

Report

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The Paris Agreement Implementation Blueprint: legal avenues to Blueprint implementation (Part 2)

Summary

The combination of political and climate crises in early 2017 create the conditions for the ultimate perfect storm. The dramatic collapse of polar ice-sheets, coupled with climatic and weather conditions increasingly hostile to human life and livelihoods, appear to demand an immediate international response at precisely the moment when coordinated political action appears unattainable.

Governments have agreed to limit warming to 1.5C or ‘well below’ 2C, but the world remains on course for disaster. There is currently no plan or framework for closing the gap between action and goal. More specifically there is no common framework to support either the equitable division of the remaining carbon budget or the quantification of rights to finance (upon which any equitable division of the carbon budget must depend).

In Part 2 of this paper we describe the legal avenues to implementation of the Blueprint framework described in Part 1 of this article.¹

Part 2: Legal avenues to Blueprint implementation

Recognising the difficulties of raising ambition through the political process, and the growing momentum behind climate change litigation,² Part 2 of this paper highlights a number of different legal avenues to:

- (i) implement a science-based framework for the division of the remaining carbon budget, in order to limit warming to 1.5C or ‘well below’ 2C,

- (ii) secure appropriate financial resources to support developing countries in implementing mitigation measures and achieving sustainable development, and
- (iii) secure appropriate compensation for loss and damage (including the costs of adaptation) arising from historic emissions.

Specifically, Part 2 considers legal actions on the following basis:

- breach of a country’s duty to prevent harm to other countries,
- breach of a country’s duty to prevent pollution of the marine environment (under UIN Convention on the Law of the Sea, Article 194),
- breach of fundamental norms of human rights (such as the right to life), and
- breach of a government’s duties to its citizens (including procedural obligations to act reasonably and rationally).

Introduction

As the limitations of the political process have become evident, increasing attention has been paid to the role of the courts in leading a rational and ethical response to the climate crisis. The following excerpts from recent judgements highlight the readiness of judges to intervene:

If, and this is the case here, there is a high risk of dangerous climate change with severe and life-threatening consequences for man and the environment, the State has the obligation to protect its citizens from it by taking appropriate and effective measures.³

The debate about climate change and its impact has been before various political bodies for sometime now ... But the intractability of the debates before Congress and state

¹ Tim Crosland et al ‘The Paris Agreement Implementation Blueprint (Part 1) [2016] 3/4 Env. Liability.

² See for example ‘*Could the Courts bring Order to Climate Change?*’, Isabella Kaminski, The *ENDS* Report, 8 December 2016.

³ *The Urgenda Foundation v Kingdom of the Netherlands* [2015] District Court of the Hague, HAZA c/09/00456689, June 2015.

legislatures and the alleged valuing of short term economic interest despite the cost to human life, necessitates a need for the courts to evaluate the constitutional parameters of the action or inaction taken by the government.⁴

Exercising my “reasoned judgment”, ... I have no doubt that the right to a climate system capable of sustaining human life is fundamental to a free and ordered society. Just as marriage is the “foundation of the family”, a stable climate system is quite literally the foundation “of society, without which there would be neither civilization nor progress.”⁵

This trend has been summarized in a recent article in the ENDS report:⁶

Litigation has long been considered an important tool to hold companies and governments to account on environmental matters, and climate change is no exception ...

But when ENDS tried to write a feature on this subject in 2013, it hit a brick wall; nothing exciting is happening in this space was the standard response, action is a long way off. One experienced but dejected lawyer said to call again in 50 years’ time.

The mood is now completely different. In the intervening three years the political landscape has shifted, new options for using the law have been considered and tested, legal precedents have been set, and the hopes of people trying to drive action through the law have been reset.

By establishing a *procedural* framework, which requires Parties to develop and communicate long-term plans for reducing their greenhouse gas (GHG) emissions, the Paris Agreement places Parties, NGOs and others in a strong position to challenge the adequacy of those plans through the courts. Such challenges will, in turn, require the courts to develop principles for assessing whether a government’s plans are consistent with its legal and constitutional obligations. The risk, however, is that different courts around the world will adopt a wide range of mutually inconsistent approaches, tending to collective incoherence.

The Blueprint aims to provide governments, civil society and courts with a globally applicable *substantive* framework, based on authoritative sources of data, for assessing state responsibility (or liability) in terms of:

- (i) the duty to take preventative action by reducing its own emissions,
- (ii) the duty to take preventative action through the provision of financial resources to support developing countries with their mitigation plans, and sustainable development, and
- (iii) loss and damage arising from historic emissions (including the costs of adaptation).

The framework may be utilized in a wide range of legal actions including for:

- (i) breach of a country’s duty to prevent harm to other countries,
- (ii) breach of a country’s duty to prevent pollution of the marine environment (under Article 194, UN Convention on the Law of the Sea),
- (iii) breach of fundamental norms of human rights (such as the right to life), and
- (iv) breach of a government’s duties to its citizens (including procedural obligations to act reasonably and rationally).

Part 2 of this article focuses principally on point (i) above on the basis that it raises issues of international law likely to be relevant in all other contexts.

Breach of the duty to prevent harm

The general principle

States have the sovereign right to exploit their own resources. They have a corresponding responsibility to ensure activities within their control do not cause substantial damage to other states or areas beyond the limits of national jurisdiction (such as the high seas or outer space). This is described as the ‘principle of prevention’ or the ‘no-harm rule’. In a recent case the International Court of Justice held that:

A State is thus obliged to use all the means at its disposal in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State.⁷

The UNFCCC directly invokes the principle in its Preamble, removing all doubt regarding its application to climate change:

⁴ *Kelsey Cascade Rose Juliana et al v United States of America et al* (April 2016) Federal District Court in Oregon (*Our Children’s Trust*) per Magistrate Judge Coffin.

⁵ *Kelsey Cascade Rose Juliana et al v United States of America et al* (November 2016) Federal District Court in Oregon (*Our Children’s Trust*), on appeal from the April judgement, per Judge Aiken.

⁶ See ‘Could the Courts bring Order to Climate Change?’, Isabella Kaminski, The ENDS Report, 8 December 2016.

⁷ *Pulp Mills on the River Uruguay* (2010) ICJ, para 101.

Recalling also that States have, in accordance with the Charter of the United Nations and the principles of international law ... the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

States, therefore, have an obligation to take all appropriate measures to anticipate, prevent or minimize the causes of climate change, in particular through effective measures to reduce greenhouse gas emissions to a level consistent with the temperature goal. The principle itself is straightforward. It is the apparent complexity of quantifying the scope of the obligation for any give country that has caused some to question its practical applicability. The Blueprint aims to address this concern.

In practical terms, and in accordance with the UNFCCC and the Paris Agreement, the duty to prevent harm implies liability for climate change loss and damage, including the costs of adaptation arising out of past breaches of the duty and, in relation to future prevention measures, the duty implies distinct obligations to:

- reduce GHG emissions in line with the global target, and
- on the part of countries which have used more than their share of the carbon budget, to support financially the implementation of mitigation measures on the part of those who have used less.

Given that all states emit GHGs,⁸ courts will need a framework to assess what is reasonable and equitable. Again, the Blueprint has been designed with these purposes in mind.

If, on balance, a state is found to have committed an international legal wrong it is obliged to discontinue the wrongful act,⁹ offer guarantees of non-repetition¹⁰ and provide full reparation for the consequences.¹¹ The purpose of reparation is to wipe out, as far as possible, all the consequences of the illegal act and re-establish the situation, which would have existed if the act had not been committed.¹² Reparation must therefore include compensation for the costs of necessary prevention measures incurred by the victim (ie the costs of adaptation).

Relation of the COP 21 Decision to the duty to prevent harm

Paragraph 52 of the COP 21 Decision states that Article 8 of the Paris Agreement (concerning loss and damage) 'does not involve or provide a basis for any liability or compensation'. The clause addressed a concern on the part of some developed country Parties, in particular the United States, that a provision on loss and damage might be construed as an admission of liability. Since liability and compensation are specifically excluded from the scope of the Paris Agreement provisions on loss and damage, the principle of *lex specialis*¹³ does not apply (see section below: '*Lex specialis* and the 'object and purpose' of the Paris Agreement'). Consequently, liability and compensation must be determined on the basis of general principles of law. Contrary to the concerns raised by some NGOs in the immediate aftermath of the Paris Conference, the COP Decision serves only to highlight the continuing application of general rules on liability and compensation between states.

Lex specialis and the 'object and purpose' of the Paris Agreement

Broadly speaking, countries are subject to general principles of international law unless they agree to a more specific regime tailored to a particular context. Where they do so agree, it is the specific regime that takes precedence over the general (although general principles should still be taken into account). This principle is commonly referred to as *lex specialis*.

More particularly, the principle of *lex specialis* may be considered in connection with three distinct aspects of the international legal framework for climate change:

- (i) the duty to cooperate in good faith,
- (ii) the duty to prevent harm to other countries or areas beyond national jurisdiction, and
- (iii) the approach to liability and compensation.

The duty to cooperate, for example, is a general principle of law, reflected in Principle 7 of the UNEP Draft Principles 1978, as follows:

Exchange of information, notification, consultation and other forms of co-operation regarding shared natural resources are carried out on the basis of the principle of good faith and in the spirit of good neighbourliness.

⁸ Although Bhutan is in fact net negative when forestry sequestration is taken into account.

⁹ International Law Commission, Articles on Responsibility of States for Internationally Wrongful Acts Article 30(a).

¹⁰ *ibid* Article 30(b).

¹¹ *ibid* Article 31(1).

¹² *Factory at Chorzow*, Merits, ICJ, p 47.

¹³ *lex specialis derogat legi generali* is translated as 'specific legal provisions override the more general'.

It is an obligation, which requires Countries to follow certain procedural steps, such as notification and consultation, in relation to actions affecting shared natural resources. In the event a matter cannot be resolved through co-operation, exchange of information puts parties in a position to challenge the action where appropriate.

Since the UNFCCC and the Paris Agreement establish detailed and specific obligations on states regarding processes for communicating and consulting over national levels of GHG emissions, they may be regarded as *lex specialis* applicable to the duty to cooperate over emission reductions. The position is different in relation to points (ii) and (iii) above (respectively: the duty to prevent harm to other countries or areas beyond national jurisdiction and the approach to liability and compensation).

Since the Paris Decision specifically excludes liability and compensation from Article 8, it is clear that *lex specialis* does not apply in these contexts. Indeed, both UNFCCC¹⁴ and the Paris Agreement¹⁵ incorporate and reflect the general duty to prevent harm. They confirm the obligations on all Parties to implement measures to realise the temperature goal.¹⁶ They also confirm the obligation on ‘developed country parties’ to ‘provide financial resources to assist developing country Parties with respect to both mitigation and adaptation’.¹⁷ What they do not do, however, is develop a specific framework for quantifying these obligations, leaving quantification to be determined by the courts.

The current situation post-Paris may be contrasted with the Kyoto Protocol, which did prescribe specific emission reduction commitments for developed country Parties between 2008 and 2012 (‘the first commitment period’). The Doha Amendment, which would have established a second commitment period running from 2013 to 2020, has yet to come into force. As between the Parties to the Protocol, it could be argued that these commitments did indeed represent *lex specialis* in relation to emission reductions by those Parties between 2008 and 2012. On that basis, the principle might have prevented Party A, for example, from arguing that Party B was breaching its duty to prevent harm by failing to reduce its GHG emissions sufficiently between 2008 and 2012, as long as Party B’s reductions were within its Protocol limit. Clearly, however, the Protocol could not be considered to be *lex specialis* in relation to emissions outside the commitment period.

In this context, it is also relevant to consider the ‘object and purpose’ of the UNFCCC regime. International agreements must be interpreted in a way that is consistent

with their object and purpose. The fundamental object and purpose of UNFCCC and the Paris Agreement is to stabilise atmospheric concentrations of greenhouse gases¹⁸ and, more generally, to strengthen the response to climate change.¹⁹

By virtue of the Article 31(1) of the Vienna Convention on the Law of Treaties 1969: ‘[a] treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose’.

In the *Gabcikovo-Nagymaros Project* case,²⁰ the ICJ stated that the principle of good faith required parties to apply their treaty ‘in a reasonable way and in such manner that its purpose can be realized’.

It would be inconsistent with the objects and purposes of UNFCCC, the Kyoto Protocol and the Paris Agreement to interpret them in such a way that they *weaken* the preexisting legal regime (in which countries are accountable to each other for their contributions to climate change) by replacing it with one in which countries set their own targets with no accountability. Applying the Vienna Convention, therefore, the UNFCCC process may proceed along either of two paths:

- (i) supplementing the general duty to prevent with additional procedural mechanisms, or
- (ii) replacing the general duty to prevent with a specific framework for legally binding levels of GHG emissions, with consequent legal liability and provisions for compensation.

For the time being (and the foreseeable future) the process appears committed to pathway (i) above.

It is also relevant to note that on signing the UNFCCC, Fiji stated:

The Government of Fiji declares its understanding that signature of the Convention shall, in no way, constitute a renunciation of any rights under international law concerning state responsibility for the adverse effects of climate change, and that no provisions in the Convention can be interpreted as derogating from the principles of general international law.

Declarations in similar terms were made, upon signature or ratification of the UNFCCC, by Kiribati, Nauru, and Papua New Guinea. Upon signing and/or ratifying the Paris Agreement, the Cook Islands, the Marshall Islands, Micronesia, Nauru, Niue, Solomon Islands, Tuvalu and Vanuatu all

14 UNFCCC Preamble and Article 3(3).

15 Paris Agreement Article 4(3).

16 *ibid* Article 3.

17 *ibid* Article 9(1).

18 UNFCCC Article 2.

19 Paris Agreement, Article 2.

20 *Case Concerning the Gabcikovo-Nagymaros Project* (1997) ICJ Reports 7.

expressed an intention to preserve their rights to compensation for climate damages under general international law.

Practical application of the duty to prevent harm

Liability for loss and damage (including the costs of adaptation)

Although establishing liability or state responsibility for loss and damage ultimately is a qualitative process, it should be clear that:

- (i) a country's risk of being found legally liable for loss and damage increases in line with its carbon debit,
- (ii) a country's risk of being found legally liable for loss and damage decreases in line with its carbon credit,
- (iii) the share of a country's responsibility for loss and damage (including the costs of adaptation) increases in line with its carbon debit, and more specifically
- (iv) the share of a country's responsibility for loss and damage (including the costs of adaptation) may be calculated as a percentage on the basis of its share of the total debit (so that if total debit, for example, is 200 Gt C,²¹ and country A's debit is 2 Gt C, it will be 1 per cent responsible for all loss and damage arising).

It is *not* intended that a country's ability to recover damages should be limited by its credit. A debit on the part of a claimant country, however, may be indicative of a finding of contributory negligence.

Liability for failing to take adequate prevention measures

Although the Paris Agreement does not directly define the content of the duty to take measures to prevent future harm, the procedural framework it introduces, in combination with the Fifth Assessment Report of the IPCC, facilitates such definition as a matter of logical inference.

One of the most significant features of the Agreement is its ambitious temperature goal. By virtue of Article 2(1)(a), Parties pledge to holding average warming to 'well below' 2°C and to 'pursuing efforts' to limit it to 1.5°C. Article 2(1)(c) commits Parties to 'making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development'. Together,

these goals provide an anchor point for assessing the adequacy of countries' prevention measures.

Moreover, the Agreement ensures the availability of detailed information regarding Parties' prevention measures relating to their domestic mitigation measures. By virtue of Article 4, Parties are required to 'prepare, communicate and maintain' successive NDCs. In addition, the Agreement's Transparency Framework, established by Article 13, requires that:

Each Party shall regularly provide the following information:

- (a) A national inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases, prepared using good practice methodologies accepted by the Intergovernmental Panel on Climate Change and agreed upon by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;
- (b) Information necessary to track progress made in implementing and achieving its nationally determined contribution under Article 4.

In addition, Article 9(5) requires developed country Parties to 'biennially communicate indicative quantitative and qualitative information related to paragraphs 1 and 3 of this Article, as applicable, including, as available, projected levels of public financial resources to be provided to developing country Parties' while other Parties providing resources 'are encouraged to communicate biennially such information on a voluntary basis'. Other Parties and NGOs may therefore challenge the adequacy of a Party's prevention measures in terms of the temperature goal, providing there is a suitable framework for so doing.

It is generally recognised that aggregated (I)NDCs and finance pledges, even if honoured in full, are inadequate in terms of the temperature goal. The point is acknowledged in the preamble to the Paris Decision:

Emphasizing with serious concern the urgent need to address the significant gap between the aggregate effect of Parties' mitigation pledges in terms of global annual emissions of greenhouse gases by 2020 and aggregate emission pathways consistent with holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels ...

Recognizing the urgent need to enhance the provision of finance, technology and capacity-building support by developed country Parties, in a predictable manner, to enable enhanced pre-2020 action by developing country Parties ...

It follows that at least some Parties are failing to do what is required of them under both general international law and the Paris Agreement. Without a framework for determining

²¹ This figure is used for illustrative purposes only. An accurate figure for total debit will be available at <http://www.gci.org.uk/CREDIT-DEBIT.html> when work has been complete on all country charts.

the scope of obligations there is, however, an accountability gap – which leads almost inevitably to the ‘emissions gap’ and the ‘finance gap. Indeed, Parties themselves have no obvious way of determining the scope of their obligations.

The UNFCCC, directly incorporates a number of general principles of international law, which must be the basis for any framework, the most significant of which are:

- (i) the precautionary principle,²²
- (ii) the principle of equity,²³
- (iii) the right to sustainable development,²⁴ and
- (iv) the obligation to reduce emissions in accordance with the ‘best available science’.²⁵

Likewise, the Paris Agreement confirms that NDCs should be prepared on the basis of equity.²⁶

Since the Paris Agreement itself does not provide a framework for assessing the equity of mitigation measures (ie the framework that is required if the objective of the Agreement are to be realised) it is reasonable to consider the ‘Travaux Préparatoires’. As described in more detail above, the draft Paris Agreement, presented to the Parties after a four-year process of negotiation, included the proposal that:²⁷

[Parties [collectively][cooperatively] aim to reach the global temperature goal referred to in Article 2 through ...

[Equitable distribution of a global carbon budget based on historical responsibilities ...]

The Fifth Assessment Report of the IPCC also provides guidance on the interpretation of equity.²⁸ It proposes ‘four key dimensions’:²⁹

- (i) responsibility,
- (ii) capacity,
- (iii) equality, and
- (iv) the right to sustainable development.

22 UNFCCC Article 3(3): ‘The Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures, taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost.’

23 UNFCCC Article 3(1).

24 UNFCCC Article 3(4).

25 Paris Agreement Article 4(1).

26 *ibid.* Preamble and Article 4(1) and 4(3).

27 Draft agreement and draft decision on workstreams 1 and 2 of the Ad Hoc Working Group on the Durban Platform for Enhanced Action (5 December 2015) Article 3(1)(e).

28 IPCC AR5, Mitigation of Climate Change, Chapter 4, Sustainable Development and Equity.

29 *ibid* Section 4.6.2.1, p. 317.

It proceeds to describe two ‘different’³⁰ types of implementing framework:³¹

- resource-sharing frameworks which establish a basis for sharing the agreed global ‘carbon budget’, and
- effort-sharing frameworks, which aim at sharing the costs of the global climate response.

Given the need for finance to support mitigation measures, in practice a single integrated framework is required: since an increase in the share of country A, means that much less for country B, the equity of country A’s NDC can only be considered in conjunction with flows of finance (ie either its entitlement to finance, or its obligation to pay it).

Selection of a global carbon budget

For a given temperature rise limit, for example the 1.5C or ‘well below’ 2C long-term limit, the corresponding carbon budget should reflect the ‘best available science’ for the total amount of carbon emissions, measured in tonnes, that can likely be emitted for temperatures to stay below that limit. Since NDCs are expressed in similar terms, a carbon budget facilitates an assessment of an NDC’s adequacy (and equity) in relation to the common goal.

IPCC AR5 sets out the specific carbon budgets associated with different temperature limits, on the basis of a range of probabilities.³² On the basis of the precautionary principle, a court may consider that a budget of greater than 550 Gt CO₂ would be inconsistent with the Paris Agreement goal (since it is already, after all, a 50 per cent chance of long-term warming in excess of 1.5C).

Distribution of the global carbon budget

More complex than the task of budget selection is that of budget division. The obvious way to distribute a budget (at least notionally) is to do so on the basis of equal per capita shares. Such an approach has a number of advantages:

- it accords with the Preamble of UNFCCC and the work of the ADP (provided that historical emissions are accounted for through credits and debits),
- it reflects an intuitive principle that all people have an equal right to the earth’s atmosphere,

30 The Blueprint integrates both ‘types’ of framework into a single whole, reflecting the inextricable linkage between finance and mitigation.

31 IPCC AR5, Mitigation of Climate Change, Chapter 4, Sustainable Development and Equity, Section 4.6.2.2, p. 319.

32 See Crosland et al ‘The Paris Agreement Implementation Blueprint (Part 1) [2016] 3/4 Env. Liability.

- it offers a straightforward criterion for carbon budget division that may be implemented on the basis of authoritative sources of data, and
- it provides for a flexible cap-and-trade scheme, anchored to the carbon budget.³³

High emission countries may argue that in practical terms they will need a greater share of the remaining future budget than currently low emitting countries. That may well be true, in part due to the time required to introduce fundamental changes to infrastructure. However practical need should not be confused with ‘legal entitlement’: in such a case, they will need to purchase the appropriate share certificates under a cap-and-trade scheme.

Historically low emitting countries may argue they should have a greater share of the remaining budget to reflect historic responsibility. The answer to this is that historic responsibility is intended to be accounted for in the system of carbon credits and debits, ensuring that historically low emitting countries have access to the finance and technology required to achieve sustainable development (for which high emitters are liable, along with damages) in proportion to their credits. Any unresolved issues of equity may be addressed through the approach to valuation of historic debits and credits, ensuring that creditors, where necessary, also have access to sufficient funds to purchase additional certificated shares.

More generally, in the absence of valuations for carbon credits and debits, the Blueprint framework itself is ‘equity neutral’. In the event that courts were to value a carbon credit at just \$1 per tonne of carbon, for example, there would be a strong argument that the implementation of the framework was inequitable to historically low emitters. On that basis, developing countries would be unlikely to have sufficient funding either:

- (i) to finance the clean energy infrastructure required to support sustainable development, or
- (ii) to purchase, where necessary, additional certificated carbon shares.

On the other hand, were the courts to impose a valuation of say \$100 per tonne of credits and debits, creditor countries would be in a very powerful position (including in relation to the purchase of certificate carbon shares), but many debtor countries would be likely to be bankrupted.

Properly understood, the Blueprint provides a conceptual framework for the equitable allocation of finance and the carbon budget, but does not itself define

that allocation.

Courts are well equipped to weigh competing interests and to address matters of equity. The problem, for the moment, is that they lack a framework on which to base their deliberations. That is the gap that the Blueprint aims to fill. As noted above, distribution of the remaining budget on the basis of equal per capita emissions is dependent on carbon debtors discharging their carbon debts to carbon creditors. Consequently, courts and policy-makers will have to consider simultaneously both aspects of the duty to take preventative measures (ie the duty to reduce emissions and the duty to provide finance to developing countries).

Defining the scope of rights and obligations in respect of finance

The atmosphere has a limited capacity to contain emissions of carbon safely. Those countries that have emitted more than their share have done so at the expense of others, and have a corresponding obligation to support the development of those countries that have emitted less than their shares. Economic development requires energy, and countries have a right to sustainable development: if historically low emitting countries are now unable to pursue fossil fuel based development because of the actions of others, there is a corresponding obligation on those others to finance the initially more expensive alternative.

More specifically, the UNFCCC and the Paris Agreement mandate that developed country Parties provide finance to developing country Parties to support their mitigation and adaptation efforts.³⁴ Moreover the same obligation can be derived from the duty to take preventative action against climate change: in practical terms preventing dangerous climate change demands that developed countries provide developing countries with the finance, resource and expertise to transition their economies to a renewable energy base. Given the long-term cycle for infrastructure planning, development and implementation, countries need to know now what level of sustained financial support they can anticipate in support of their mitigation efforts.

Operationalizing the obligation to provide finance, however, demands a framework for determining the adequacy and equity of commitments. Creditor countries need a clear indication of what is owed to them. Debtor countries equally need to be able to determine the scale of their debt. Courts and policy-makers need to know that they are operating to principles capable of consistent and transparent application across jurisdictions.

33 See discussion above regarding certificated carbon shares.

34 See Paris Agreement Article 9(1).

A common scale is required that:

- ensures symmetry between credit and debit,
- reflects the principle of equity, and
- accounts for historic emissions.

The Blueprint meets these criteria by allocating credits and debits to countries, measured in tonnes of carbon, according to whether their historic emissions are above or below their shares. These shares are determined on the basis of equal per capita emissions over time.³⁵ All that is required to translate credits and debits into finance is a valuation of a tonne of carbon. Additional finance might be generated through the sale of certificated carbon shares.

Link between finance and emission obligations

The duty to prevent harm demands that all countries limit their future emissions to their equal per capita share of the remaining carbon budget, subject to the sale or purchase of certificated carbon shares.

Rights and obligations in relation to future emissions are, however, conditional on the credits and debits being honoured. Debtor countries' 'rights to emit' an equal share of the future carbon budget are dependent on their debts being paid. The emissions limits imposed on creditor countries likewise only apply where credits are being honoured.

Again, it is apparent that an integrated framework is required to define the scope of both aspects of the duty to take prevention measures (ie the obligation to provide finance and obligations in respect of national emissions).

Breach of the duty to 'prevent, reduce, and control' pollution of the marine environment

The emission of GHGs threatens the marine environment in two distinct ways:

- by leading to warming of the oceans beyond the adaptive capacity of many forms of ocean life, and
- in the case of CO₂, by acidifying the oceans and jeopardizing the ocean food chain, with consequent implications for human livelihoods and food security.

The UN Convention on the Law of the Sea (UNCLOS) is the principal legal instrument governing countries' use of the oceans. Article 194(1) UNCLOS provides that 'States shall take, individually or jointly as appropriate, all measures ... necessary to prevent, reduce and control pollution of the

marine environment from any source'.

Article 1(4) UNCLOS defines 'pollution of the marine environment' in broad terms:

"pollution of the marine environment" means the introduction by man, directly or indirectly, of substances or energy into the marine environment ... which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing.

The definition, which refers specifically to the 'indirect' introduction of 'substances or energy', is sufficiently broad to encompass emissions of greenhouse gases. UNCLOS, in other words, imposes on states a legal obligation to 'prevent, reduce and control' pollution of the marine environment through the emission of GHGs.

Liability and compensation under UNCLOS

In contrast to the UNFCCC, UNCLOS is explicit in stating that breach of its provisions implies liability and compensation. Article 234 UNCLOS reads as follows:

- (1) States are responsible for the fulfillment of their international obligations concerning the protection and preservation of the marine environment. They shall be liable in accordance with international law.
- (2) States shall ensure that recourse is available in accordance with their legal systems for prompt and adequate compensation or other relief in respect of damage caused by pollution of the marine environment by natural or juridical persons under their jurisdiction.
- (3) With the objective of assuring prompt and adequate compensation in respect of all damage caused by pollution of the marine environment, States shall cooperate in the implementation of existing international law and the further development of international law relating to responsibility and liability for the assessment of and compensation for damage and the settlement of related disputes, as well as, where appropriate, development of criteria and procedures for payment of adequate compensation, such as compulsory insurance or compensation funds.

Dispute resolution under UNCLOS

Article 287 UNCLOS provides a choice of procedures for dispute resolution to be determined by Party declaration:

- (a) the International Tribunal for the Law of the Sea,
- (b) the International Court of Justice,
- (c) an arbitral tribunal constituted in accordance with Annex VII, or
- (d) a special arbitral tribunal constituted in accordance with Annex VIII for one or more of the categories of disputes specified therein.

³⁵ See Crosland et al 'The Paris Agreement Implementation Blueprint (Part 1) [2016] 3/4 Env. Liability.

In the absence of a declaration, a Party is deemed to have elected arbitration, and where two or more Parties have chosen different options, and unless the parties agree otherwise, the dispute will go to arbitration.

***Lex specialis*: UNCLOS and the Paris Agreement**

It might be argued that, in light of the UNFCCC framework, UNCLOS should not be applied to the emission of GHGs: *lex specialis derogat legi* (see section below: ‘*Lex specialis* and the ‘object and purpose’ of the Paris Agreement’). Such an argument fails on three grounds:

- ocean acidification is outside the mandate of the UNFCCC (and therefore UNCLOS is *lex specialis* in relation to ocean acidification),
- UNCLOS is *lex specialis* in relation to marine pollution more generally, and in any event,
- UNFCCC does not impose specific emission reduction commitments, which therefore remain subject to general principles of law and the requirements of other relevant treaties (see section below: ‘*Lex specialis* and the ‘object and purpose’ of the Paris Agreement’). (see section below: ‘*Lex specialis* and the ‘object and purpose’ of the Paris Agreement’).

The Blueprint and UNCLOS

Although UNCLOS offers some specific advantages as a basis for a legal claim (in particular its liability and dispute resolution provisions), the key substantive issues for any claim are likely to be the same as for breach of the duty to prevent harm: when everyone is contributing something to the problem, how do you determine:

- (i) responsibility for loss and damage (including the costs of adaptation) already incurred, and
- (ii) the scope of the duty to take preventative measures (including through the provision of financial support for developing country mitigation measures).

The Blueprint helps to address these issues in precisely the same way as it does for breach of the duty to prevent harm.

Breach of international human rights law

An interdependency between human rights and a safe climate and environment is widely acknowledged in international instruments and jurisprudence. For example,

Principle 1 of the Stockholm Convention 1972 states:

Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations.

The Council of Europe, Manual on Human Rights and the Environment 2012 explains:

(...)the [European Court of Human Rights] has emphasised that the effective enjoyment of the rights which are encompassed in the Convention depends notably on a sound, quiet and healthy environment conducive to well-being.

And the Preamble to the Paris Agreement 2015 includes the following:

Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity.

It is generally accepted that the fundamental principles of human rights form part of customary international law, as well as governing the actions of corporations and the obligations of governments to their citizens. The Restatement (Third) of the Foreign Relations Law of the United States, for example, states as follows:

A state violates international law if, as a matter of state policy, it practices, encourages, or condones ...

- (g) a consistent pattern of gross violations of internationally recognized human rights.³⁶

Subsidising and supporting fossil fuel industries, or failing to take adequate action to control emissions, over an extended period of time, in full knowledge of the likely devastating consequences for others would appear to meet this definition. However, for a claim on this basis to gain traction a framework is required against which the adequacy of state action might be addressed. Again, the principles of the Blueprint may assist with such an assessment.

³⁶ See Section 702.

Breach of a government's duties to its own citizens

In the last couple of years, domestic courts have shown an increasing willingness to intervene in government climate change policy. In June 2015, a Dutch court upheld a claim brought by the Urgenda Foundation, a citizens' platform, that the Dutch Government's actions to tackle climate change were inadequate, and therefore a breach of its duty of care:³⁷

Due to the severity of the consequences of climate change and the great risk of hazardous climate change occurring – without mitigating measures – the court concludes that the State has a duty of care to take mitigation measures.³⁸

Based on its considerations here, the court concludes that in view of the latest scientific and technical knowledge it is the most efficient to mitigate and it is more cost-effective to take adequate action than to postpone measures in order to prevent hazardous climate change. The court is therefore of the opinion that the State has a duty of care to mitigate as quickly and as much as possible.³⁹

The fact that the amount of the Dutch emissions is small compared to other countries does not affect the obligation to take precautionary measures in view of the State's obligation to exercise care. After all, it has been established that any anthropogenic greenhouse gas emission, no matter how minor, contributes to an increase of CO₂ levels in the atmosphere and therefore to hazardous climate change. Emission reduction therefore concerns both a joint and individual responsibility of the signatories to the UN Climate Change Convention.⁴⁰

Based on the foregoing, the court concludes that the State – apart from the defence to be discussed below – has acted negligently and therefore unlawfully towards Urgenda by starting from a reduction target for 2020 of less than 25% compared to the year 1990.⁴¹

A little later in the year, the High Court in Lahore, Pakistan, considered a claim brought by a farmer that the government's inaction on climate change was a breach of his fundamental rights:

The petitioner submits that in order to address the threat of climate change the National Climate Change Policy, 2012 ("NCCP") and the Framework for Implementation of Climate Change Policy (2014-2030) [Framework] has been announced by the Ministry of Climate Change, Government of Pakistan, however, no implementation on the ground has taken place.

He submits that inaction on the part of Ministry of Climate Change and other Ministries and Departments in not implementing the Framework, offends his fundamental rights in particular Articles 9 and 14 of the Constitution besides the constitutional principles of social and economic justice.⁴²

The High Court upheld his complaint, ordering the establishment of a Climate Change Commission to oversee implementation of the national framework:

It is quite clear to me that no material exercise has been done on the ground to implement the Framework. In order to expedite the matter and to effectively implement the fundamental rights of the people of Punjab, Climate Change Commission ("CCC") is constituted by this Court.

In April 2016, a US Federal Court ruled against the Federal Government's motion to dismiss a claim that is violating the constitutional rights of young people by enabling the continuing exploitation of fossil fuels,⁴³ Magistrate Judge Coffin stating as follows:

Assuming plaintiffs are correct that the United States is responsible for about 25% of the global CO₂ emissions, the court cannot say, without the record being developed, that it is speculation to posit that a court order to undertake regulation of greenhouse gas emissions to protect the public health will not effectively redress the alleged resulting harm. The impact is an issue for the experts to present to the court after the case moves beyond the pleading stage.

In November 2016, this ruling was upheld on appeal, Judge Aiken ruling:⁴⁴

Plaintiffs argue defendants' actions violate their substantive due process rights to life, liberty, and property, and that defendants have violated their obligation to hold certain natural resources in trust for the people and for future generations ...

[Plaintiffs] ask this Court to determine what emissions level would be sufficient to redress their injuries. That question can be answered without any consideration of competing interests ...

The science may well be complex, but logistical difficulties are immaterial to the political question analysis. See Alperin, 410 F.3d at 552, 555 ("[T]he crux of th[e] political question] inquiry is ... not whether the case is unmanageable in the sense of being large, complicated, or otherwise difficult to tackle from a logistical standpoint," but rather whether "a legal framework exists by which courts can evaluate ... claims in a reasoned manner.") ...

37 *The Urgenda Foundation v Kingdom of the Netherlands* [2015] District Court of the Hague, HAZA c/09/00456689, June 2015.

38 *ibid* para 4.83.

39 *ibid* para 4.73.

40 *ibid* para 4.79.

41 *ibid* para 4.93.

42 *Laghari v Federation of Pakistan* (2015) Lahore High Court, Case No: W.P. No. 25501/2015.

43 *Youth v USA et al* (April 2016) District Court for the District of Oregon, 6:15-cv-1517-TC.

44 *Youth v USA* (10 November 2016) US District Court for the District of Oregon, Eugene Division, Case No. 6: 15-cv-01517-TC.

Although the United States has made international commitments regarding climate change, granting the relief requested here would be fully consistent with those commitments. There is no contradiction between promising other nations the United States will reduce CO₂ emissions and a judicial order directing the United States to go beyond its international commitments to more aggressively reduce CO₂ emissions ...

If plaintiffs can show, as they have alleged, that defendants have control over a quarter of the planet's greenhouse gas emissions, and that a reduction in those emissions would reduce atmospheric CO₂ and slow climate change, then plaintiffs' requested relief would redress their injuries ...

Plaintiffs do not object to the government's role in producing any pollution or in causing any climate change; rather, they assert the government has caused pollution and climate change on a catastrophic level, and that if the government's actions continue unchecked, they will permanently and irreversibly damage plaintiffs' property, their economic livelihood, their recreational opportunities, their health, and ultimately their (and their children's) ability to live long, healthy lives. Echoing Obergefell's reasoning, plaintiffs allege a stable climate system is a necessity condition to exercising other rights to life, liberty, and property ...

In this opinion, this Court simply holds that where a complaint alleges governmental action is affirmatively and substantially damaging the climate system in a way that will cause human deaths, shorten human lifespans, result in widespread damage to property, threaten human food sources, and dramatically alter the planet's ecosystem, it states a claim for a due process violation. To hold otherwise would be to say that the Constitution affords no protection against a government's knowing decision to poison the air its citizens breathe or the water its citizens drink. Plaintiffs have adequately alleged infringement of a fundamental right.

Other actions are already underway (including in Switzerland⁴⁵ and Sweden⁴⁶) alleging government failure to take appropriate action on climate change.

What is the relationship between the Paris Agreement temperature goal and obligations in human rights treaties?

Even at 1.5C to 'well below' 2C there are grave dangers for all. It is now near impossible (both scientifically and politically) for any government to challenge the assertion that warming in excess of the long-term temperature goal set out in the Paris Agreement poses grave and intolerable risks to the right to life. It does not follow, however, that

action consistent with the Paris goal is sufficient to discharge human rights obligations. In the Philippines alone tens of thousands of people have already lost their lives to super-typhoons, attributed in significant part to climate change, and millions have been displaced; and the Philippines Commission on Human Rights is currently investigating alleged human rights breaches on the part of the 'carbon majors'. Claims might be commenced against governments on a similar basis where there is evidence of insufficient action. The Paris Agreement temperature goal, in other words, serves as a *minimum standard* for assessing compliance with human rights obligations; and the right to life, for example, obliges governments to take all necessary steps to prevent global warming exceeding it.

How should a domestic court really deal with non-appearance of affected parties?

Let us say the court in country Y gives a ruling, which (roughly translated) apportions 2 per cent of the global carbon budget to the country Y. It is thereby simultaneously ruling (even if it does not say so, or does not consider this consequence) that the rest of the world should be left with 98 per cent. But the rest of the world has not been represented. There is, in other words, only one 'pie' to be distributed to all countries, and any apportionment of that pie impacts on the shares available for all other parties. Consequently, domestic courts must conduct their apportionment on the basis of principles that may be consistently and equitably applied internationally. The Blueprint is designed to assist with such an exercise. The court in country Y can not dictate the approach taken by a court in country Z. But as long as it adopts principles that, if also applied by courts internationally, would tend to compliance with the Paris goal, it will at least be acting rationally and laying a path leading away from the worst of the climate crisis.

Once courts accept the principle that inaction on climate changes threatens constitutional protections and fundamental human rights, they will increasingly find themselves addressing the action that is logically and practically required to uphold those protections, and to avert collective disaster.

What is lacking for the moment, however, is an objective framework for assessing the adequacy and equity of a government's actions as a contribution to the common Paris Agreement temperature goal (both in terms of its own mitigation and its financial support for the mitigation measures of developing countries). In the absence of such a framework, even where courts recognize the need to advance a common vision, they will struggle to do so.

45 http://www.huffingtonpost.com/jennifer-l-morgan/silver-power-swiss-granni_b_12631440.html.

46 <http://www.magnoliamälet.se/info/the-magnolia-lawsuit-application-in-english/>.

Hypothetical example

Given the nature and scale of the threat posed by the current global emissions trajectory, and the urgency of increasing finance flows to support mitigation efforts, it is becoming increasingly likely that some governments will be motivated to commence legal action.

To illustrate the operation of the Blueprint in practice, let us suppose that Parties A, B, C and D bring an action against Parties E and F, alleging that:

- (i) parties E and F are partially responsible for the disappearance of Lake K, depriving large parts of their populations of access to fresh water, and necessitating the building of a pipeline to replenish the lake at a cost of \$15 billion, and consequently in breach of their *past* duty to prevent harm, and that
- (ii) the emission reduction plans of Parties E and F, as expressed in their NDCs, are inconsistent with the objective of limiting future warming to 1.5C or 'well below' 2C, and therefore in breach of their *future* duties to prevent harm,
- (iii) Parties E and F are failing to meet their obligations to provide Parties A, B, C and D with adequate finance to support their mitigation efforts, and that
- (iv) consequently Parties E and F are also in breach of their obligations under international human rights law (given the real and substantive threat to the right to life, for example, of people in countries A, B, C and D).

he court accepts in principle that:

- countries have a duty to prevent harm from climate change, and consequently that:
 - the court must determine the scope of both past and future obligations in order to determine the case,
 - referencing UNFCCC and the Paris Agreement, the duty to prevent future harm entails both emission reduction obligations and obligations to provide finance, and that
 - breaches of these obligations threaten large-scale loss of life and displacement of people, and consequently breach also fundamental norms of international human rights law.

Recognising, however, that climate change is a global problem, and that many similar future cases may arise the court is concerned to adopt a framework that may be applied consistently and transparently, enabling countries not party to

the litigation to determine also the scope of their respective obligations.

On the evidence before it, the court finds that the drying up of Lake K is 50 per cent attributable to poor irrigation methods on the part of Parties A, B, C and D, and 50 per cent attributable to climate change. It assesses the total damages (including the cost of the pipeline construction) at \$20 billion, of which \$10 billion dollars can be attributed to climate change.

Party E has a carbon debit of 10 Gt C while Party F had a carbon debit of 1 Gt C. The total carbon debit (let us say) is 200 Gt C.⁴⁷ Party E is therefore responsible for 5 per cent of all loss and damages (including adaptation costs), Party F for 0.5 per cent. On that basis, the court finds that Party E must pay Parties A, B, C and D a total amount of \$500 million in compensation for loss and damage arising from the drying up of Lake K, while Party F must pay \$50 million.

Parties A, B, C and D each have a carbon credit of 1 Gt C, representing rights to finance for their sustainable development and mitigation efforts (as distinct from adaptation costs). No common framework for valuing a tonne of carbon in this context has as yet been agreed. Parties A, B, C and D produce various analyses by external parties in proposing a valuation of \$20 per tonne. Parties E and F produce different analyses in proposing that a valuation of \$1 per tonne would in fact be more appropriate to the context of historic carbon credits and debits. The Court concludes that an equitable valuation would in fact be \$10 per tonne. Consequently the Court assesses each 1 Gt C credit to be worth \$10 billion.

On that basis, Party E's debit equates to an obligation to provide \$100 billion of climate finance, and Party F \$10 billion. Additionally, the court calculates a figure for interest accruing on the debts, increasingly their value accordingly. Party E can evidence previous payments to support climate mitigation globally of \$10 billion, reducing its debit by a corresponding amount. The court orders Party F to commit \$10 billion to Party A to support its climate mitigation efforts, and Party F to commit \$10 billion each to Parties B, C and D.

On condition that Parties E and F discharge their debits, the court holds that they are entitled to an equal per capita share of the remaining carbon budget of 150 Gt C (as from 2011), which according to the IPCC, would give a 50 per cent likelihood of limiting warming to 1.5C. Any use beyond these shares must be supported by the purchase of certificated carbon shares. Additionally, the court prescribes the interest applicable to any delay in payment.

⁴⁷ Precise figures for total credits and debits are derived from summing total credits and debits for all countries. Once available these figures will be published at on the GCI and Plan B websites respectively: <http://www.gci.org.uk/CREDIT-DEBIT.html>; and <http://www.planb.earth/blueprint—emissions—finance-and-damages.html>.

Given the catastrophic consequences of the global budget being exceeded, any country failing to operate within the framework for the future budget will be jointly and severally liable for all loss and damages arising.

If the judgement appears radical, that is only because it would be the first time in our history to date that a court would be drawing the existing legal framework on climate change to its logical consequence in light of the best available science.

Conclusion

The scale of the threat from climate change, the power of vested interests, and the political and economic complexity arising from dependence on fossil fuels, combine to disguise the logical simplicity of the solution.

Humanity must limit global warming to <1.5C or ‘well below’ 2C, or face critical points of irreversibility and ever more dangerous consequences of dangerous climate change. There is clear scientific guidance on the total mass of carbon dioxide that may be emitted consistent with reasonable (though by no means certain) chances of keeping to those limits (ie ‘the carbon budget’).

Humanity’s future now depends on:

- a) devising a common framework for the division of that budget (which integrates both rights to emissions, and right and obligations in terms of financial support), and then
- b) implementing it in good faith.

It is a challenging but not impossible task.

