rev. 35 (2019); ICC Commission Report, *Resolving Climate Change Related Disputes Through Arbitration and ADR*, *supra* footnote 23, p. 59, para. 44; R. Verheyen, C. Zengerling, 'International Dispute Settlement', *Oxford Handbook of International Climate Change Law*, p. 423 (Carlane et al., Oxford University Press 2016).
29. S. Dwi Andrina, *Green Technology Disputes in Stockholm*, *supra* footnote 25, p. 12.
30. Wendy J. Miles, Nicolas Swan, 'Climate Change Financing and Dispute Resolution', *supra* footnote 7, p. 339.
31. S. Dwi Andrina, *Green Technology Disputes in Stockholm*, *supra* footnote 25, p. 12.
32. *Id.*, p. 13.

green investment disputes.[33] All of these disputes were filed under the Energy Charter Treaty (ECT), confirming that the ECT promotes the use of arbitration in climate-related investment disputes.[34] The International Centre for Settlement of Investment Disputes (ICSID) has reported that, in 2020, it administered forty-eight energy cases either directly or indirectly related to climate change, 16% of that year's cases.[35] The PCA's 2019 caseload included twenty cases involving issues of environmental impact or climate change-related projects, accounting for 12% of disputes overall.[36]

Investment treaty-based disputes relating to climate finance are likely to further expand for two reasons. First, the European Commission has recently decided that the subsidies and exemptions for renewable energies should be progressively phased out from 2020 through 2030.[37] The early termination of these incentives could cause a loss for investors, who may initiate treaty-based arbitration proceedings in cases in which jurisdictional conditions are met.

Second, investment disputes relating to climate finance may proliferate following the recent decision on jurisdiction in the *Portigon v. Spain* ICSID arbitration, confirming that tribunals have jurisdiction over claims brought not only by equity investors but also by lenders to renewable energy projects under both the ICSID Convention and ECT.[38] In an earlier ICSID case, *Landesbank v. Spain*,[39] concerning a similar set of facts (the claimant financial institution had provided over 200 loans and financed dozens of renewable energy plants), the respondent did not even challenge that the financing of energy projects constitutes a protected investment under the ECT.[40] Cases such as *Portigon* and *Landesbank* may thus set the stage for the proliferation of ECT proceedings brought by lenders to renewable energy projects.

In addition to green technology and investment disputes, arbitration has also been used in inter-State arbitrations involving environmental issues. In three of these cases, tribunals have held that States have a 'duty to prevent, or at least mitigate, significant harm to the environment when pursuing large scale construction activities',[41] and applied the 'polluter pays' principle. According to this principle, first articulated by the OECD in 1972, the polluter bears the cost of the pollution or the

33. *Id.*, p. 18.
34. *Id.*, p. 19.
35. International Centre for Settlement of Investment Disputes, 2020 Annual Report, pp. 20, 22 (2020).
36. J. Levine, C. Pondel, *Updates on the Changing State of the Climate and International Arbitration*, *supra* footnote 28, p. 34.
37. European Commission, Communication, Guidelines on State Aid for Environment Protection and Energy 2014-2020, 2014/C 200/01, para. 108 (2014).
38. *Portigon AG v. Kingdom of Spain*, ICSID Case No. ARB/17/15, Decision on Jurisdiction, 20 August 2020 (decision not public).
39. *Landesbank Baden-Württemberg, HSH Nordbank AG, Landesbank Hessen-Thüringen Girozentrale and Norddeutsche Landesbank-Girozentrale v. Kingdom of Spain*, ICSID Case No. ARB/15/45.
40. D. Charlotin, *Greenwood-chaired Tribunal Offers up Decision Dismissing Intra-EU Objection in High-stakes 1.76 billion Dollar Energy Charter Treaty Claim*, IA Reporter (11 July 2019); L. Bohmer, *Majority Arbitrators Uphold Jurisdiction over Claims by Financial Institution Which Funded Renewable Energy Projects in Spain*, IA Reporter (21 August 2020).
41. *Iron Rhine Arbitration (Belgium v. The Netherlands)*, PCA Case No. 2003-02, Award, 24 May 2005, para. 59; *Indus Waters Kishenganga Arbitration (Pakistan v. India)*, PCA Case No.

environmental damage it caused.[42] Although the 'polluter pays' principle lacks normative value by itself, it has been enshrined in various environmental treaties, such as the Convention for the Protection of the Marine Environment of the North-East Atlantic and the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, as well as in both general regional treaties, such as the Treaty on the Functioning of the European Union, and specialised regional treaties like as the Energy Charter Treaty.[43]

The first of these disputes articulating State responsibility to prevent or mitigate environmental harm is the 2005 *Iron Rhine Arbitration* between Belgium and the Netherlands, administered by the PCA.[44] The dispute concerned the Belgian reactivation of a railroad through Dutch territory, including a national park, under Belgium's transit rights over Dutch territory based on the 1839 Treaty of Separation. This reactivation, which gave rise to a disagreement on the allocation of costs and risks between the States related to the project's environmental impact.[45] Applying the 'polluter pays' principle, the tribunal concluded that Belgium was to bear the costs and financial risks of the reactivation of the railway for the segments that it used exclusively,[46] and costs and risks were allocated equally between the States for the segments of the railway used by both.[47]

Similar environmental issues arose in the *Indus Waters Kishenganga* arbitration between Pakistan and India in 2013, initiated under the 1960 Indus Waters Treaty.[48] In response to India's plan to build a hydroelectric plant on the Kishenganga River, Pakistan contended that the project violated India's obligation not to obstruct the flow of the natural channels of the river in a manner likely to cause material and environmental damage.[49] The tribunal ruled that the treaty authorised India's planned project,[50] but that, in application to the State's duty to mitigate environmental damages, India was required to guarantee that the project ensured a minimum flow of water downriver.[51]

The third of these cases was initiated by the Philippines against China in the *South China Sea* arbitration under the UN Convention on the Law of the Sea (UNCLOS).[52] These proceedings concerned, *inter alia*, whether Chinese construction of artificial islands in the South China Sea caused severe harm to the coral reef environment.[53] After an extensive review of the expert reports, the tribunal found that

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2011-01, Partial Award, 18 February 2013, paras 451-452; *South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China)*, PCA Case No. 2013-19, Award, 12 July 2016, para. 945.

42. A. Boyle, *Polluter Pays* (Max Planck Encyclopaedia of Public International Law 2009), para. 1.
43. *Ibid.*, paras 3, 6.
44. *Iron Rhine Arbitration*, Award, 24 May 2005, *supra* footnote 41.
45. *Id.*, paras 121, 206.
46. *Id.*, paras 226, 236.
47. *Id.*
48. *Indus Waters Kishenganga Arbitration,* Partial Award, 18 February 2013, *supra* footnote 41.
49. *Id.*, para. 256.
50. *Id.*, para. 510.
51. *Id.*, para. 451, p. 201.
52. *South China Sea Arbitration*, Award, 12 July 2016, *supra* footnote 41.
53. *South China Sea Arbitration*, Award, 12 July 2016, *supra* footnote 41, para. 22.

the Chinese artificial islands had caused devastating and long-lasting damage to the marine environment, amounting to a breach of its obligations under UNCLOS not to harm the marine environment.[54]

§2.02 THE ROLE OF ARBITRATION IN THE RESOLUTION OF CLIMATE CHANGE DISPUTES

States have consented to the jurisdiction of arbitral tribunals for the settlement of climate change-related disputes in numerous treaties. While arbitration is often included as an available dispute resolution mechanism for inter-State disputes, the implementation process has never been fully completed by State parties [A]. On the other hand, the use of investor-State arbitration for climate change-related disputes has expanded considerably [B].

[A] Inter-State Arbitration in Climate Change Disputes: A Missed Opportunity

Recourse to arbitration for inter-State disputes arising out of international environmental and climate change agreements once appeared promising. This began with the adoption of the Vienna Convention for the Protection of the Ozone Layer (VCPOL) in 1985,[55] Article 11(3) of which invites parties to make declarations on whether they consent to the jurisdiction of arbitral tribunals and/or of the International Court of Justice (ICJ) for disputes arising out of the Convention. The parties adopted an Annex to the Convention tailoring the arbitral procedure to the specificities of these disputes, demonstrating their awareness of the particularities of environmental disputes and their willingness to consider recourse to arbitration.[56] This Annex establishes an arbitral procedure under the supervision of the Secretariat of the VCPOL.[57] Notably, this arbitral procedure is tailored for environmental disputes, as it provides that Contracting Parties with an interest in the arbitral proceedings have the right to participate therein, explicitly grants the respondent State the right to file counterclaims, and it requires the tribunal to render its decision within a five-month period, renewable only once.[58]

In 1992, the parties to the UNFCCC followed the same path, as Article 14 of the Convention provides that disputes arising thereunder may be settled through arbitration. As with Article 11 of the VCPOL, Article 14 of the UNFCCC invites the parties to

54. *Id.*, para. 983.
55. Vienna Convention for the Protection of the Ozone Layer (22 March 1985), T. S. No. 26164.
56. W. Miles, M. Lawry-White, *Arbitral Institutions and the Enforcement of Climate Change Obligations for the Benefit of All Stakeholders: The Role of ICSID*, 24 ICSID Review 1, 11 (2019).
57. United Nations Environment Programme, *Handbook for the Vienna Convention for the Protection of the Ozone Layer*, 12th ed., pp. 60-61 (2019).
58. *Ibid.*

declare their acceptance of the compulsory jurisdiction of the ICJ and/or arbitral tribunals.[59]

The Kyoto Protocol and the Paris Agreement followed a similar route: Article 18 of the Kyoto Protocol and Article 24 of the Paris Agreement incorporate Article 14 of the UNFCCC by reference.[60] Although an annex on arbitration was supposed to complement these arbitration mechanisms, the parties to the UNFCCC, the Kyoto Protocol, and the Paris Agreement never adopted these additional instruments.[61]

This failure (or refusal) primarily reflects the Contracting Parties' unwillingness to consent to recourse to arbitration in environmental and climate change-related disputes. In 2020, only two (out of 197) Contracting Parties to the UNFCCC have made a declaration consenting to dispute settlement mechanisms (including arbitration) under Article 14.[62] With respect to the Kyoto Protocol, none of the 192 parties have made such declaration,[63] and the Netherlands is the sole State Party to have issued a declaration under Article 24 of the Paris Agreement consenting to the jurisdiction of the ICJ and arbitral tribunals.[64]

[B] The Suitability of Investment Treaty Arbitration to Deal with Climate Change Disputes

Recent investment treaty cases evince a trend of investors relying on the substantive protections provided under bilateral investment treaties (BITs), free trade agreements, and other multilateral investment treaties to seek recovery for climate change-related losses [1]. In parallel, recent investment treaty cases also indicate a new trend in which host States can avail themselves to climate change-based defences against investors who are non-compliant with environmental regulations [2].

[1] Investors' Climate Change-Related Arguments Falling under the Umbrella of the Substantive Protection of the Investment Treaty

The substantive protections offered to foreign investors under international investment agreements, including the Fair and Equitable Treatment (FET) and Full Protection and Security (FPS) standards, can provide a basis for investors to advance claims against States based on environmental and climate change-related losses.

59. Article 14 of the UNFCCC.
60. Article 18 of the Kyoto Protocol to the UNFCCC and Article 24 of the Paris Agreement both read that: 'The provisions of Article 14 of the [United Nations Framework Convention on Climate Change] on settlement of disputes shall apply mutatis mutandis to this Agreement.'
61. W. Miles, M. Lawry-White, *Arbitral Institutions and the Enforcement of Climate Change Obligations for the Benefit of All Stakeholders*, *supra* footnote 56, p. 10.
62. The Netherlands and the Solomon Islands made a declaration under Article 14 of the UNFCCC, consenting to the jurisdiction of arbitral tribunals; United Nations Framework Convention on Climate Change, *Declarations by Parties* (accessed 13 October 2020).
63. United Nations Treaty Collection, Kyoto Protocol, *Declarations and Reservations* (accessed 13 October 2020).
64. United Nations Treaty Collection, Paris Agreement, *Declarations and Reservations* (accessed 13 October 2020).

An example of the application of the FET standard in this context is the *Novenergia v. Spain* SCC case brought under the ECT.[65] The claimant had indirectly invested in photovoltaic plants in Spain following the adoption of Royal Decrees in 2000 and 2007, encouraging renewable energy production, resulting in the claimant's legitimate expectation that Spain would maintain this favourable regime.[66] However, following the late-2000s economic crisis, Spain issued a 2010 Royal Decree retroactively deleting feed-in tariff values for photovoltaic plants registered in 2007,[67] and subsequent regulations further altered the remuneration mechanism.[68] The tribunal agreed with the claimant and found that the investor had legitimate expectations arising out of Spain's initial Royal Decrees, which could not be radically or fundamentally altered,[69] and that this retroactive change of regulation required it to compensate the investor.[70]

The *Novenergia* award suggests that an investor may rely on its legitimate expectations under an investment treaty's FET provision that a State would continue to promote green energy investment and endeavour to ensure compliance with international environmental obligations.[71] Tribunals may indeed interpret the FET standard in light of the State's legitimate policy objective of complying with applicable international environmental law.[72] It will therefore come as no surprise that investors may rely on the FET standard moving forward as a basis for claims arising from a State's environmental and climate change action or inaction.

The 2018 *Zelena v. Serbia* ICSID case appears to confirm this trend.[73] In *Zelena*, the claimant, an operator of a plant using animal by-products to produce energy, asserted that Serbia's failure to enforce its environmental and veterinary laws

65. *Novenergia II – Energy & Environment (SCA), SICAR v. Kingdom of Spain*, SCC Case No. 063/2015, Final Award, 15 February 2018.
66. *Novenergia II v. Spain*, Final Award, 15 February 2018, *supra* footnote 65, para. 551.
67. *Novenergia II v. Spain*, Final Award, 15 February 2018, *supra* footnote 65, para. 121; Royal Decree 1565/2010, 'Regulating and Modifying Specific Aspects Related to Energy Production in the Special Regime', 19 November 2010.
68. *Novenergia II v. Spain*, Final Award, 15 February 2018, *supra* footnote 65, paras 132, 136, 139 and 145; G. Issac, *Luxembourg Fund Awarded EUR 53.3 Million for FET Breach Arising out of Spain's Curtailment of Renewable Energy Incentive Schemes*, International Institute for Sustainable Development (30 July 2018); Royal Decree-Law 2/2013 'Concerning Urgent Measures in the Electric System and Financial Sector', 1 February 2013 and Royal Decree-Law 9/2013 'Adopting Urgent Measures to Ensure the Financial Stability of the Electric System', 13 July 2013.
69. *Id.*, paras 666, 681.
70. *Id.*, para. 697.
71. Royal Decree 661/2007 'Regulating Electricity Production Under the Special Regime', 25 March 2007: The second paragraph of the Royal Decree Preamble provides that the energy policy should encourage renewable energies and decrease gas emissions, as committed in the Kyoto Protocol.
72. Annette Magnusson, 'New Arbitration Frontiers: Climate Change', *Evolution and Adaptation: The Future of International Arbitration,* p. 1020 (Kalicki, Abdel Raouf, Kluwer Law International 2019).
73. *Zelena N.V. and Energo-Zelena d.o.o Inđija v. Republic of Serbia*, ICSID Case No. ARB/14/27, Award, 9 November 2018 (unpublished).

amounted to a FET violation, as it favoured the claimant's non-compliant competitors.[74] The tribunal agreed, ordering Serbia to compensate the claimant for the FET violation.[75]

In addition to a host State's domestic law, the State's international obligations can also serve as a basis for an investor's claim. Broadly worded arbitration clauses (referring, e.g., to 'all disputes relating to an investment'), together with Article 31(3)(c) of the Vienna Convention on the Law of Treaties (VCLT), which provides for the applicability of 'any relevant rules of international law applicable in the relations between the parties', allow tribunals to apply other international conventions when faced with an investment claim.[76]

The ad hoc tribunal organised under the United Nations Commission on International Trade Law (UNCITRAL) Rules in the *S.D. Myers v. Canada* case relied on treaties ratified by Canada to determine whether that the State had breached its obligations to the US investor under the North American Free Trade Agreement (NAFTA). In that case, the claimant, a waste treatment company, brought a claim against Canada when the State issued an interim order prohibiting the export of the waste of a certain chemical compound.[77] In considering whether the order violated Canada's national treatment and minimum standard of treatment obligations under NAFTA, along with whether the order amounted to an expropriation, the tribunal considered the Canada-USA Transboundary Agreement on Hazardous Waste and the Basel Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal.[78] In light of these treaty provisions, the tribunal held that, although a State may achieve its chosen level of environmental protection 'through a variety of equally effective and reasonable means', Canada was obliged to adopt the alternative 'that is most consistent with open trade'.[79]

The FPS standard, which protects the physical integrity and the legal security of the investment and imposes a due diligence obligation on the host State,[80] can also protect investors in situations in which the action or inaction of the State has degraded the environment and, consequently, the value of the investment.[81]

For example, the claimant in the PCA case *Allard v. Barbados* relied on the FPS standard after the Barbados Water Authority conducted an emergency discharge of raw

74. J. Hepburn, *Serbia Held Liable at ICSID in Case Alleging Failure to Enforce Environmental Regulations*, IA Reporter (10 November 2018).
75. *Ibid.*
76. R. de Paor, *Climate Change and Arbitration: Annex Time Before There Won't Be a Next Time*, 8 J. Int. Disput. Settl. 179, 209 (2017); Zachary Douglas, 'The Enforcement of Environmental Norms in Investment Treaty Arbitration', *Harnessing Foreign Investment to Promote Environmental Protection*, pp. 424-425 (Dupuy, Viñuales, Cambridge University Press 2013). In addition, Article 42(1) of the ICSID Convention allows tribunals to apply 'rules of international law as may be applicable' in the absence of an agreement on the applicable by the parties.
77. *Id.*, para. 128.
78. *Id.*, paras 220-221.
79. *Ibid.*
80. August Reinisch, Christopher Schreuer, *International Protection of Investments: The Substantive Standards*, pp. 558, 569, 580, paras 79, 129, 171 (Cambridge University Press 2020).
81. Annette Magnusson, 'New Arbitration Frontiers: Climate Change', *supra* footnote 72, p. 1021.

sewage in a nearby swamp,[82] degrading the claimant's ecotourism site.[83] The claimant contended that the FPS standard in the Barbados-Canada BIT included an obligation of due diligence, and that the State's failure to exercise such diligence resulted in an FPS violation.[84] Although the tribunal rejected the claimant's position, it nonetheless observed in obiter dictum that 'consideration of a host State's international obligations may well be relevant in the application of FPS standard to particular circumstances' and noted that Barbados had ratified the Convention on Biological Diversity and the Ramsar Convention on Wetlands of International Importance.[85]

Although the claimants were ultimately unsuccessful, the *obiter* in *Allard* opens the door to claims against States for violations of the FPS standard for their inappropriate actions or inactions on climate change.[86]

[2] Climate Change-Related Defences for Respondent States in Investment Arbitration

Not only does the investment arbitration framework allow investors to bring climate change-related arguments before arbitral tribunals but also this same framework provides a defence to respondent States.

Investment treaties, for example, do not restrict States from adopting environmental regulations.[87] As recalled by the *Invesmart v. Czech Republic* UNCITRAL tribunal, international investment agreements are not expected to prevent Contracting States from exercising their customary international law right to regulate.[88] Also known as the 'police powers' doctrine,[89] the right to regulate operates as a balance between the investor's private interests and the public purpose that the State pursues through action or abstention.[90] To that end, tribunals generally examine whether the State measure challenged by the claimant fulfils four criteria: whether the measure: (i) was adopted

82. *Id.*, paras 50, 43.
83. Flavia Marisi, *Environmental Interests in Investment Arbitration*, p. 23 (Kluwer Law International 2020).
84. *Peter A. Allard v. The Government of Barbados*, PCA Case No. 2012-06, Award, 27 June 2016, para. 249.
85. *Ibid.*, para. 244.
86. Annette Magnusson, 'New Arbitration Frontiers: Climate Change', *supra* footnote 72, p. 1021.
87. *Methanex Corporation v. United States of America*, UNCITRAL, Final Award, 3 August 2005, Part IV Ch. D paras 7, 9, 15; S. Schill, *Do Investment Treaties Chill Unilateral State Regulation to Mitigate Climate Change?*, 24 J. Int. Arbitr. 469, 470 (2007).
88. *Invesmart B.V. v. Czech Republic*, UNCITRAL, Award, 26 June 2009, para. 498. *See also SAUR International v. Argentine Republic*, ICSID Case No. ARB/04/4, Decision on Jurisdiction and Liability, 6 June 2012, para. 398.
89. Alain Pellet, 'Police Powers or the State's Right to Regulate', *Building International Investment Law: The First 50 Years of ICSID* (Fischer et al., Kluwer Law International 2015); Yulia Levashova, *The Right of States to Regulate in International Investment Law: The Search for Balance Between Public Interest and Fair and Equitable Treatment* (Kluwer Law International 2019); Catharine Titi, 'Police Powers Doctrine and International Investment Law', *General Principles of Law and International Investment Arbitration* (Gattini, Tanzi, Fontanelli, Brill Nijhoff 2018).
90. S. Schill, *Do Investment Treaties Chill Unilateral State Regulation to Mitigate Climate Change?*, *supra* footnote 87, p. 471.

in good faith, (ii) is for a public purpose, (iii) is proportional to this purpose, and (iv) is not discriminatory.[91] Environment protection has been routinely held by tribunals to be a public purpose on which police powers may be based.[92] As such, the State's right to regulate may constitute a successful defence against a claim regarding a polluting investment.

Likewise, just as a claimant may invoke its legitimate expectations under the FET standard to challenge a State environmental measure, the respondent State can equally invoke FET principles as a defence. Tribunals generally consider that investors' expectations are legitimate only when the investors exercised due diligence and carried out a risk assessment before investing.[93] This principle was articulated by the ad hoc tribunal established under the SCC Rules in the *Charanne v. Spain* case, stating 'the Claimants should have made a diligent analysis of the legal framework for the investment' in order to attract investment treaty protection.[94]

As climate change agreements are now part of the public debate, it would thus be difficult for any investor to successfully argue that it was, for example, unaware of the Paris Agreement and a host State's obligation to reduce greenhouse gas emissions thereunder. The enactment of a regulation by a State Party to the Paris Agreement implementing its commitments under this treaty is therefore likely to be held as reasonable on the State's part and foreseeable to any prudent investor.[95] An investor making an investment in a polluting industry after the adoption of the Paris Agreement would correspondingly have difficulty arguing that it could not have legitimately expected the State to take measures against climate change. As a result, the increase in the number of climate change treaties and increasing public knowledge thereof may well constitute a defence for States faced with investment claims.

States may also assert climate change-related arguments against claimants through counterclaims. Although whether States can bring counterclaims is still the

91. *See Saluka Investment BV v. Czech Republic*, UNCITRAL, Partial Award, 17 March 2006, para. 255; SAUR *International v. Argentine Republic*, ICSID Case No. ARB/04/4, Decision on Jurisdiction and Liability, 6 June 2012, para. 401; *Les Laboratoires Servier, S.A.S., Biofarma, S.A.S. and Arts et Techniques du Progrès S.A.S. v. Republic of Poland*, UNCITRAL, Award, 14 February 2012, para. 569.
92. *Magyar Farming Company Ltd, Kintyre Kft and Inicia Zrt v. Hungary*, ICSID Case No. ARB/17/27, Award, 13 November 2019, para. 366; *Crompton (Chemtura) Corporation v. Government of Canada*, UNCITRAL, Award, 2 August 2010, para. 266; *Marvin Roy Feldman Karpa v. United Mexican States*, ICSID Case No. ARB(AF)/99/1, Award, 16 December 2002, para. 103.
93. Yulia Levashova, *The Right of States to Regulate in International Investment Law*, *supra* footnote 89, pp. 163-164; *See Biwater v. Tanzania,* ICSID Case No. ARB/05/22 Final Award, 24 July 2008, para. 601; *Parkerings v. Lithuania,* ICSID Case No. ARB/05/8 Award, 11 September 2007, para. 335; *Mamidoil Jetoil Greek Petroleum Products Société S.A. v. Republic of Albania*, ICSID Case No. ARB/11/24, Award, 30 March 2015, para. 634; *Isolux Netherlands, BV v. Kingdom of Spain*, SCC Case V2013/153, Award, 17 July 2016, para. 781.
94. *Charanne Construction v. Spain*, SCC Case No. 062/2012, Award, 21 January 2016, para. 505 (unofficial translation).
95. M. Feria-Tinta, *The Role of International Law and Arbitration in Enforcing the Paris Agreement*, Kluwer Arbitration Blog (31 December 2016).

subject of debate,[96] and some commentators assert that States cannot file counterclaims when the obligation allegedly breached by the investor is not enshrined in the investment treaty,[97] eleven counterclaims have been filed by respondent States to date.[98] Out of these eleven counterclaims, tribunals have retained jurisdiction over only five, and only two of those counterclaims were ultimately successful.[99]

Notwithstanding the limited use of counterclaims in the past, no fewer than four separate legal bases exist for an investment tribunal's jurisdiction over a respondent State counterclaim, depending on the circumstances.[100] First, the investment treaty may expressly grant the contracting State the right to bring a claim or counterclaim, though only four do so and most are silent on this issue.[101] Second, the applicable arbitration rules may expressly authorise counterclaims, as is the case with most arbitration rules.[102] Third, the parties may agree to confer jurisdiction to the tribunal over counterclaims, as in the *Burlington v. Ecuador* ICSID case, discussed below.[103] Finally, a tribunal may base its jurisdiction over counterclaims on the applicable dispute resolution provision, in cases in which the provision is broadly worded, allowing the submission of 'all' or 'any' disputes related to investments.[104]

Interestingly, the two State counterclaims that, to date, were successful were both based on environmental arguments. Both were filed by Ecuador in the related *Burlington v. Ecuador* and *Perenco v. Ecuador* cases.[105] The claimants, Perenco and Burlington, formed a consortium and invested in two hydrocarbon blocks through ownership interests in Production Sharing Contracts (PSC) to operate in the Ecuadorian

96. Anne Hoffmann, 'Counterclaims', *Building International Investment Law: The First 50 Years of ICSID*, p. 510 (Fischer et al., Kluwer Law International 2015).
97. *Ibid*.
98. Flavia Marisi, *Environmental Interests in Investment Arbitration*, *supra* footnote 83, p. 238.
99. *Ibid*.; *Urbaser S.A. and Consorcio de Aguas Bilbao Bizkaia, Bilbao Biskaia Ur Partzuergoa v. Argentine Republic*, ICSID Case No. ARB/07/26, Award, 8 December 2016, para. 1155; *Hesham T. M. Al Warraq v. Republic of Indonesia*, UNCITRAL, Final Award, 15 December 2014, para. 664; *Perenco Ecuador Ltd. v. Republic of Ecuador*, ICSID Case No. ARB/08/6, Award, 27 September 2019, para. 1023(b); *Burlington Resources, Inc. v. Republic of Ecuador*, ICSID Case No. ARB/08/5, Decision on Counterclaims, 7 February 2017, para. 1099.
100. Flavia Marisi, *Environmental Interests in Investment Arbitration*, *supra* footnote 83, p. 239.
101. *See* Article 17 of the Slovak Republic–Iran BIT; Article 22 of the Slovak Republic–United Arab Emirates BIT; Article 28 of the Argentina–United Arab Emirates BIT; Article 9.19 of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership.
102. *See* Article 46 of the ICSID Convention; Article 40(1) of the ICSID Arbitration Rules; Article 9 of the SCC Rules, Article 5 of the ICC Rules, Article 2(1)(iii) of the LCIA Rules, Articles 4(1)(b) and 25 of the SIAC Investment Rules; Article 21 of the 2010 UNCITRAL Arbitration Rules: Article 19(3) of the UNCITRAL Arbitration Rules originally authorised 'counter-claim[s] arising out of the same contract', but the reference to 'the same contract' was removed during the revision of the Rules in 2006 to leave no doubt on the permissibility of counterclaims in investment arbitration proceedings.
103. *Burlington Resources, Inc. v. Republic of Ecuador*, ICSID Case No. ARB/08/5, Decision on Counterclaims, 7 February 2017, para. 60.
104. Flavia Marisi, *Environmental Interests in Investment Arbitration*, *supra* footnote 83, p. 240; *See Urbaser S.A. and Consorcio de Aguas Bilbao Bizkaia, Bilbao Biskaia Ur Partzuergoa v. Argentine Republic*, ICSID Case No. ARB/07/26, Award, 8 December 2016, para. 1144.
105. *Burlington Resources Inc. v. Republic of Ecuador*, ICSID Case No. ARB/08/5; *Perenco Ecuador Ltd. v. Republic of Ecuador and Empresa Estatal Petróleos del Ecuador*, ICSID Case No. ARB/08/6.

forest.[106] The disputes arose out of a significant increase in windfall taxes imposed by Ecuador on the claimants, although the PSCs provided that the State-owned oil company would cover future tax increases.[107] Perenco and Burlington filed separate ICSID arbitration claims in April 2008.[108] In both cases, Ecuador filed a counterclaim alleging that the claimants were liable for environmental damage caused by soil and groundwater pollution in the two hydrocarbon blocks they operated.[109] Although differently constituted, both tribunals retained jurisdiction over the counterclaim, and both unanimously found that the claimants were liable for environmental damage and ordered compensation to Ecuador based on its counterclaims.[110]

The respondent State's climate change-related defence may also directly derive from the letter of the applicable investment treaty. Out of the 2,342 BITs currently in force,[111] approximately 10% include provisions addressing environmental issues.[112] More than sixty-six investment treaties refer to environmental matters in their preamble, including the recently ratified Agreement between the United States of America, the United Mexican States and Canada (USMCA), along with the ECT.[113] Some international investment agreements specify that non-discriminatory environmental measures do not amount to indirect expropriation,[114] and others encourage the Contracting Parties not to lower their environmental standards to attract investments.[115] Finally, some treaties deal with environmental issues directly in relation to investor-State dispute settlement. For instance, the Belgium/Luxembourg–Colombia

106. M. Levine, *ICSID Tribunal Renders Interim Decision on Ecuador's Environmental Counterclaim in Long-running Dispute*, International Institute for Sustainable Development (26 November 2015); J. Robalino Orellana, *Burlington Resources Inc v. Republic of Ecuador* (Decision on Ecuador's Counterclaims), ICSID Case No. ARB/08/5, 7 February 2017 (Contribution by ITA Board of Reporters, Kluwer Law International 2017).
107. *Perenco Ecuador Ltd. v. Republic of Ecuador and Empresa Estatal Petroleos del Ecuador (Petroecuador)*, ICSID Case No. ARB/08/6, Decision on Jurisdiction, 30 June 2011, paras 15-21; International Institute for Sustainable Development, *Burlington v. Ecuador*, Investment Treaty News (18 October 2018).
108. *Perenco v. Ecuador*, Decision on Jurisdiction, 30 June 2011, *supra* footnote 107, para. 21.
109. *Burlington v. Ecuador*, Decision on Counterclaims, 7 February 2017, *supra* footnote 103, para. 52(i); *Perenco Ecuador Ltd. v. Republic of Ecuador*, ICSID Case No. ARB/08/6, Interim Decision on the Environment Counterclaim, 11 August 2015, para. 36.
110. *Perenco Ecuador Ltd. v. Republic of Ecuador*, ICSID Case No. ARB/08/6, Award, 27 September 2019, para. 1023(b); *Burlington v. Ecuador*, Decision on Counterclaims, 7 February 2017, *supra* footnote 103, para. 1099.
111. Investment Policy Hub, *International Investment Agreements Navigator*, https://investmentpolicy.unctad.org/international-investment-agreements (accessed 7 December 2020).
112. K. Gordon, J. Pohl, *Environmental Concerns in International Investment Agreements: A Survey*, OECD Working Papers on International Investment 2011/01, p. 3 (2011).
113. *Id.*, pp. 11-13; The USMCA entered into force on 1 July 2020 and replaces NAFTA.
114. K. Gordon, J. Pohl, *Environmental Concerns in International Investment Agreements: A Survey*, OECD Working Papers on International Investment 2011/01, p. 11 (2011).
115. *Ibid*.

BIT excludes State environmental measures from the scope of the dispute settlement clause entirely.[116]

These treaties encourage arbitral tribunals to consider environmental issues when dealing with an investment dispute. On this basis, arbitral tribunals' interpretation of investment treaties in light of climate change matters could undoubtedly support a respondent states' defence based on their environmental regulations.

§2.03 THE SUITABILITY OF ARBITRATION PROCEEDINGS FOR THE RESOLUTION OF CLIMATE CHANGE DISPUTES

Arbitral institutions have increasingly acknowledged the role of arbitration in the resolution of climate change-related disputes. The PCA, for one, has been a pioneer, adopting in 2001 a special set of arbitration rules for environmental-related disputes.[117] Adapted to disputes involving 'a natural resources, conservation, or environmental protection component',[118] the PCA Environmental Rules are accompanied by the establishment of a list of arbitrators specialised in environmental matters and a list of scientific and technical experts.[119] In addition, the PCA Environmental Rules allow the arbitral tribunal to appoint experts and order interim measures to preserve the environment from serious harm within the subject matter of the dispute. These Rules have been applied in six contract-based disputes relating to carbon trading under the UNFCCC and the Kyoto Protocol.[120]

The ICC and the SCC have followed suit and taken initiatives to adapt arbitration proceedings administered under their rules to the specificities of disputes relating to climate change. These institutions highlighted, and sometimes improved, the advantages that arbitration offers to resolve these disputes, including tribunal expertise [A], transparency and public participation [B], and the expeditiousness of arbitral proceedings [C].[121]

116. Article VII(5) of the Belgium/Luxembourg-Colombia BIT deals with environment protection and policies, and provides that '[t]he dispute settlement mechanisms under Articles XII and XIII of this Agreement shall not apply to any obligation undertaken in accordance with this Article'.
117. PCA Optional Rules for Arbitration of Disputes Relating to Natural Resources and/or the Environment.
118. *Id.*, p. 183.
119. The Panel of arbitrators for environmental disputes was established under Article 8(3) of the PCA Environmental Rules and the Panel of experts was established under Article 27(5) of the Rules.
120. J. Levine, C. Pondel, *Updates on the Changing State of the Climate and International Arbitration*, *supra* footnote 28, p. 35.
121. ICC Commission Report, *Resolving Climate Change Related Disputes Through Arbitration and ADR*, *supra* footnote 23.

[A] Expertise on Climate Change Issues

Climate change disputes involve complex fields of law and require specific environmental and scientific knowledge.[122] As recalled by the ICC Arbitration Commission Report on Climate Change, it is essential to ensure that 'appropriate expertise is available to the parties and the tribunal' to facilitate the 'understanding of disputes and their resolution techniques'.[123] Since international lawyers are not usually equipped with the necessary skills to deal with these issues,[124] arbitration may respond to the demands of climate change-related disputes in terms of expertise in two ways: through the appointment of arbitrators specialised in environmental issues and/or the specific sector at hand, and through the designation of competent experts.

To select arbitrators capable of understanding the issues in dispute, the parties may, for example, request that arbitral institutions provide publicly available information on the arbitrators' expertise or present a list of arbitrators qualified to deal with these matters.[125] As noted above, the PCA Environmental Rules do just that by establishing a panel of arbitrators specialised in environmental issues. The SCC, for its part, has observed that arbitrators specialised in the energy or in the construction sector are appointed in most disputes involving climate change elements.[126]

Arbitrator expertise is of such importance that an arbitrator's lack of the necessary skills to understand and rule on the dispute could give rise to a challenge.[127] In support of this view, the ICC Arbitration Commission Report on Climate Change relies on Article 14(1) of the ICC Arbitration Rules, under which an arbitrator may be challenged 'whether for an alleged lack of impartiality or independence, *or otherwise*' (emphasis added), and considers that '[t]he language "or otherwise" is a catch-all phrase that could include lack of requisite qualifications'.[128] To avoid such a situation, the appointment of an arbitrator with the appropriate expertise may be included in the arbitration agreement as a condition for the valid constitution of the tribunal.[129]

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122. D. Magraw, C. Giorgetti et al., *Model Green Investment Treaty: International Investment and Climate Change*, 36 J. Int. Arbitr. 95, 125 (2019); Wendy J. Miles, N. Swan, 'Climate Change Financing and Dispute Resolution', *supra* footnote 7, p. 342.
123. ICC Commission Report, *Resolving Climate Change Related Disputes Through Arbitration and ADR*, *supra* footnote 23, p. 19.
124. Joint dissenting opinion of Judges Al-Khasawneh and Simma, *Pulp Mills on the River Uruguay* (*Argentina v. Uruguay*), International Court of Justice, Judgment, 20 April 2010, p. 109, para. 2: 'the Court has evaluated the scientific evidence brought before it by the Parties in ways that we consider flawed methodologically'.
125. ICC Commission Report, *Resolving Climate Change Related Disputes Through Arbitration and ADR*, *supra* footnote 23, p. 21.
126. S. Dwi Andrina, *Green Technology Disputes in Stockholm*, *supra* footnote 25, pp. 15, 23.
127. ICC Commission Report, *Resolving Climate Change Related Disputes Through Arbitration and ADR*, *supra* footnote 23, p. 23, para. 5.19.
128. *Ibid.*
129. *See, e.g.*, *Indus Waters Kishenganga Arbitration (Pakistan v. India)*, PCA Case No. 2011-01; Article IX(5)(4) of the 1960 Indus Waters Treaty requires that at least one highly qualified engineer composes the tribunal; J. Levine, 'Adopting and Adapting Arbitration for Climate Change-Related Disputes: The Experience of the Permanent Court of Arbitration', *Dispute Resolution and Climate Change: The Paris Agreement and Beyond*, p. 26 (Miles, ICC 2017), p. 29.

The arbitral tribunal may alternatively seek assistance on technical issues by designating experts.[130] For example, in the *Perenco v. Ecuador* case, the tribunal appointed its own independent expert, after it concluded that it was unable to determine which of the party-appointed experts was more reliable.[131] Similarly, in the *South China Sea* case, the tribunal appointed its own experts on coral reef environment to report and shed light on the potential consequences of the disputed construction activities.[132]

As climate change-related disputes encompass a wide range of issues that do not necessarily pertain to environmental science alone, the SCC correctly observes that other areas of expertise may also bring meaningful contributions to the resolution of these types of disputes. This is, for instance, the case of finance and taxation experts who can guide the tribunal in understanding the consequences of States incentive and support schemes in renewable energies, which are issues that appear increasingly in investment arbitration cases.[133]

[B] Transparency of the Arbitral Proceedings and Public Participation

Demand for transparency and public participation is growing in investment arbitration. This demand is particularly acute in climate change-related disputes, in light of actions initiated by citizen groups and non-governmental organisations (NGOs) against States and corporations for environmental inaction.[134]

In this context, the recent decision of the *Hoge Raad*, the Netherlands' Supreme Court, in *Urgenda Foundation v. Netherlands*, is particularly pertinent.[135] The Urgenda Foundation, together with a group of 900 Dutch citizens, initiated legal proceedings against the Dutch Government to compel it to reduce greenhouse gas emissions.[136] On 20 December 2019, the *Hoge Raad*, in consideration of the UNFCCC, ordered the State to reduce greenhouse gases by at least 25% compared to 1990 levels by the end of 2020.[137] This judgment inspired climate change cases in Europe, the Americas, Asia, and Oceania, demonstrating that civil society is willing and, in some cases, able to compel governments to comply with international climate obligations.[138] Enhanced transparency would therefore reconcile the arbitral process with civil society, allow

130. ICC Commission Report, *Resolving Climate Change Related Disputes Through Arbitration and ADR*, *supra* footnote 23, p. 24, paras 5.26-5.27.
131. *Perenco v. Ecuador*, Interim Decision on the Environment Counterclaim, 11 August 2015, *supra* footnote 109, paras 585, 587.
132. *South China Sea Arbitration (Philippines v. China)*, PCA Case No. 2013-19, Independent Expert Report on Coral Reef Environment, 26 April 2016.
133. S. Dwi Andrina, *Green Technology Disputes in Stockholm*, *supra* footnote 25, p. 23.
134. J. Setzer, R. Byrnes, *Global Trends in Climate Change Litigation: 2020 Snapshot*, Policy Report (2020).
135. *Urgenda Foundation v. The State of the Netherlands*, ECLI:NL:HR:2019:2007, 20 December 2019.
136. *Ibid*.
137. *Ibid.*
138. Urgenda, *Global Climate Litigation*, https://www.urgenda.nl/en/themas/climate-case/global-climate-litigation/ (accessed 30 November 2020); *See also* the case 'Commune de Grande-Synthe' brought before the *Conseil d'Etat* (French Supreme Administrative Court): the city of

arbitration to gain legitimacy, and ultimately facilitate public understanding of tribunal decisions.[139]

However, transparency may be subject to the consent of the parties to the dispute. Further, while transparency seems to be increasing in investment arbitration, it remains a rare feature in commercial arbitration, as confidentially remains one of the reasons why parties to commercial contracts choose arbitration over litigation.

Most rules used in investment arbitration proceedings nevertheless provide for some amount of transparency. For instance, the adoption of the UNCITRAL Rules on Transparency in Treaty-Based Investor-State Arbitration (UNCITRAL Transparency Rules) in 2013 is a step forward for transparency in investment arbitration. The Transparency Rules provide for the publication of certain documents from the arbitration proceedings, such as the parties' submissions, exhibit lists, expert reports, witness statements, and the tribunal's decisions.[140] The use of the UNCITRAL Transparency Rules is expected to increase along with an increase in the number of ratifications of the United Nations Convention on Transparency in Treaty-Based Investor-State Arbitration (Mauritius Convention). Importantly, Article 2(1) of the Mauritius Convention provides that '[t]he UNCITRAL Rules on Transparency shall apply to any investor-State arbitration, whether or not initiated under the UNCITRAL Arbitration Rules, in which the respondent is a Party that has not made a relevant reservation under article 3(1)(a)'.[141] In 2020, seven States had ratified the Mauritius Convention, and none had made a reservation under Article 3(1)(a), meaning that the UNCITRAL Transparency Rules will apply in investment arbitration proceedings in which these States will appear as respondents.[142]

Similarly, the ICSID Arbitration Rules provide for transparency under certain conditions. Rule 48(4) of the ICSID Arbitration Rules provides that, should the parties refuse to consent to the award being made public, ICSID may nevertheless publish excerpts of the tribunal's legal reasoning, and Rule 32(2) permits the tribunal, with the parties' consent, to hold the hearings in public. These efforts towards transparency in ICSID proceedings are confirmed by the review of the ICSID Arbitration Rules currently underway. To date, the latest proposals provide that the ICSID 'shall' publish any order or decision taken by the tribunal, with necessary redactions, within sixty days the

Grande-Synthe, later joined by other French cities and foundations, initiated judicial proceedings against the French government for refusing to take measures to comply with its obligation to reduce greenhouse gases under the UNFCCC and the Paris Agreement. In a decision dated 19 November 2020, the *Conseil d'Etat* ordered the French government to justify within three months the reasons why the government refuses to take additional steps to reduce emissions and to explain whether this refusal is compatible with the objectives set in the Paris Agreement.

139. ICC Commission Report, *Resolving Climate Change Related Disputes Through Arbitration and ADR*, *supra* footnote 23, p. 41, para. 5.69; W. Miles, M. Lawry-White, *Arbitral Institutions and the Enforcement of Climate Change Obligations for the Benefit of All Stakeholders*, *supra* footnote 56, p. 28.
140. ICC Commission Report, *Resolving Climate Change Related Disputes Through Arbitration and ADR*, *supra* footnote 23, p. 41, para. 5.68.
141. United Nations Convention on Transparency in Treaty-Based Investor-State Arbitration (18 October 2017), T. S. No. 54749.
142. To date, the Mauritius Convention has been ratified by Australia, Bolivia, Cameroon, Canada, Gambia, Mauritius and Switzerland.

issuance of an order or decision, and that the tribunal 'shall' authorise any third person to observe hearings, unless the parties otherwise agree.[143]

The recent increase in arbitral hearings being conducted remotely allows tribunals to manage the attendance of non-party observers more easily, when the rules allow it. The opportunity for non-parties to observe arbitral hearings will further legitimise arbitration as an effective means of resolving disputes in which the public has an interest, which is particularly the case for environmental disputes. Remote hearings offer the particular advantage of allowing tribunals to deactivate observers' video and audio connections for in camera sessions, thereby reducing the inefficiency of requiring the tribunal to ensure that only counsel and party representatives are physically present in a hearing room. The hearing of the ICSID *Vattenfall v. Germany* case,[144] for example, was recorded and made publicly available, which is particularly notable given the public interest in a case with environmental implications, as the *Vattenfall* claim was brought in response to Germany's decision to phase out nuclear power by 2022.[145]

The participation of non-parties in a dispute as amici curiae will also enhance transparency in the arbitral process.[146] Third-party participation is possible under most arbitration rules. Article 25 of the ICC Rules provides that the tribunal may hear 'any other person', and Article 4 of the UNCITRAL Transparency Rules and Article 4 of Appendix III to the 2017 SCC Rules authorise the tribunal to allow a non-disputing party to file written submissions. Similarly, ICSID Rule 37(2) states that the tribunal may authorise a non-disputing party to file a written submission to the tribunal, after considering whether the non-disputing party would assist the tribunal in determining a factual or legal issue related to the proceedings by bringing in a different perspective from that of the parties, whether the submission would address a matter within the scope of the dispute, and whether the non-disputing party has a significant interest in the proceedings. The proposals for amendments of the ICSID Rules reaffirm this possibility in proposed amended Rule 67.[147]

In the context of climate change-related disputes, amicus briefs from non-parties may offer the tribunal another perspective and additional expertise, as demonstrated in *Foresti v. South Africa*.[148] In that case, the claimant filed a claim for unlawful expropriation and the respondent State argued that the expropriation was lawful as it

143. International Centre for Settlement of Investment Disputes, *Proposals for Amendment of the ICSID Rules,* Working Paper 4, Vol. 1, pp. 65-66 (February 2020).
144. *Vattenfall AB and others v. Federal Republic of Germany*, ICSID Case No. ARB/12/12.
145. ICSID, *Vattenfall AB and others v. Federal Republic of Germany (ICSID Case No. ARB/12/12) – Public Hearing*, Press Release (29 September 2016); IA Reporter, *Germany is Sued at ICSID by Swedish Energy Company in Bid for Compensation for Losses Arising out of Nuclear Phase-Out* (1 June 2012).
146. ICC Commission Report, *Resolving Climate Change Related Disputes Through Arbitration and ADR*, *supra* footnote 23, p. 42, para. 5.70; W. Miles, M. Lawry-White, *Arbitral Institutions and the Enforcement of Climate Change Obligations for the Benefit of All Stakeholders*, *supra* footnote 56, pp. 28-29.
147. Proposals for Amendments of the ICSID Rules, *supra* footnote 143, p. 67.
148. ICC Commission Report, *Resolving Climate Change Related Disputes Through Arbitration and ADR*, *supra* footnote 23, pp. 44-45, para. 5.90; *Piero Foresti, Laura de Carli & Others v. Republic of South Africa*, ICSID Case No. ARB(AF)/07/01, Award, 4 August 2010.

pursued the public purpose of protecting the environment and communities in the area.[149] The arbitral tribunal allowed four NGOs to file submissions on the issues of substantive equality, human rights, sustainable development, and environmental protection in South Africa,[150] ordered the parties to give these non-disputing parties access to documents submitted to the tribunal, and invited the parties to comment on the amicus briefs.[151]

[C] Expeditiousness of Arbitral Proceedings

Climate change-related disputes often involve an element of urgency and require prompt resolution.[152] If not dealt with expeditiously, the environmental impact and the effect on populations in climate change-related disputes may be irreversible.[153] Parties may use various procedural options to expedite the resolution of the dispute. The ICC, for instance, recommends a host of measures to resolve a dispute efficiently, including the bifurcation of proceedings, deciding that some issues may be decided on a 'documents only' basis, and the limitation of submissions to key climate change-related issues.[154]

Arbitration presents the immense advantage of procedural rules that are adaptable to fit the needs of parties. To resolve a dispute quickly, parties may agree on the application of an expedited procedure when arbitral institutions, such as the ICC and the SCC, offer this possibility.[155] In 2019, out of 586 cases administered by the ICC, 146 cases had been or were being conducted under the ICC Expedited Procedure.[156] Similarly, the SCC states that 19% of the green technology disputes it administered between 2012 and 2018 were registered under the SCC Rules for Expedited Arbitrations and were terminated within a year, against an average of sixteen months for rendering an award in other proceedings.[157]

Should the circumstances of a climate change-related dispute require a decision prior to the constitution of the tribunal, the ICC Emergency Arbitrator Rules provide for the rendering of such a decision, but do not make it available in the case of treaty-based arbitration.[158] In such a situation, the President of the ICC Court will appoint an emergency arbitrator within no more than two days after the receipt of the application,

149. *Ibid.*; W. Miles, M. Lawry-White, *Arbitral Institutions and the Enforcement of Climate Change Obligations for the Benefit of All Stakeholders*, *supra* footnote 56, p. 30.
150. *Foresti v. South Africa*, Award, 4 August 2010, *supra* footnote 149, para. 27; *Foresti v. South Africa*, Petition for Limited Participation as non-Disputing Parties, 17 July 2009, para. 4.18.
151. *Id.*, paras 28-29.
152. *Ibid*.
153. ICC Commission Report, *Resolving Climate Change Related Disputes Through Arbitration and ADR*, *supra* footnote 23, p. 26, para. 5.34.
154. *Id.*, pp. 26-27, para. 5.35.
155. *Id.*, p. 27, para. 5.36; *See* Article 30 of the ICC Arbitration Rules and the SCC Rules for Expedited Arbitrations.
156. International Chamber of Commerce, ICC Dispute Resolution 2019 Statistics, p. 16 (2020).
157. S. Dwi Andrina, *Green Technology Disputes in Stockholm*, *supra* footnote 25, pp. 8, 10.
158. ICC Commission Report, *Resolving Climate Change Related Disputes Through Arbitration and ADR*, *supra* footnote 23, pp. 35-36, paras 5.54-5.55.

and the emergency arbitrator will issue an order within fifteen days after the receipt of the file.[159] In 2019, twenty-three emergency arbitrator applications were filed with the ICC, and half of them concerned disputes in the construction and the energy sectors, and two sectors particularly related to climate change.[160]

In contrast, the SCC Arbitration Rules extend emergency arbitration proceedings to investment treaty arbitration.[161] A party in SCC proceedings may apply for the appointment of an emergency arbitrator until the case has been referred to an arbitral tribunal. After the application has been received by the SCC Secretariat, and provided that the SCC does not manifestly lack jurisdiction, the SCC Board will proceed to the appointment of an emergency arbitration within twenty-four hours of the receipt of the application. Between 2014 and 2019, ten emergency arbitrator decisions have been rendered in investment treaty disputes under the SCC Rules, in six of which the emergency relief claimed was granted. Eight of these disputes were based on bilateral investment treaties. In all those cases, the emergency arbitrator was successfully appointed by the SCC Board in twenty-four hours, and the average term for rendering the emergency decision was five and half days.[162]

§2.04 CONCLUSION

As Wendy Miles QC correctly observes, arbitration may well become 'a tool of global climate governance',[163] as it offers the necessary mechanisms for the resolution of climate change disputes. With the number of climate change-related disputes being sure to increase, thanks to increase in green investments made each year, recourse to climate change-related arbitration should be further promoted. Arbitral institutions, for their part, are engaged and determined to welcome climate change-related disputes.

The potential for the increased use of arbitration in these matters now lies in the hands of the parties. Private and public entities, when concluding a contract related to energy, construction, or any other field in which climate or environmental issues may arise, should seriously consider including an arbitration clause. Likewise, States should complete the arbitration protocols in climate change treaties and incorporate climate change-related provisions in their investment promotion agreements.

The 'Model Green Investment Treaty' drafting competition launched by the SCC is an encouraging step towards incentivising States to ratify suitable investment agreements.[164] This Model Green Investment Treaty comprises express provisions promoting environmental actions and combating climate change. The first of these provisions pertains to States' rights to regulate generally, as well as to do so more

159. Appendix V, Articles 2(1) and 6(4) of the ICC Arbitration Rules.
160. ICC Dispute Resolution 2019 Statistics, *supra* footnote 156, p. 17.
161. A. Pirozhkin, *Emergency Arbitrator's Decisions in Investment Treaty Disputes at the SCC (2014-2019)*, May 2020.
162. *Ibid*.
163. Wendy J. Miles, Nicolas Swan, 'Climate Change Financing and Dispute Resolution', *supra* footnote 7, p. 342.
164. A. Havedal Ipp, *Stockholm Treaty Lab: Combating Climate Change Through Legal Crowdsourcing*, Kluwer Arbitration Blog (17 July 2020).

specifically in relation to climate change.[165] The treaty also requires investors to comply with local law and with the World Bank Environmental and Social Standards and the International Finance Corporation Performance Standards.[166] To that end, the Model Green Treaty explicitly grants the respondent State with the right to bring a counterclaim for a breach of international law and standards.[167] The Model Green Treaty also seeks to adapt arbitration proceedings to climate change-related disputes by requiring that arbitrators be familiar with the issues of climate change and sustainable development as well as with relevant laws and policies. Finally, the Model Green Treaty strengthens transparency by providing for public participation in the dispute resolution process and requiring reporting on the implementation of awards.[168]

In the same vein, the European Commission has proposed amendments to the ECT to introduce considerations of sustainable development and climate change.[169] In particular, the European Commission proposal seeks to reaffirm the Contracting Parties' right to regulate in environmental matters to fight climate change.[170]

Similarly, out of the twenty-six international investment agreements concluded since the beginning of 2019, at least seventeen include provisions addressing climate change issues. These agreements reaffirm the contracting State's right to regulate with respect to climate, include protection of the environment in the exception clause, provide that States should not lower environmental standards to promote investment, and address corporate social responsibility. These treaties thus require investors to comply with the host State's environmental regulations.[171] As recent developments show, despite the calls for the establishment of an international court of environment,[172] States are determined to ensure the viability of arbitration in climate change-related disputes, and the arbitration system is up to the challenge.

165. D. Magraw, C. Giorgetti et al., *Model Green Investment Treaty: International Investment and Climate Change*, 36 J. Int. Arbitr. 95, 99 (2019).
166. *Id.*, p. 118.
167. *Ibid*.
168. *Id.*, p. 96.
169. C. Sanderson, *EU Publishes Proposals for ECT Revamp*, Global Arbitration Review (28 May 2020).
170. *Ibid*.
171. *See* Belarus–Hungary BIT, Australia–Indonesia CEPA, Brazil–UAE BIT, CARIFORUM–UK FTA, Australia–Hong Kong BIT, Hungary–Cabo Verde BIT, Australia–Uruguay BIT, Burkina Faso–Turkey BIT, Uzbekistan–South Korea BIT, Morocco–Brazil BIT, Kyrgyz Republic–India BIT, Vietnam–EU FTA, Singapore–Myanmar BIT, Brazil–Ecuador BIT, Armenia–Singapore BIT, Morocco–Japan BIT, Brazil–India BIT.
172. International Bar Association, *Achieving Justice and Human Rights in an Era of Climate Disruption*, Report of the Climate Change Justice and Human Rights Task Force, p. 28 (2014).