Chapter 2

Responsibility, Solidarity and their Connections in International law: Towards a Coherent Framework

Volker Roeben and Mark Amakoromo*

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Abstract

The principle of common but differentiated responsibilities (CBDR), as one of the differing senses in which the concept of responsibility is used, represents an exception to the rules governing the equal treatment of States under international law. Its centrality in discussions relating to addressing global challenges has led to its recognition as a potent tool for examining the principle of solidarity. While the status of solidarity as a principle in international law remains uncertain, its influence as a moral value and as a tool for critical analysis of the law are clear. As such, there is a need to examine the extent to which solidarity influences the CBDR principle and vice versa particularly from a conceptual perspective. Drawing out the normative implications of the conceptual nexus between the CBDR principle and solidarity will form the foundation for the development and interpretation of international law in this regard. The chapter develops this argument as follows. It first discusses responsibility under international law as the foundation for the discussion of the CBDR principle. Secondly, the

* V. Roeben, Dean and Professor of International Law, Durham University, Durham, United Kingdom
e-mail: volker.roeben@durham.ac.uk
M. Amakoromo, Doctoral Candidate, University of Dundee, Dundee, United Kingdom and Lecturer, Faculty of Law, Niger Delta University, Bayelsa State, Nigeria
e-mail: mamakoromo@dundee.ac.uk

conceptual connections CBDR shares with solidarity will be explained. Thirdly, the chapter will discuss select reference areas of international law to determine the extent to which these connections are currently manifest. Finally, the chapter concludes with recommendations targeted at further strengthening of the CBDR principle as a platform for solidarity in the development of international law.

Keywords – solidarity, responsibility, CBDR principle, international law, IEL (international environmental law), climate change, ozone layer protection, biodiversity

2.1 Responsibility as the Foundation for the CBDR Principle

At the heart of the principle of common but differentiated responsibilities (CBDR) is the recognition that there are significant differences between countries in terms of their abilities to tackle global challenges. These differences are reflected in the international legal regimes set up to tackle these global challenges, with countries having different responsibilities imposed on them based on the CBDR principle and some countries requiring international support to meet these responsibilities based on solidarity. A key challenge that emerges in international law practice is that the CBDR principle is not uniformly applied under different legal regimes. This creates confusion and leads to different outcomes under these legal regimes.

In a bid to provide clarity, this chapter discusses the interconnections that exist between the CBDR principle and solidarity in order to determine how they influence each other and the extent to which they can strengthen each other. Based on a solidarity and responsibility perspective, the chapter considers three different regimes under international environmental law: ozone layer protection, climate change and biodiversity. The consideration of these three regimes will show how the connections between the CBDR principle and solidarity are currently manifested under these legal regimes and provide analysis regarding the differences in solidarity under these regimes.

Before delving into greater detail of what the CBDR principle entails, it is necessary to first answer the question "What is responsibility?" in view of the centrality of responsibility to the CBDR principle. While recognising that responsibility has a wide array of meanings, a distinction has been drawn between 'responsibility as answerability' and 'responsibility as liability'.[1] Responsibility as answerability arises at the point where a person (natural or legal) can be called upon to account for their behaviour and respond to any charges (moral or legal)

[1] Crawford and Watkins 2010, at 283.

that are put to them.[2] At this stage, no wrong has necessarily been committed; as such, a person is entitled to offer valid justifications for their conduct and avoid any imputations of wrongdoing.[3] On the other hand, responsibility as liability arises at the point where the actual wrong has been committed through a violation of obligations that could give rise 'to some negative response such as punishment, censure or enforced compensation'.[4] These two senses of responsibility operate at different stages in the international legal system, with responsibility as answerability preceding liability.[5] Thus, while answerability occurs before it can be decided that a wrong has been committed, liability arises after the wrong has been committed.[6] One can therefore be answerable without being liable while one that is liable would typically also be answerable.

Responsibility lies at the heart of any system of law and 'constitutes its largely invisible foundational structure which may be rendered visible by means of legal principles'.[7] In international law, responsibility is regarded 'as the necessary corollary of the equality of States'.[8] Furthermore, international law is primarily a system that is 'designed to allow states to be held responsible for their actions…[and] may be conceived of as a web of obligations that states owe to each other and to other actors'.[9]

The focus of responsibility is on the relationship existing between a subject (moral agent), object (action or thing, moral patient), and a designated body with effective sanctioning powers (addressee).[10] The subject therefore is to act on the object and is answerable to the designated body. This relationship between subject, object and designated body manifests itself in a matrix consisting of three vectors: *who* is responsible for *what* and *to whom*? Discussions relating to responsibility involve this responsibility matrix and any deficits regarding any vector raises questions as to the existence of responsibility.

How does this responsibility matrix manifest itself in international law? The starting point will be to answer the question as to who can be responsible under international law. For a party to be responsible under international law, it must be capable of making its own decisions and to

[2] Ibid.
[3] Ibid.
[4] Ibid.
[5] Ibid 284.
[6] Ibid 284.
[7] Roeben 2012, at 104-105.
[8] Mayer 2014, at 542.
[9] Crawford 2014, at 3-4.
[10] Roeben 2012, at 106.

be answerable for same. States are the primary actors imbued with responsibility under international law; they are however not the only actors. Thus, international responsibility may lie to international organisations and their organs[11] as well as other forms of institutionalised cooperation between States which exercise formal or informal public authority.[12] Private actors can also be held responsible under international law where they have been assigned with responsibility. This chapter focuses on the responsibility attributed to States.

To answer the "what" question, States may be held responsible for international public goods which may require either international cooperation or internal action. Where international cooperation is required before an international public good can be met, primary and secondary responsibilities may be allocated in this regard. Whatever is designated as an international public good is to be acted upon by States which have been imbued with responsibility in that regard. A key idea in this chapter is that these responsibilities drive solidarity towards the achievement of international public goods. The chapter will therefore consider international public goods requiring international cooperation such as climate change, ozone layer depletion and global biodiversity in a bid to determine how these have been tackled from the perspectives of responsibility and solidarity.

Lastly, with respect to the "to whom" vector of the responsibility matrix, this refers to the designated body with effective sanctioning powers. For the responsibility matrix to be complete, there should be a body to which the subject of responsibility (*who*) is required to answer as regards the fulfilment or otherwise of its responsibilities with respect to the international public good (*what*). Such a body has the task of setting standards for compliance for all subjects of responsibility and should be able to administer effective sanctions aimed at facilitating compliance with obligations. This latter requirement has however proven to be difficult to achieve under international environmental law as will be seen subsequently in this chapter.

Against this backdrop of what responsibility entails, a common iteration of the notion of responsibility under international law is the concept of "common but differentiated responsibility" (CBDR), which this chapter focuses on. While the CBDR principle has been deployed in different areas of international law, it has a strong foundation in international environmental law (IEL), with the environment having been recognised as a fertile ground for

[11] Ibid 107.
[12] Ibid.

nonuniform obligations.[13] This chapter focuses on the operation of the principle under IEL and will focus on three key legal regimes: climate change, ozone layer protection and biodiversity.

The CBDR principle represents a means for the formal integration of environmental and developmental concerns at an international level.[14] It is aimed at making 'one country's commitments more "just" relative to the commitments of other countries'.[15] It operates on the premise that while all countries are required to work together to tackle global environmental problems, the differences between countries means that despite their equality under international law, their contributions and commitments towards resolving these global environmental problems will not be equal.

The CBDR principle 'recognises historical differences in the contributions of developed and developing States to global environmental problems, and differences in their respective economic and technical capacity to tackle these problems'.[16] Its primary aim is 'to provide more equitable and effective results within the system'.[17] It is worth mentioning here that the CBDR principle represents 'a conceptual framework for compromise and co-operation in effectively meeting environmental challenges'.[18]

The CBDR principle manifests general principles of equity under international law.[19] This is because greater responsibility is placed on wealthier countries and those bearing greater responsibility in causing specific global problems.[20] It has therefore been acknowledged that 'imposing equal obligations on subjects of law that are unequal in relevant ways may be perceived as unjust if they exacerbate inequalities or impose unfair burdens on those least able to bear them'.[21]

The CBDR has two core conceptual elements:

> The first element concerns states' common responsibility for environmental protection at the national, regional and global levels. The second conceptual element concerns the need to take account of differing circumstances, especially in relation to each state's

[13] Stone 2004, at 279.
[14] Pauw et al 2014, at 3; Honkonen 2009.
[15] Pauw et al 2014, at 3.
[16] Centre for International Sustainable Development Law (CISDL) 2002.
[17] Deleuil 2012, at 281; Cullet 2003, at 15.
[18] CISDL 2002.
[19] Bortscheller 2010, at 50; CISDL 2002; Pauw et al 2014, at 3; Cullet 2016, at 306.
[20] CISDL 2002.
[21] Shelton 2008, at 647.

contribution to the creation of a particular environmental problem and its ability to prevent, reduce and control the threat of it (Sands et al. 2012).[22]

It is necessary to discuss these two elements of the CBDR principle. Regarding the common responsibilities of states to address global environmental challenges, these do not raise much issue. Common responsibility arises where two or more States share obligations with the aim of protecting an environmental resource.[23] It governs resources described as 'common heritage of mankind' or of 'common concern'.[24] There are varying circumstances where common responsibility may apply such as 'where the resource is shared, under the control of no state, or under the sovereign control of a state, but subject to a common legal interest'.[25] It is necessary that certain resources should be considered as 'common heritage'; these must be managed and enjoyed jointly, while being regulated in a manner that goes beyond national self-interest.[26] In this regard, it has been argued that differentiation for global environmental problems needs to be considered from the perspective of common heritage equity rather than that of the nation state.[27]

The last quarter of the twentieth century saw the appearance of differential treatment between developed and developing countries in international environmental law.[28] Differential responsibility aims at the promotion of substantive equality as opposed to mere formal equality between States[29] and is rooted in the notions of fairness and equity.[30] It has been noted that differential treatment 'builds on ideas of global distributive justice and helps to rebalance some of the most visible inequalities arising between formally equal states of very different size, power or natural resource endowment'.[31] Different factors have been identified as forming the basis for which differentiated environmental standards are introduced such as 'special needs and circumstances, future economic development of countries, and historic contributions to the creation of an environmental problem'.[32]

[22] Pauw et al 2014, at 4.
[23] CISDL 2002.
[24] Ibid.
[25] Ibid.
[26] Cullet 2016, at 322.
[27] Ibid 306-307.
[28] Deleuil 2012, at 271.
[29] CISDL 2002.
[30] Deleuil 2012, at 271.
[31] Cullet 2016, at 306
[32] CISDL 2002.

Differential treatment aims at ensuring 'that developing countries can come into compliance with particular legal rules over time – thereby strengthening the regime in the long term'.[33] As such, there are different techniques which may be deployed in differentiated responsibility such as 'delayed implementation and less stringent commitments'.[34] Elaborating on these different techniques, Stone notes that:

> An agreement can make differential substantive requirements; subject some parties to a more favourable compliance timetable; permit special defences; make noncompliance, if not forgiven, overlooked; or afford qualified nations financial and technical contributions, either to absorb the costs of compliance, or as a precondition for their own participation.[35]

There are two perspectives from which the development of differentiation can be considered: 'Firstly, differential treatment is based on a recognition that deep inequalities must be addressed to ensure the legitimacy of the international legal order… Secondly, differentiation is the product of the convergence of various interests in international negotiations that offer a basis for diverging from the usual reciprocity of obligations'.[36] It is worth noting here that while there is a proper foundation for differential treatment in the foundational instruments of international environmental law, no specific reference is made on the need 'to differentiate at the level of legal commitments in the basic principles of IEL'.[37] Thus, it has been noted, for instance, that Principle 7 of the Rio Declaration does not impose any legal obligations on the North.[38]

International assistance in the form of financial aid and technology transfer is key in the discussion of differential responsibilities.[39] The inclusion of provisions relating to implementation aid and technology transfer in most treaties since the early 1990s has been acknowledged.[40] This inclusion is based on the recognition that accession to treaties does not equal effective implementation; the inclusion also serves to facilitate resource redistribution since many States do not have the ability to meet up with their commitments under international

[33] Ibid.
[34] Ibid.
[35] Stone 2004, at 277-278.
[36] Cullet 2016, at 307.
[37] Ibid 310.
[38] Ibid.
[39] CISDL 2002.
[40] Cullet 2016, at 313.

law.[41] Cullet has however observed that 'While implementation aid has been provided on a relatively sustained basis in various treaty regimes, the same cannot be said with regard to technology transfer[…]'.[42]

One of the earliest endorsements of the differentiation between developed and developing countries can be found in the Stockholm Declaration of 1972, which takes the circumstances and specific requirements of developing countries into consideration as well as the costs that arise from incorporating environmental safeguards into their development planning.[43] It goes further to acknowledge the need for additional international technical and financial assistance to be made available for these countries upon their request.[44] In addition, the Stockholm Declaration recognised the need to consider 'the applicability of standards which are valid for the most advanced countries but which may be inappropriate and of unwarranted social cost for the developing countries'.[45]

While recognising that special priority should be given to the special situation and needs of developing countries,[46] the Rio Declaration went further to officially recognise the CBDR principle thus:

> In view of the different contributions to global environmental degradation, states have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.[47]

It is worth mentioning here that three arguments have been identified for differentiation under Principles 6 and 7 of the Rio Declaration: (1) differentiation according to *needs* (2) differentiation according to the *pressures* placed by each country on the environment and (3) differentiation based on differing capabilities in wealth and technology.[48] Stone has observed that Principle 7 focuses more on the wrongs of the Rich rather than the needs of the Poor, and

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[41] Ibid.
[42] Ibid.
[43] Declaration of the United Nations Conference on the Human Environment, Stockholm, 16 June 1972 (Stockholm Declaration), principle 12.
[44] Ibid, principle 12.
[45] Ibid, principle 23.
[46] Rio Declaration on Environment and Development, Rio de Janeiro, 14 June 1992 (Rio Declaration), principle 6.
[47] Rio Declaration, principle 7.
[48] Stone 2004, at 290; Rio Declaration, principles 6 and 7.

may be understood as a declaration that the polluter should pay.[49] Furthermore, that Principle 7 only becomes controversial when understood in the past tense ("their societies placed") rather than in its present tense ("their societies place") as it is written.[50] The Rio Declaration gives further impetus to the CBDR principle by providing that 'Standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries'.[51] It is worth noting here that Principle 7 of the Rio Declaration does not impose any legal obligations on the North.[52]

What is the status of the CBDR principle under international law? There is no evidence of a general practice accepted as law in relation to the CBDR principle, despite its abundant use in treaties.[53] While the CBDR principle is perceived as 'an emerging principle of international environmental law',[54] it is not clear that a new normative principle is in play; this is despite the increase in multilateral treaties that have differentiated obligations.[55] The prevailing view therefore is that the CBDR principle does not have the status of a customary principle of international law.[56] Rather, the CBDR principle appears to only be 'a philosophical and ethical basis for differentiated obligations'.[57] Thus, while the CBDR principle enjoys recognition in climate treaties and is binding *inter partes*, it 'is not a rule of international law and therefore has no autonomous binding force – especially because its legal nature and content remain disputed'.[58] This can be seen under the Rio Declaration which, while recognising the differences between the North and the South, did not impose any legal obligations on the North.[59] In similar fashion, it has been noted under the climate regime that the CBDR is not a legal principle in the narrow sense even though it is provided for under Article 3 of the UNFCCC which is headed "Principles".[60]

Developed and developing countries have expressed differing views as it relates to the CBDR principle. It is worth noting here that the rapid development of differential treatment in international environmental law is largely due to the differing agendas of the South and North,

[49] Stone 2004, at 291.
[50] Ibid.
[51] Rio Declaration, principle 11.
[52] Cullet 2016, at 310.
[53] Deleuil 2012, at 275; Rajamani 2006, at 159.
[54] Weiss 2000, at 350.
[55] Stone 2004, at 300.
[56] Ibid 299; Deleuil 2012, at 275; Honkonen 2009, at 303–304.
[57] Deleuil 2012, at 277.
[58] Ibid.
[59] Cullet 2016, at 310.
[60] Pauw et al 2014, at 5.

with the former making equity-based claims as under international economic law while the latter sought to address global problems 'that were not (yet) crucial environmental problems for the South when negotiations started'.[61] In practice, developed countries such as the US have raised objections on the perception of the CBDR as a legally binding principle and have called instead for greater uniformity in parties' obligations.[62] On the other hand, most developing countries favour a strict interpretation of CBDR which recognizes a clear differentiation between states.[63] For Deleuil, this perception of the CBDR principle as a binding rule by developing countries is not tenable as the CBDR principle 'does not directly establish a clear goal, and differentiated obligations are and remain the results of negotiations and of the political will of States'.[64]

The perspective of developing countries is unsurprising. This is because development is more of a priority to developing countries than addressing global environmental challenges.[65] Furthermore, the benefits that these countries anticipate from participating in collective action to address global environmental challenges are typically lesser than the benefits they anticipate from their other development investments.[66] Under the climate regime for example, while poorer countries are more vulnerable to the effects of climate change due to 'fewer resources with which to defend their assets and to adapt',[67] reducing the risks associated with climate change remains a lower priority for these countries.[68] The link between climate change and sustainable development has therefore been constantly acknowledged, particularly as 'developing countries are minor contributors to current global environmental problems, have lower capacities and still have high levels of poverty that need to be addressed first'.[69]

Despite the differing views of developed countries, all countries are required to work together to address global environmental challenges. Developing country participation is crucial; this is in line with the suggestion that global negotiations would be bound to fail in the absence of 'a firm effective and mutually acceptable bedrock definition defining the scope and depth of developing country involvement'.[70] The participation of all categories of countries does not

[61] Cullet 2016, at 310.
[62] Pauw et al 2014, at 1; Deleuil 2012, at 278.
[63] Pauw et al 2014, at 9; Deleuil 2012, at 278.
[64] Deleuil 2012, at 276.
[65] Stone 2004, at 295.
[66] Ibid.
[67] Ibid 291.
[68] Ibid 286.
[69] Pauw et al 2014, at 8.
[70] Ibid 2.

mean that their contributions must be equal. Indeed, due to the different costs and benefits that different countries anticipate from any 'single set of terms', there is bound to be 'some heterogeneity in terms just from rational, self-interested bargaining among parties with heterogeneous interests and resources'.[71] An example can be seen under the first COP under the climate regime where a political compromise was struck despite the differing perspectives of developed and developing countries, with the former calling for an inclusive international agreement while the latter were hesitant to commit to reduction targets since they had not contributed to the problem nor benefitted from such emissions.[72] Countries therefore need to look beyond their differing perspectives if global environmental challenges will be effectively addressed.

Some criticisms against the current interpretation of the CBDR principle are worth mentioning briefly here. Under the climate change regime, the need for changes to be made in the conceptualization and implementation of CBDR to take emerging countries (such as India and China) into account has been acknowledged.[73] Indeed, differentiation based on developed and developing countries was appropriate for international environmental law since 'in some cases a good correlation existed between levels of economic development and contribution to environmental damage'.[74] For Pauw and others however, as it relates to the climate change regime, 'the Annex I/Non-Annex I dichotomy is neither a practical nor a realistic way forward'.[75] It has therefore been argued that the current interpretation of the CBDR principle is ineffective as it excludes emerging economy, major emitter-countries like China from emission reduction obligations.[76] This argument is hinged on the premise that the CBDR principle is backward looking as it fails to consider the significant current contributions being made by China and other developing countries.[77] A case has therefore been made for a new interpretation of the CBDR principle which would make adequate provisions for emerging economies with high GHG emission levels such as China.[78]

Differential treatment has also been criticised on the basis that while appropriate, it should only be available 'up to the point at which inequalities are sufficiently reduced'.[79] According to

[71] Stone 2004, at 300.
[72] Bortscheller 2010, at 49-50
[73] Pauw et al 2014, at abstract.
[74] Cullet 2016, at 317.
[75] Pauw et al 2014, at 50.
[76] Bortscheller 2010, at 51; Cullet 2016, at 315.
[77] Bortscheller 2010, at 52.
[78] Ibid 49.
[79] Cullet 2016, at 315.

Rawls, once there has been a satisfaction of the duty of assistance at the international level, with all people benefitting from working liberal or decent governments, there is no need to narrow the wealth gap.[80] In similar fashion, Stone questions whether redistribution can be defended based on multilateral environmental agreements, rather than through increased aid and development assistance.[81]

Despite these criticisms of the CBDR principle, the argument has been made that differentiation still remains crucial in the world and that it should be extended to include all aspects of sustainable development law, while also being 'implemented in a way that benefits the most disadvantaged in every country'.[82] For Deleuil, the CBDR principle should be retained as the basis for differentiated obligations.[83] Under the climate regime, the fact that differentiation is still part of the Paris Agreement is a pointer to the fact that differentiation cannot be dispensed with.[84] Despite the current gaps existing in the CBDR therefore, the CBDR principle still represents a strong basis for addressing global environmental challenges without derailing the sustainable developmental trajectory of developing countries. The chapter goes further to consider how the CBDR principle can be strengthened by solidarity and how solidarity can be greater manifested in the CBDR.

2.2 The CBDR Principle and Solidarity

The CBDR principle has been described as 'a clear manifestation of solidarity'.[85] This is because it integrates responsibilities for cooperation, recognises existing disparities at the global level, and facilitates support and assistance measures.[86] Solidarity among States therefore demands differential treatment since states may be required to take measures to address inequalities.[87] In the climate change arena, for example, there is an expectation on richer countries to pay for addressing climate change 'based on a normative principle of solidarity' and regardless of whether they have caused harm directly or indirectly.[88]

[80] Ibid 309; Rawls 1999, at 114.
[81] Cullet 2016, at 309; Stone 2004, at 293–294.
[82] Cullet 2016, at 305.
[83] Deleuil 2012, at 281.
[84] Cullet 2016, at 314.
[85] Williams 2009, at 505.
[86] Ibid.
[87] Cullet 2016, at 314.
[88] Pauw et al 2014, at 7.

What then is solidarity? Starting from its terminological root ('solidum' in Latin), 'the notion of solidarity connotes a shared responsibility for the whole common objective (solidum), not just the care for an individual'.[89] Under the UN Millennium Declaration, solidarity is described thus: 'Global challenges must be managed in a way that distributes the costs and burdens fairly in accordance with basic principles of equity and social justice. Those who suffer or benefit least deserve help from those who benefit most'.[90] Another perspective views solidarity as 'an understanding among formal equals that they will refrain from actions that would significantly interfere with the realization and maintenance of common goals or interests'.[91] It is important to note that under solidarity, each state considers its interests to be inextricable from the interests of the community of states.[92] In the environmental domain for example, the principle of solidarity is aimed at preventing a state from asserting that its narrower national interests should take preference over the general interest of the community.[93]

Solidarity has been described as having dual roles: 'responding to dangers or events (negative solidarity) and creating joint rights and obligations (positive solidarity)'.[94] Experience has shown a general tendency of responding in the aftermath of dangers or events rather than the adoption of more proactive approaches in addressing global environmental challenges. It is important for solidarity to be preventive rather than reactive, as reacting to global crises is typically more expensive than preventing them.[95]

There is a need to distinguish solidarity from cooperation. International cooperation has been described as 'the most manifest expression of solidarity in international law and policy'.[96] Both principles are therefore strongly intertwined and share many similarities. While solidarity is primarily a principle of cooperation however,[97] it has been argued that in comparison to the principle of cooperation, 'solidarity potentially offers a more composite and mature principle that better reflects the diversity and complexity of our international society'.[98] Part of the criticism against the principle of cooperation is that it lacks 'any real appreciation or recognition of varying capacity amongst participants, or the need for redistribution in order to

[89] Dann 2010, at 57.
[90] United Nations Millennium Declaration, General Assembly Resolution 55/2 of 8 September 2000 https://www.ohchr.org/EN/ProfessionalInterest/Pages/Millennium.aspx accessed 20 January 2020.
[91] MacDonald 1996, at 290.
[92] Ibid.
[93] Ibid.
[94] Wellens 2010, at 4.
[95] Szpak 2017, at 123.
[96] Puvimanasinghe 2013, at 181.
[97] MacDonald 1996, at 259; Carozza and Crema 2014, at 13.
[98] Williams 2009, at 493.

promote a justice-orientated solution'.[99] In addition, the principle of cooperation does not consider mutuality (a key component of solidarity) to be as important in achieving the set goal.[100]

It is worth noting here that the differences between solidarity and cooperation are not such that would require different implementation and enforcement mechanisms.[101] That said, solidarity does go beyond cooperation and still requires rules, instruments and procedures to be effective.[102] Considering that solidarity represents 'the intensification of co-operation for development',[103] and that solidarity would be useful in resolving many of the perceived inadequacies of the principle of cooperation,[104] there is a need to consider the added benefit that solidarity can bring to the principle of cooperation for the purpose of resolving global environmental challenges.

While the principle of solidarity struggles for popularity in the realm of international law as compared to cooperation, different international agreements and instruments directly refer to it.[105] The UN Convention to Combat Desertification, for instance, calls on Parties to improve cooperation and coordination in a spirit of international solidarity and partnership.[106] Other international instruments also contain allusions to the principle of solidarity, even though it is not expressly mentioned. The Rio Declaration, for example, provides that the 'special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, shall be given special priority'.[107] This has been described as 'a clear manifestation of solidarity'.[108] In similar fashion, the UNFCCC, in requiring developed countries to take the lead in addressing climate change, has been described as appearing to endorse solidaristic behaviour.[109] It has further been noted that environmental agreements, such

[99] Williams 2009, at 507.
[100] Badanova 2019, at 114.
[101] Wolfrum 2012, at 13.
[102] Casini 2013, at 8.
[103] Wolfrum 2010.
[104] Williams 2009, at 507.
[105] UN Convention to Combat Desertification (UNCCD), art 3(b); the Constitutive Act of the African Union, art 3(a); the Agreement Establishing the Common Market for Eastern and Southern Africa, art 6(b); UNGA Resolution 64/157; The United Nations Human Rights Council Resolution 23/12 of 2013 also recognises solidarity. It notes that: 'international solidarity is not limited to international assistance and cooperation, aid, charity or humanitarian assistance; it is a broader concept and principle that includes sustainability in international relations, especially international economic relations, the peaceful coexistence of all members of the international community, equal partnerships and the equitable sharing of benefits and burdens'.
[106] UNCCD, art 3(b).
[107] Rio Declaration, principle 6
[108] Williams 2009, at 504.
[109] Williams 2009, at 505.

as those relating to climate change and the depletion of the ozone layer, involve self-centred solidarity.[110] This chapter shall explore the three legal regimes under IEL to explore the extent to which solidarity is reflected in them.

It should be mentioned here that while there is agreement under international law that a principle of solidarity exists, there is disagreement as to the nature of the principle.[111] MacDonald summarises the disagreements under three categories: (i) those who argue that solidarity does not create any extra-legal obligations; (ii) those that argue that solidarity creates extra-legal obligations; and (iii) those who see solidarity as a principle that informs the entire system and as representing the direction of travel for international law.[112] While there is a need for more weight to be accorded to the solidarity principle in international law, it has been noted that even if such an argument were to be made, it would be on the basis of 'solidarity as a fundamental moral value, to which law ought to be responsive'.[113]

It is also worth noting here that solidarity is more widely accepted under IEL as compared to other areas of law, such as the international economic system.[114] One reason for this could be because the environment highlights the intergenerational dimension of solidarity.[115] The pervasiveness of solidarity with developing countries under IEL has therefore been recognized.[116] Another possible reason for the pervasiveness of solidarity under IEL could be its reliance on soft law, which is a key characteristic of IEL. The reason for this reliance has been attributed to 'inequalities in resources, different economic needs, and the difficulties of attributing legal responsibility'.[117] Importantly, soft law has been described as reflecting solidarity and creating a 'pull of legitimacy through the articulation of common goals'.[118] Of key relevance also is the fact that despite the lack of enforcement mechanisms, state practice suggests that soft law is taken seriously.[119]

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[110] Hestermeyer 2012, at 56; In defining self-centred solidarity, Wolfrum notes thus: 'Solidarity may mean that a state has to sacrifice, or at least limit, its individual interests, in favour of the overarching interest of the international community; however, because every member of the international community, including the self-sacrificing ones, accrues the benefits of such cooperation, the term self-centred solidarity has been coined' – Wolfrum 2013, at 403-404.
[111] MacDonald 1996, at 262.
[112] Ibid.
[113] Carozza and Crema 2014, at 15.
[114] MacDonald 1996, at 282.
[115] Casini 2013, at 7.
[116] Hestermeyer 2012, at 56.
[117] MacDonald 1996, at 286.
[118] Ibid 287.
[119] Ibid 286-287.

A key challenge faced by the principle of solidarity under international law is the more well-established principle of sovereignty. Solidarity has been described as a relatively weak legal principle which typically gives way to other principles such as sovereignty and consent.[120] While solidarity is typically looked upon as being opposite to solidarity, it has been noted that 'solidarity is then not the opposite of sovereignty but the proper use and fulfilment of the freedom that human communities have in the international system and which we express through the term "sovereignty"'.[121] Solidarity therefore enhances sovereignty through the presence of mutual obligations.[122] This however also means that States have relinquished part of their sovereignty and may therefore be subject to legal consequences.[123] For this reason, States are typically reluctant to operate on the basis of solidarity. Despite this latter concern however, it has been pointed out that 'solidarity does not result in an infringement of the sovereignty of those states that benefit from a solidarity action'.[124]

There are three key aspects of solidarity identified in the literature: the achievement of common objectives, the achievement of common objectives through differentiated obligations, and the adoption of actions to benefit particular states or groups thereof.[125] IEL falls within the aspect on achieving common objectives through differentiated obligations.[126] Solidarity however goes beyond differentiated obligations but requires additional actions to be taken. This is because solidarity represents 'a set of feelings activated and reinforced by the institutional obligation of a set of transfers'.[127] Solidarity therefore goes beyond mere feelings or sentiments but includes practical dispositions to take action.[128]

Two key actions which may be taken in favour of developing countries are the transfer of finances and technology.[129] It is worth noting here that financial assistance and technology

[120] Carozza and Crema 2014, at 15.
[121] Ibid 19.
[122] Casini 2013, at 14.
[123] Ibid.
[124] Wolfrum 2013, at 416.
[125] Wolfrum 2013, at 404; Wolfrum 2012, at 11; Wellens gave examples of these three aspects thus: 'In the UN law on the maintenance of international peace and security and in international humanitarian law (the obligation to ensure respect) solidarity operates as an instrument to achieve common objectives through the imposition of common obligations. In international environmental law, international development law … and to some extent in international trade law (through the GSP system) solidarity is instrumental in achieving common objectives through differentiated obligations. In international disaster law and, for instance, in Articles 49 and 50 of the UN Charter solidarity is used for actions to benefit particular States' – Wellens 2010, at 13.
[126] Wellens 2010, at 13.
[127] Burelli 2018, at 5.
[128] Laitinen and Pessi 2014, at 4; Prainsack and Buyx 2011, at xiv
[129] Stockholm Declaration, principle 9

transfer have been identified as claims linked to the notion of solidarity.[130] These transfers of finances and technology should not therefore be seen as donations but as the fulfilment of the obligations of developed countries under the principle of solidarity.[131] In practice, it has been suggested that the transfer of finances and technology under IEL has been on the basis of an altruistic form of solidarity, which has led to difficulties in implementation.[132] It should be stressed here that where actions are taken in favour of developing countries, the ability of these countries to meet up with their obligations will be strengthened.[133]

There is a danger that solidarity may be considered as a one-sided affair. It has been noted, for instance, that there has been a wrong perception and application of the principle of solidarity under the Declaration on the New International Economic Order (NIEO) and the Charter on Economic Rights and Duties of States, as they appear to impose one-sided obligations, which solidarity cannot do.[134] MacDonald has therefore noted emphatically that 'solidarity cannot impose a one-sided obligation'.[135] This is because where obligations under solidarity are one-sided, it makes it 'practically impossible for any developed state [to] willingly recognize a general legal obligation arising from it'.[136] Solidarity should therefore not be one-sided but requires mutual obligations.[137]

The requirement for mutuality in solidarity deserves further consideration here. Solidarity rights have been recognised as existing only in circumstances where obligations exist on both sides.[138] Mutuality of obligations has also been identified as one of the three elements of solidarity.[139] It has thus been observed that where solidarity does not involve a reciprocal relationship with all parties as beneficiaries and contributors, 'social solidarity does not have firm normative foundations'.[140] It is important to note here that 'Mutuality does not mean to benefit the donor but mutuality means to benefit the shared goal'.[141] Thus, where the recipient

[130] Raymond Schutz, in MacDonald 1996, at 280.
[131] MacDonald 1996, at 289.
[132] Hestermeyer 2012, at 56, 63.
[133] Ibid 11.
[134] MacDonald 1996, at 265.
[135] Ibid.
[136] Ibid 280.
[137] Casini 2013, at 11.
[138] Raymond Schutz, in MacDonald 1996, at 280; Wellens 2010, at 7.
[139] Dann 2010, at 61; the other two being an obligation to help meet the common objective and equality of the partners involved.
[140] Küçük 2016, at 976.
[141] Dann 2010, at 84.

contributes towards meeting the common objective, the contributions should achieve this goal, rather than being only for the benefit of the donor.[142]

A key aspect of mutuality is that the contributions of both sides do not necessarily need to be equal. Dann, in distinguishing between reciprocity and mutuality, noted that mutuality does not require equal contributions or the same amount of help; rather, 'it underlines that the achievement of the common objective is a common task and not a one-sided effort'.[143] According to MacDonald, 'Differences in resources and capacities means that there will be differences as to how states share these obligations, but the fact remains that all states share these obligations'.[144] All states do not therefore have to contribute equally or have equal obligations under solidarity.[145] This is a proper interpretation of solidarity as opposed to one which is largely one-sided in favour of weaker states. As Küçük has observed, 'If the motivating ground is the communal interest, the addressees of a solidarity requirement can be read to cover all interested parties, rather than just the strong that are expected to show support towards the weak'.[146] Dann aptly summarises the idea of mutuality thus:

> If equality is (rightfully) demanded as basis for the relationship between donor and recipient, a meaningful concept of solidarity equally implies that recipients of help also contribute to the achievement of the common objective. It is this thought that in environmental law has found a valid expression in the principle of a "common but differentiated responsibility".[147]

The effect of the above is that developing countries should also have corresponding obligations in line with the principle of solidarity. In this light, it has been noted that developing countries have corresponding obligations 'to cooperate and participate in the common efforts to protect the environment'.[148] What contributions can developing countries make while acting in the spirit of solidarity? In this regard, it has also been suggested that the "worst off" may offer 'support and willing compliance with the system' in return for the benefits gained.[149] Another example has been given regarding the transfer of financial resources, where it has been noted

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[142] Dann 2010, at 61, footnote 20; Dann gives the example of tying aid in the context of development cooperation where the recipient is required to spend in the donor's country. This, according to Dann, 'is not mutuality since it is not aiming at the development of the recipient but of the donor's economy'.
[143] Ibid.
[144] MacDonald 1996, at 281.
[145] Ibid 280-281; Wolfrum 2013, at 404.
[146] Küçük 2016, at 967.
[147] Dann 2010, at 74-75.
[148] MacDonald 1996, at 289.
[149] Burelli 2018, at 8.

that if developing countries are seen to have used these funds properly, this will increase the willingness of developed countries to make further contributions.[150] The examination of the three different IEL regimes in this chapter will reveal the extent to which developing countries have (or have not) contributed to meeting common objectives in the spirit of solidarity.

The mutuality of obligations inherent in the discussion of solidarity raises questions as to the relationship between solidarity and responsibility and how they interact with each other. In this regard, it has been noted that 'responsibility generates acts of solidarity (that is, solidarity is grounded in responsibility)'.[151] Solidarity is therefore seen as a potential which we have and for which we must do something in order to be in solidarity with others.[152] This is especially important where actions need to be taken in favour of those who do not fall within the category of "one of us".[153] Under IEL, such necessary actions would include the transfer of finances and technology. Responsibility therefore emerges as a notion that can be appealed to (whether conceptually or practically) for facilitating solidarity building across groups.[154]

The literature shows that there is a strong link between the CBDR principle and solidarity. According to Wolfrum, the CBDR principle, as one of the core principles of IEL, has a bearing on solidarity in international law.[155] This view is further supported by Wellens who notes that under IEL, the CBDR principle, as one of the core elements of sustainable development,[156] has been a powerful tool in the further clarification and development of the solidarity principle.[157] Hestermeyer has also described the adoption of differentiated responsibilities aimed at realizing common goals as 'a reflection of solidarity with weaker states'.[158] In addition, Hestermeyer notes that:

> Solidarity with developing countries clearly shows in the doctrine of common but differentiated responsibilities, which implements both relevant facets of solidarity: achieving common objectives through differentiated obligations and actions in favour of particular states.[159]

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[150] MacDonald 1996, at 289.
[151] Principe 2000, at 142.
[152] Ibid 143.
[153] Ibid 144.
[154] Ibid.
[155] Wolfrum 2013, at 407; Wolfrum goes further to state that the CBDR principle is based on the principle of interstate solidarity - Wolfrum 2013, at 408.
[156] The other being intergenerational equity.
[157] Wellens 2010, at 4.
[158] Hestermeyer 2012, at 53.
[159] Hestermeyer 2012, at 53-54.

The chapter will now turn to a consideration of three legal regimes under IEL to examine the extent to which they reflect solidarity and responsibility.

2.3 Solidarity and Responsibility under IEL

2.3.1 Ozone Layer Protection

The starting point for the discussion of the legal regime governing the ozone layer is the Vienna Convention for the Protection of the Ozone Layer (VCPOL) 1985. The VCPOL is a framework treaty which represents 'a core of common agreement to be strengthened and refined with subsequent annexes and protocols[…]'.[160] It is worth noting here that as a framework convention, the VCPOL does not create any binding legal obligations on State Parties. This is because the VCPOL was not intended to be 'the definitive legal response to changes in atmospheric ozone'.[161]

In its preamble, the VCPOL recognises 'the circumstances and particular requirements of developing countries'.[162] It also acknowledges the need for international cooperation and action for the protection of the ozone layer.[163] This consideration of the needs of developing countries and the need for international cooperation is further buttressed in its substantive provisions, which require parties to cooperate in the development and transfer of technology and knowledge, while taking the needs of developing countries into account.[164] While the VCPOL does not impose binding legal obligations on State Parties, it allows the Conference of the Parties to adopt protocols in line with Article 2.[165]

The Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol) 1987 was the first protocol adopted pursuant to Article 8(1) of the VCPOL. It is worth mentioning here that the adoption of the VCPOL and Montreal Protocol within a two-year timeframe represents the fastest response by the international community in addressing a global environmental challenge.[166] The Montreal Protocol has been described as 'the landmark multilateral environmental agreement that regulates the production and consumption of nearly 100 man-made chemicals referred to as ozone depleting substances (ODS)'.[167]

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[160] Gallagher 1992, at 281.
[161] Ibid.
[162] The Vienna Convention for the Protection of the Ozone Layer, preamble.
[163] The Vienna Convention for the Protection of the Ozone Layer, preamble.
[164] The Vienna Convention for the Protection of the Ozone Layer, art 4(2).
[165] The Vienna Convention for the Protection of the Ozone Layer, art 8(1).
[166] UNDP 2014, at 2.
[167] UN Environment Programme undated.

All parties under the Montreal Protocol 'have specific responsibilities related to the phase out of the different groups of ODS, control of ODS trade, annual reporting of data, national licensing systems to control ODS imports and exports, and other matters'.[168] A key point to note is that all developed and developing countries (the latter referred to as "Article 5 countries") have common but differentiated responsibilities under the Montreal Protocol. In this regard, although the CBDR principle is not explicitly mentioned under the Montreal Protocol, it has been described as 'as a way to express the differentiation put in place in the treaty'.[169] It is also important to note that all countries under the Montreal Protocol have 'binding, time-targeted and measurable commitments'.[170]

In its preamble, the Montreal Protocol acknowledges that special provisions would be required to meet the needs of developing countries, including through the provision of financial and technological assistance.[171] It also considers the importance of promoting international cooperation relating to technology transfer, while considering the needs of developing countries.[172]

A key provision under the Montreal Protocol is found in Article 5, which provides for the special situation of developing countries. Under Article 5, developing countries (with an annual calculated level of consumption of controlled substances less than 0.3 kilograms per capita) are allowed a 10-year delay in meeting the control measures imposed under the Protocol.[173] It goes further to state that the effective implementation of the obligations of developing countries would depend on effective implementation regarding financial cooperation and technology transfer.[174]

It is worth noting here that despite the 10-year delay in favour of developing countries, all State Parties to the Montreal Protocol invariably have the same responsibilities.[175] It has thus been observed that 'there was no "invidious" distinction between some countries' undertakings being voluntary, while others had mandatory commitments'.[176] The special rights enjoyed by developing countries were however dependent on these countries meeting certain conditions

[168] Ibid.
[169] Pauw et al 2014, 42.
[170] UN Environment Programme undated.
[171] The Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol), preamble
[172] Montreal Protocol, preamble.
[173] Montreal Protocol, art 5(1).
[174] Montreal Protocol, art 5(5).
[175] Shemar 2021.
[176] Pauw et al 2014, at 43.

and staying below a specified threshold.[177] Developing countries were therefore not allowed to exceed most production restrictions by more than 10 per cent and this was allowed only for the purpose of satisfying basic domestic needs.[178] There were also different base years between developed and developing countries.[179] Thus, for instance, unlike other parties to the Montreal Protocol that adopted 1986 as the baseline for calculating their compliance with control measures, the base levels for Article 5 parties were to be 'calculated at either 0.3kg per capita or on the annual consumption figures for the period from 1995 to 1997, whichever is lower'.[180] At the core however, all countries were largely subject to the same responsibilities.

The Montreal Protocol goes further to provide for the establishment of a financial mechanism aimed at assisting Article 5 parties in meeting all agreed incremental costs of complying with the control measures under the Montreal Protocol.[181] The Multilateral Fund, as the Montreal Protocol's financial mechanism, has been responsible for funding the incremental costs of compliance in developing countries, and has been supported by the Global Environmental Facility with respect to countries with economies in transition.[182] In addition, the Montreal Protocol requires each party to take practicable steps to ensure that the best technologies are transferred to Article 5(1) parties and that these transfers happen under fair and most favourable conditions.[183] Actions in favour of developing countries are therefore recognised under the Montreal Protocol.

The Kigali Amendment to the Montreal Protocol is worth mentioning here. Under this amendment, all State Parties are required to make gradual reductions in HFC consumption and production, with different start dates for developed and developing countries (2019 and 2024 respectively).[184] It also includes 'two phase-down options for developing countries… and an earlier phase-down schedule for developed countries'.[185] The CBDR principle is reflected in the Kigali Amendment, as can be seen with developed countries phasing down HFCs before developing countries, and also the continuous provision of financial support to developing countries.[186] There are also further flexibilities in favour of developing countries, which allow

[177] CISDL 2002; Pauw et al 2014, at 52.
[178] Pauw et al 2014, at 43.
[179] Ibid.
[180] Gallagher 1992, at 286.; Montreal Protocol, art 5(1).
[181] Montreal Protocol, art 10(1).
[182] The World Bank 2013; Montreal Protocol, art 10(3).
[183] Montreal Protocol, art 10A.
[184] Environmental Investigation Agency 2016, 2.
[185] Ibid.
[186] Ibid 3.

them to 'define sectors, select technologies and alternatives, elaborate and implement strategies to meet agreed HFC obligations based on specific needs and national circumstances'.[187]

Having identified the key provisions of the Montreal Protocol, it is necessary to consider the interplay of solidarity and responsibility inherent in the treaty. As was mentioned earlier, all matters of responsibility operate within the responsibility matrix which consists of three vectors: *who* is responsible for *what* and *to whom*? In answering the question of *who* is responsible under the Montreal Protocol, the above discussion has shown that all State Parties have responsibilities under the Montreal Protocol. Regarding *what* State Parties are responsible for, all State Parties are responsible for taking measures to reduce the production and consumption of ozone depleting substances, with developing countries allowed to delay their compliance in meeting this objective. As regards the body *to whom* responsibility is owed, this would primarily be the Conference of the Parties to the Vienna Convention and the Meeting of the Parties to the Montreal Protocol. It is worth noting in this regard that while the Montreal Protocol contains provisions relating to non-compliance,[188] 'Punitive sanctions have been waived in favour of a system which emphasizes cooperation facilitating adherence to Protocol provisions over condemnation for failure to comply'.[189] This is in line with the general trend under IEL which favours soft law as has been discussed earlier.

As a follow-up to the above discussion of the responsibility matrix, it is also necessary to consider how solidarity is reflected under the Montreal Protocol. As has been mentioned earlier, solidarity under IEL is reflected in two aspects: common but differentiated responsibilities and actions to benefit particular states. In addition, that solidarity requires mutuality of obligations flowing from the recipient of solidarity. The CBDR principle has been shown to be strongly at play under the Montreal Protocol, particularly as all State Parties have responsibilities under the Protocol, though there is differentiation in terms of delayed compliance for developing (Article 5) countries. In terms of actions in favour of particular states, this is reflected through two key actions (financial assistance through the Multilateral Fund and technology transfer), with developing countries being the key recipients of these actions. In addition, developing countries also have mutual obligations under the Montreal Protocol which are aimed at meeting the common objectives of the legal regime for the protection of the ozone layer.

[187] Ibid.
[188] Montreal Protocol, art 8.
[189] Gallagher 1992, at 322.

The consideration of the Montreal Protocol through the lens of solidarity and responsibility reveals that apart from the lack of punitive mechanisms to compel compliance, the Montreal Protocol largely fulfils the responsibility matrix relating to who is responsible for what and to whom. This deficiency is however strengthened by the fact that soft law is taken seriously despite the lack of enforcement mechanisms and that soft law reflects solidarity.[190] The Montreal Protocol also represents a strong example of the CBDR principle because although it imposes similar obligations on all State Parties (common responsibilities), it makes special allowances for developing countries, particularly with respect to delayed compliance (differentiated responsibilities). The CBDR principle under the Montreal Protocol also reflects solidarity as there are mutual obligations on the part of the recipient of solidarity, which are aimed at meeting the common objectives of the treaty. The availability of financial assistance and technology transfer for the benefit of developing countries also portrays solidarity.

2.3.2 Climate Change

The legal regime governing climate change is governed by three primary agreements: The United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, and the Paris Agreement. These shall be considered in turn.

As a framework convention, the UNFCCC is not legally binding. It does however set the basis for subsequent legally binding protocols and agreements. The ultimate objective of the UNFCCC 'is to achieve… stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system'.[191] It should be noted that the common but differentiated responsibilities and respective capabilities (CBDR-RC) principle is included as one of the principles guiding the UNFCCC, with the expectation that developed countries should take the lead in addressing climate change.[192] Another core principle of the UNFCCC is that full consideration should be given to the specific needs and special circumstances of developing countries.[193]

All parties to the UNFCCC have commitments in line with the CBDR-RC principle, including with respect to promotion and cooperation for technology development and transfer.[194] The developed countries under the UNFCCC have specific commitments to provide new and

[190] MacDonald 1996, at 286-287.
[191] UNFCCC, art 2.
[192] UNFCCC, art 3(1).
[193] UNFCCC, art 3(2).
[194] UNFCCC, art 4(1)(c).

additional financial resources to enable developing countries meet up with their obligations.[195] In this regard, the UNFCCC established a financial mechanism for the purpose of facilitating the provision of financial resources to developing countries.[196] Developed countries also commit to taking all practicable steps to promote, facilitate and finance technology transfer to developing countries.[197] As with the Montreal Protocol, the UNFCCC includes a conditionality clause which provides that the extent to which developing countries will be able to meet up with their commitments would be dependent on the effective implementation of the commitments of developing countries regarding financial resources and technology transfer.[198]

Unlike the UNFCCC, the Kyoto Protocol is a legally binding instrument. It aims at operationalising the UNFCCC 'by committing industrialized countries and economies in transition to limit and reduce greenhouse gases (GHGs) in accordance with agreed individual targets'.[199] A key observation regarding the Kyoto Protocol however is that it does not introduce any new commitments for non-Annex I parties (developing countries).[200] Under the Kyoto Protocol, Annex I parties (developed countries) have quantified emission limitation and reduction commitments (QELRCs).[201] All parties are also required to cooperate in technology transfer and development.[202] In addition, developed countries are required to make financial resources available to developing countries to enable them meet up with their commitments under the UNFCCC.[203]

The Paris Agreement is guided by the CBDR-RC principle in the light of different national circumstances.[204] It also has a legally binding effect as with the Kyoto Protocol. This Agreement aims to strengthen the global response to climate change through limiting global temperatures to well below 2ºC while pursuing efforts to reach 1.5ºC.[205] It also aims at making finance flows for climate mitigation and adaptation.[206]

[195] UNFCCC, art 4(3).
[196] UNFCCC, art 11
[197] UNFCCC, art 4(5).
[198] UNFCCC, art 4(7).
[199] UNFCCC undated-b.
[200] Kyoto Protocol, art 10.
[201] Kyoto Protocol, art 3(1).
[202] Kyoto Protocol, art 10(c).
[203] Kyoto Protocol, art 11(2)(a)-(b).
[204] Paris Agreement, preamble; art 2(2).
[205] Paris Agreement, art 2(1)(a)
[206] Paris Agreement, art 2(1)(c)

It is worth noting here that differentiation under the Paris Agreement is based on each of the Durban pillars.[207] This has led to different kinds of differentiation under the Paris Agreement, in contrast that that under the UNFCCC and Kyoto Protocol which was based on categories of countries.[208] Thus, differentiation for mitigation is self-differentiation bounded by normative expectations of actions parties are to take;[209] differentiation for transparency involves flexibility for developing countries based on their capacities;[210] while differentiation for finance follows the developed/developing country dichotomy but makes room for other parties to provide finance.[211]

In terms of responsibilities, each party to the Paris Agreement has a responsibility of preparing, communicating and maintaining successive nationally determined contributions (NDCs) it aims to achieve.[212] The NDCs are to reflect the CBDR-RC principle, in the light of different national circumstances.[213] While developed countries are required to take the lead through economy-wide absolute emission reduction targets, developing countries are encouraged to enhance their mitigation efforts.[214] Developing countries are also to be provided support to enable them implement Article 4 of the Paris Agreement dealing with NDCs.[215]

The Paris Agreement explicitly stipulates developed countries shall provide financial resources to help developing countries meet their existing obligations under the UNFCCC.[216] Regarding technology transfer, all parties are to 'strengthen cooperative action on technology development and transfer'.[217] In addition, the Paris Agreement states that support shall be provided to developing countries to enable them to implement the provisions relating to technology development and transfer.[218] It is worth noting here that the Paris Agreement establishes a mechanism for facilitating implementation and compliance, which is expected to function in a transparent, non-adversarial and non-punitive manner.[219]

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[207] Rajamani 2016, at 509; the Durban pillars are mitigation, adaptation, finance, capacity building, technology and transparency.
[208] Ibid.
[209] Ibid 511.
[210] Ibid; Paris Agreement, art 13(1)-(2).
[211] Rajamani 2016, at 512; Paris Agreement, art 9(2).
[212] Paris Agreement, art 4(2).
[213] Paris Agreement, art 4(3).
[214] Paris Agreement, art 4(4).
[215] Paris Agreement, art 4(5).
[216] Paris Agreement, art 9(1).
[217] Paris Agreement, art 10(2).
[218] Paris Agreement, art 10(6).
[219] Paris Agreement, art 15(1)-(2)

There is a need to consider the above key provisions of the international climate regime through the lens of solidarity and responsibility. Starting with the responsibility matrix (*who* is responsible for *what* and *to whom*), a combined reading of the legal documents governing the climate regime shows that it is only the Kyoto Protocol and Paris Agreement that have clear bearing on responsibility, since both are legally binding. This does not however mean that the UNFCCC has no validity in this regard. It is worth noting that the UNFCCC imposes obligations on all state parties to meet its ultimate objective[220] and contains general commitments for developing countries.[221] In addition, developed countries under the UNFCCC have non-binding obligations with respect to technology transfer and finance.[222]

With respect to *who* is responsible, while only developed countries have responsibilities under the Kyoto Protocol, all countries have responsibilities under the Paris Agreement. As regards *what* parties are responsible for, while developed countries were responsible for meeting their QELRCs under the Kyoto Protocol, all countries under the Paris Agreement have responsibilities regarding their NDCs. Developed countries under both agreements also have responsibilities to provide financial resources to developing countries.[223] In addition, all parties are required to cooperate regarding technology transfer.[224] Regarding the body *to whom* parties are responsible to, while the Conference of Parties is the overarching governance body under the UNFCCC, both the Kyoto Protocol and Paris Agreement established committees to ensure compliance with their provisions. It should be noted here that while the Compliance Committee under the Kyoto Protocol could determine consequences for non-compliance of parties with its provisions (through its enforcement branch),[225] sanction non-compliance by excluding the state from emissions trading, the Compliance Committee under the Paris Agreement is expected to 'function in a manner that is transparent, non-adversarial and non-punitive'.[226]

From a solidarity lens, it can be seen that the CBDR principle has different formulations under the different legal instruments governing climate change.[227] Thus, under the Kyoto Protocol, the CBDR principle imposed QELRCs on developed countries but did not lead to any new responsibilities for developing countries (apart from their commitments under the UNFCCC).

[220] UNFCCC, art 2.
[221] UNFCCC, art 4(1)
[222] UNFCCC, art 4(3) and (5).
[223] Kyoto Protocol, art 11(2)(b); Paris Agreement, art 9(1).
[224] Kyoto Protocol, art 10(c); Paris Agreement, art 10.
[225] Kyoto Protocol, art 18; UNFCCC undated-a.
[226] Paris Agreement, art 15(2).
[227] While the UNFCCC refers to CBDR-RC, the Paris Agreement refers to CBDR-RC in the light of different national circumstances.

In contrast, the Paris Agreement imposes a common responsibility on all parties regarding their NDCs. In terms of actions in favour of developing countries, the obligations to help regarding finance appear to be clearer and more precise than those regarding technology transfer (which focuses more on cooperation). It is worth noting however that the Paris Agreement states that support will be provided to developing country parties regarding technology transfer.[228] While it is not stated where this support will come from, there are pointers that this would be from the developed countries.[229] The Paris Agreement also epitomises greater solidarity through mutuality of obligations as the recipients of help (developing countries) are also subject to the same obligations regarding NDCs as their developed country counterparts, which is a sharp contrast from what is obtainable under the Kyoto Protocol.

The consideration of the international climate regime reveals great inconsistencies between the Kyoto Protocol and Paris Agreement when considered through the lens of solidarity and responsibility. The key observation here is that while the Kyoto Protocol did not impose any obligations on developing countries (therefore not making room for mutuality of obligations), the Paris Agreement imposes responsibilities on all its parties as it relates to their NDCs. From this analysis, it can therefore be said that the CBDR principle under the Paris Agreement represents a stronger basis for solidarity than that under the Kyoto Protocol. It will however be shown why this is also insufficient in the subsequent sections of the chapter.

2.3.3 Biodiversity

The Convention on Biological Diversity (CBD) is the primary international legal instrument governing biodiversity. Unlike the VCPOL and the UNFCCC, the CBD is a legally binding treaty.[230] Despite its legally binding status however, the CBD is seen as a framework convention.[231] Three principles have been identified as forming the basis of the CBD: 'national implementation, cooperation with other agreements and post-agreement negotiation of annexes and legally binding protocols, as well as non-binding work programmes'.[232] The CBD has been described as providing 'a flexible conceptual structure for both international co-operation and national implementation'.[233] It has however been criticised for making 'a continuous attempt to expand its subject matter without fully achieving or systematically assessing progress on

[228] Paris Agreement, art 10(6).
[229] Paris Agreement, art 13(9).
[230] UNEP undated.
[231] Morgera and Tsioumani 2010, at 6.
[232] McGraw 2002, at 18.
[233] Morgera and Tsioumani 2010, at 6.

previously agreed commitments'.[234] This has proved to be challenging particularly as the scope of the CBD requires action from different national and local authorities, which tend to work in isolation, and thereby leads to problems with implementation.[235]

In its preamble, the CBD acknowledges the importance of providing new and additional financial resources and access to technologies in addressing the loss of biodiversity. It goes further to acknowledge the need for special provision to be made to meet the needs of developing countries in this regard.[236] The CBD has three main goals which are embedded in its objective thus: the conservation of biodiversity, sustainable use of biodiversity, and the fair and equitable sharing of the benefits arising from the utilisation of genetic resources.[237] All contracting parties to the CBD have responsibilities towards meeting its objective. It should be noted here that the CBD recognises the need for cooperation towards meeting its objective.[238]

The CBD contains explicit provisions relating to technology transfer.[239] It has two tracks for technology transfer: (i) biotechnology (ii) conservation and sustainable use.[240] Each of the contracting parties to the CBD undertakes to provide and/or facilitate technology transfer to other contracting parties.[241] Where the technology is to be transferred to developing countries, this should be done under fair and most favourable terms. Furthermore, where the technology is subject to patents and other intellectual property rights (IPRs), the transfer of such technologies is to be done in manner that ensures adequate protection of IPRs.[242] In addition, each contracting party is to take legislative, administrative or policy measures aimed at ensuring that contracting parties (particularly developing countries) which provide genetic resources have access to technology transfer. [243] Despite these provisions, it has been noted that the concept of technology transfer under the CBD 'has always been perceived as important – but also as highly general, difficult to grasp or translate into practical action'.[244]

[234] Ibid 4; McGraw 2002, at 23.
[235] Morgera and Tsioumani 2010, at 4.
[236] CBD, preamble.
[237] CBD, art 1.
[238] CBD, art 5.
[239] Apart from the key provisions dealing with technology transfer, other provisions with a bearing on technology transfer include provisions on training and research (art 12), access to genetic resources and benefit sharing (art 15), information exchange (art 17), technical and scientific cooperation (art 18), and biotechnology (art 19).
[240] Prip et al 2015, at 2.
[241] CBD, art 16(1).
[242] CBD, art 16(2).
[243] CBD, art 16(3).
[244] Prip et al 2015, at 15.

The CBD also contains provisions regarding financial assistance. The finance-related provisions of the CBD have been identified as the core of the CBDR principle in terms of biodiversity.[245] Each contracting party under the CBD therefore undertakes to provide financial support and incentives according to its capabilities.[246] The CBD goes further to impose an express obligation on developed countries to provide new and additional financial resources to developing countries in order to enable them meet up with the agreed full implementing costs of measures taken to implement their obligations.[247] It should be noted here that the CBD provides for a financial mechanism to facilitate the provision of financial resources to developing countries.[248]

As with the VCPOL and the UNFCCC, the CBD also makes the effective implementation of the commitments of developing countries dependent on the effective implementation of the commitments of developed countries as they relate to financial assistance and technology transfer.[249] This is not to suggest however that developing countries do not have any obligations under the CBD. All developing countries, for instance, are required to cooperate in the provision of financial and other support for in-situ and ex-situ conservation.[250] Developing countries also undertake to provide financial support and incentives according to their capabilities.[251]

In order to achieve its objectives, the CBD requires states to cooperate to preserve biodiversity and to also report on the implementation of the CBD at the national level, amongst other requirements.[252] In this regard, it has been noted that the submission of national reports is the only strict and unqualified obligation imposed on parties to the CBD.[253] The CBD is also empowered to adopt protocols which set out legal obligations to govern different aspects of its stipulations.[254] Two protocols have been made under the CBD: the Cartagena Protocol and the Nagoya Protocol. Regarding both protocols, it has been noted that 'while the Cartagena Protocol and the Nagoya Protocol provide for an international compliance mechanism of their

[245] Morgera and Tsioumani 2010, at 27.
[246] CBD, art 20(1).
[247] CBD, art 20(2).
[248] CBD, art 23(1). The financial mechanism covers the Convention as well as the two protocols – Cartagena Protocol, art 28(2); Nagoya Protocol, art 25(2).
[249] CBD, art 20(4); It should be noted here that the CBD has two protocols: the Nagoya Protocol and the Cartagena Protocol. Both protocols take the needs of developing countries for access to financial resources and technology transfer - Cartagena Protocol, arts 22(2) and 28(3); Nagoya Protocol, arts 22(2), 23 and 25(3).
[250] CBD, arts 8(m) and 9(e).
[251] CBD, art 20(1).
[252] Harrop and Pritchard 2011, at 475.
[253] Ibid 476.
[254] CBD, art 28.

own, there remains a gap in systematically monitoring compliance with the other key obligations of the CBD at the international level'.[255]

It is worth noting here that the CBD is seen as adopting a soft institutional approach, which is evidenced in its reliance on the National Biodiversity Strategies and Action Plans (NBSAP) and its emphasis on targets. Regarding the NBSAP, this has been relied upon as the "the cornerstone of national implementation".[256] NBSAPs do not however lead to any legal obligations on the parties as they 'merely constitute declarations of intention, not a commitment to action'.[257] Regarding targets, in 2002, the CBD COP had set a target to significantly reduce the rate of biodiversity loss by 2010. This target was however not met, thereby demonstrating the lack of effective implementation of the CBD.[258] In this regard, it has been observed that the 2010 Biodiversity Target was imprecise and lacked specificity, therefore making it difficult for concrete actions to be taken.[259] Furthermore, that it only expressed the same generality of intent as the CBD.[260] The CBD's Strategic Plan for Biodiversity 2011-2020 also set out 20 targets which address some of the shortcomings of the 2010 Targets.[261] A key challenge however is that these targets, being optional in nature, do not add 'further muscle to the CBD's existing obligations', nor do they 'constitute implementable instruments for States'.[262] It has been noted 'that targets alone… are generally not effective to produce favourable conservation outcomes unless they are coupled with a suite of tools including policy and legal mechanisms'.[263]

Regarding implementation of the CBD, it has been noted that despite the emphasis of the CBD on national implementation, 'there is no mechanism to systematically and effectively monitor implementation and compliance at the national level'.[264] Commenting on the lack of monitoring at the national level, Morgera and Tsioumani have observed that:

> The CBD COP does not review individual national reports but, rather, offers conclusions on the basis of the CBD Secretariat's syntheses of these reports. This examination tends to focus on the mere submission of the report and on a

[255] Morgera and Tsioumani 2010, at 38.
[256] Harrop and Pritchard 2011, at 476; NBSAPs derive from Article 6 of the CBD under which each party is required to develop national strategies, plans and programmes in accordance with its particular conditions and capabilities.
[257] Ibid 477.
[258] Morgera and Tsioumani 2010, at 11.
[259] Harrop and Pritchard 2011, at 477.
[260] Ibid.
[261] Ibid 477-478.
[262] Ibid 478.
[263] Ibid.
[264] Morgera and Tsioumani 2010, at 9.

> quantitative analysis of legislative developments (for instance, the percentage of parties with biodiversity-related legislation in place) rather than on a qualitative analysis of the content of the national reports, including the quality and comprehensiveness of national legislation and impacts of state measures on biodiversity and achievement of the CBD objectives.[265]

The text of the CBD itself has also been criticised for being 'beleaguered by vague commitments, ambiguous phrases and escape clauses that permit avoidance of obligations'.[266] In this regard, it has been suggested that the near-universal membership of the CBD reflects its weakness as 'countries sign on precisely because there is no effective way of monitoring or enforcing compliance provisions which have been described as "vague and voluntaristic" (at best) and "confusing and contradictory" (at worst)'.[267] Harrop and Pritchard aptly summarise the challenge thus:

> Most articles of the CBD contain provisions which are expressed in imprecise language or over-qualified terms which enable member states to implement these provisions in virtually any manner they wish, whether challenging or not. In this regard, the foundational text of the CBD is fundamentally flawed in that its textual qualifications seriously compromise its obligations. The overall effect suggests that the CBD accomplishes little more than to allow nations to accept merely that there is an environmental concern that requires a global response.[268]

It is now necessary to consider the CBD through the lens of solidarity and responsibility. Starting with the matrix of responsibility, all parties under the CBD have responsibilities to cooperate in meeting the objective of the CBD, including through the preservation of biodiversity as well as by reporting on the implementation of the CBD at the national level.[269] All parties also undertake to provide for and facilitate technology transfer to other parties.[270] Regarding financial assistance, while all parties undertake to provide financial assistance based on their respective capabilities, developed countries are obliged to provide new and additional financial resources to developing countries.[271] As regards the body to whom parties are

[265] Ibid.
[266] Harrop and Pritchard 2011, at 476.
[267] McGraw 2002, at 23.
[268] Harrop and Pritchard 2011, at 476.
[269] Ibid 475.
[270] CBD, art 16(1).
[271] CBD, art 20(2).

responsible, it is the Conference of the Parties (COP) that oversees the implementation process of the CBD.[272]

From the solidarity perspective, the CBDR is reflected in the CBD. Key pointers to this are the requirement that developed countries should provide financial assistance to developing countries, and also the requirement that the performance of the obligations of developing countries would be dependent on the performance of the obligations of developed countries regarding financial assistance and technology transfer. The expectations of support in terms of finance and technology also represent actions in favour of developing countries. There is also mutuality of obligations under the CBD as both developed and developing countries have responsibilities to be fulfilled under its provisions as shown above.

The above analysis of the CBD shows that solidarity and responsibility are present in the operation of the CBD. Regarding responsibility, the only gap, as with other multilateral environmental agreements, is with respect to the absence of sanctioning powers by the COP as the responsible body. The CBDR principle is also well reflected in the CBD as there are differences in the responsibilities between developed and developing countries. This therefore translates to a mutuality of obligations on both sides which is reflective of solidarity. On paper therefore, it appears that the CBD ticks all the boxes regarding the interplay of solidarity and responsibility. The next part of this chapter will however show the inadequacies inherent in the CBD.

2.4 The Interactions between the CBDR Principle and Solidarity under IEL

Having considered how solidarity and responsibility are reflected under the three different international legal regimes above, it is now necessary to identify the key differences between these three regimes and the implications of these for the interactions between the CBDR principle and solidarity. Two key statements need to be remembered here: (1) solidarity requires mutual obligations and (2) responsibility (obligation) generates solidarity.

The three legal regimes above share several similarities. All three are introduced through framework conventions. These framework conventions allow the adoption of protocols to create more concrete, legally binding obligations on different issues arising out of each convention. They all also recognise the need for cooperation in meeting their respective

[272] McGraw 2002, at 20.

objectives. A key similarity is that the three legal regimes make special (differentiated) provisions for developing countries and contain varying levels of obligations aimed at the provision of financial assistance and technology transfer. These similarities reflect the CBDR principle. All agreements also include the requirement that the performance of the obligations of developing countries are dependent on the performance of the obligations of developed countries in terms of financial assistance and technology transfer. In terms of implementation, apart from the Kyoto Protocol, the legal regimes tend to be more facilitative than punitive.

The above similarities paint a picture of alignment between the three legal regimes. But as differences begin to emerge, particularly as it relates to the CBDR principle, this has implications for how solidarity is reflected in these agreements. The different legal regimes showed key variations in the way the CBDR principle was reflected under them. In the Montreal Protocol, the CBDR principle was reflected through delayed compliance for developing countries. Under the Kyoto Protocol, the CBDR principle involved no obligations for developing countries. While all parties under the Paris Agreement have a common responsibility to prepare and submit their NDCs, these are to reflect CBDR-RC in the light of different national circumstances. Regarding the CBD, it requires actions from different authorities at the national or local level, which would be reflective of their particular conditions and capabilities.

From the analysis above, the Montreal Protocol under the ozone layer regime represents the strongest example of the interplay between solidarity and the CBDR principle. As was shown, the Montreal Protocol imposed largely similar obligations on both developed and developing countries, the key difference being that it made special provisions for developing countries (Article 5 parties), which was reflected in delayed compliance with its provisions. The Montreal Protocol ticked all the boxes regarding the interplay between solidarity and the CBDR. Mutual obligations, which are the hallmark of solidarity, are present under the Montreal Protocol. Importantly, individual state parties under the Montreal Protocol are answerable to the extent that they have clear responsibilities and can be identified as having defaulted on those responsibilities.

The analysis above also shows that the Kyoto Protocol under the climate regime represents the weakest example of the interplay between solidarity and the CBDR principle. While the Kyoto Protocol reflected a top-down regulatory approach with punitive measures for defaulters, the absence of any obligations for developing countries meant there was no mutuality of

obligations and hence no solidarity. The Kyoto Protocol was therefore strong in terms of the responsibility of only developed countries but completely lacking with respect to developing countries.

Regarding the Paris Agreement, the key gap in terms of responsibility lies in the fact that while all parties are required to submit their NDCs, they 'do not have binding obligations of result in relation to their NDCs. [273] The issue of whether parties should be subject to binding obligations in relation to their NDCs was discussed during negotiations for the Paris Agreement, with EU and small island states in favour of such an obligation while countries such as the US, China and India were opposed to legally binding obligations of result.[274] The current situation under the Paris Agreement is that 'while NDCs as such are not legally binding under the Paris Agreement, they are subject to binding procedural requirements and to normative expectations of progression and highest possible ambition'.[275] The presence of a good faith expectation that parties intend to achieve their contributions does not however translate to a requirement for them to do so.[276] It has however been suggested that 'given the negotiating context, the rigorous system of oversight and the expectation of good faith implementation, Parties will be constrained to comply with these provisions'.[277] NDCs may also come to amount to binding unilateral acts if that is the discernible intention of the submitting state.

While the chapter agrees that the binding procedural requirements and normative expectations of progression are key in facilitating compliance with NDCs, it notes that there is a break in the responsibility matrix with respect to the implementation of NDCs. This is because State Parties (*who*) are not responsible for implementing their NDCs (*what*). It should be mentioned here that while the enhanced transparency framework requires parties to provide information necessary to track progress made in implementing and achieving NDCs,[278] State parties under the Paris Agreement are not held individually answerable for failing to implement their NDCs. The situation under the Paris Agreement therefore represents a significant departure from what is seen under the Montreal Protocol above. It should be noted here that even though the Montreal Protocol and the Paris Agreement have opposite regulatory approaches,[279] the idea

[273] Rajamani and Brunée 2017, at 542.
[274] Rajamani 2016, at 498
[275] Rajamani and Brunée 2017, at 539.
[276] Rajamani 2016, at 498.
[277] Ibid 501.
[278] Paris Agreement, art 13(7)(b).
[279] While the Montreal Protocol has a top-down governance model, the Paris Agreement adopts a bottom-up approach.

behind responsibility driving solidarity remains unaffected. To be able to generate solidarity under the climate regime therefore, parties should at least be answerable regarding the implementation of their NDCs, even in the absence of punitive measures.

It is also worth noting here that while the Paris Agreement contains clear obligations to provide financial support, this alone does not qualify as solidarity. This is because the obligation to help is inherent in the notion of solidarity, as seen from Dann's tripartite concept of solidarity where the obligation to help meet the common objective is only one of three elements of solidarity.[280] These financial contributions therefore serve the purpose of either helping certain nations to absorb compliance costs or as a precondition to securing their participation.[281] Clear obligations to provide financial support should therefore be supported by the mutual obligations of all parties for the requirements of solidarity to be fulfilled. Without mutual obligations on all parties to bolster the obligation to provide help, solidarity will be incomplete.

The CBD shares similarities with the Paris Agreement as its effectiveness depends on national implementation. All parties under the CBD are required to have NBSAPs regarding implementation of the CBD at the national level and are under an obligation to submit national reports. However, as has been noted, NBSAPs do not lead to legal obligations. In addition, the CBD does not have any mechanism that monitors implementation and compliance at the national level, with the focus being on the synthesis of national reports rather than individual reports.[282] Thus, although the CBD sets out mutual obligations for the parties, the absence of obligations to implement NBSAPs is an albatross to the ability of the CBD to generate solidarity. In addition, the submission of reports should be coupled with an individual review involving a qualitative analysis of its contents,[283] aimed at making individual countries answerable to a responsible body, even in the absence of punitive measures.

The above analysis shows that the different agreements reflect CBDR in different ways. When considered through the lens of solidarity and responsibility, the key challenge is that even though all agreements provide for the CBDR principle to varying extents, there is a lack of mutual obligations, which is key for solidarity, in some of the agreements. For those with mutual obligations, these may be obligations for which there is no oversight in terms of implementation and for which the parties cannot be held answerable, even in the absence of

[280] Dann 2010, at 61.
[281] Stone 2004, at 277-278.
[282] Morgera and Tsioumani 2010, at 9.
[283] Ibid.

punitive measures. It is the presence of mutual obligations coupled with the necessary oversight of parties that provides the best conditions for solidarity to thrive. For solidarity to be achieved in addressing global environmental challenges therefore, the CBDR principle needs to be strengthened through mutual obligations which are in consonance with the responsibility matrix.

How then can the CBDR principle be strengthened to reflect solidarity? The key measure would be to ensure that there are mutual obligations for all parties concerned. The ideal situation would for the differentiation of responsibilities to be spelt out within the agreement itself, as with the Montreal Protocol. This is not however practicable in all agreements and comes with its own challenges, such as was seen with the Kyoto Protocol treating all developing countries the same despite their significant differences.[284] Where national implementation is key to the effectiveness of the agreement, as with the Paris Agreement and the CBD, the different commitments or plans of countries should be backed up by a legal obligation to implement such commitments or plans. This would fulfil the definition of mutual obligations, which is a key ingredient for solidarity. To achieve this, provisions could be added to the convention or its protocols/agreements to the effect that parties have a responsibility to implement their commitments or plans. It should be stressed here that considering the soft law slant of IEL, the purpose of such provisions would not be to subject parties to punishment or liability but to make them answerable, which would form a good basis for solidarity to thrive.

A key observation in this chapter relates to the powers of oversight of the responsible body under the responsibility matrix. In the Paris Agreement and the CBD, it was shown that these agreements did not grant oversight powers to the responsible bodies which would help facilitate the implementation of the plans and commitments of the parties. While the reason for this is primarily a lack of an obligation to implement these plans, the need for a responsible body to perform oversight functions cannot be overemphasised. While the responsible body under IEL may not be imbued with powers of sanction, it should at least have the power to identify parties in default of their obligations, which can pave the way for actions directed at encouraging compliance. Where the responsible body is unable to identify defaulting bodies, this does not augur well for solidarity.

There would also be a need to clarify the obligations of the parties. This is particularly relevant with respect to actions in favour of developing countries such as financial and technology

[284] Bortscheller 2010, at 52.

transfers. A model example would be in line with the Paris Agreement's provisions on financial transfers, which explicitly states that 'Developed country Parties shall provide financial resources to assist developing country Parties with respect to both mitigation and adaptation in continuation of their existing obligations under the Convention'.[285] Clarity of obligations is key to effective monitoring and compliance. Where obligations are imprecise or unclear, this could create a situation where parties implement these obligations in a manner that best favours them.[286] This would not lead to the effective generation of solidarity as needed to address these challenges.

2.5 Conclusion

This chapter sought to consider the relationship between solidarity and responsibility and how the interaction between these two concepts could influence the CBDR principle. Responsibility lies at the root of the CBDR principle (and indeed solidarity) and as such should be seen to be present in addressing any global environmental challenge. At every point in time, it must be shown that the responsibility matrix (*who*, *what*, *to whom*) is in operation as this is what gives the CBDR principle its efficacy. On its part, solidarity, as a more intense form of cooperation, is key to the operation of the CBDR principle. Indeed, the CBDR principle is inherent to solidarity, together with actions in favour of other countries. At the heart of solidarity is the requirement for mutual obligations, which is also a reflection of the CBDR principle.

The relationship between responsibility and solidarity has shown that while solidarity requires mutual obligations, these mutual obligations (responsibilities) in turn generate solidarity. There is thus a give and take relationship between these two concepts, where the presence of mutual responsibilities is necessary for solidarity to thrive. From the consideration of the CBDR principle under the three legal regimes, it becomes clear that for solidarity to be achieved in addressing global environmental challenges, there is a need for clear responsibilities for all parties concerned. The requirement for mutuality of obligations means that these responsibilities do not have to be equal but should be targeted at addressing the common objective. The Montreal Protocol is best suited for solidarity to thrive as it has clear responsibilities on both sides, which largely comply with the responsibility matrix. In contrast, the Kyoto Protocol did not contain any mutual obligations on the part of developing countries,

[285] Paris Agreement, art 9(1).
[286] Harrop and Pritchard 2011, at 476.

which led to a failure of solidarity. For the Paris Agreement and CBD, the mutual responsibilities do not pertain to implementation and so these also show gaps in solidarity. If solidarity is to be a reality rather than a mirage under these agreements, there needs to be clarity of responsibilities for all parties concerned.

It was noted earlier that solidarity requires something to be done in order to be in solidarity with others.[287] That "something" is the taking of responsibility, which will in turn generate solidarity. This chapter has shown that solidarity is stronger where there are obligations on both sides. Where there are clear and strong obligations on both sides, as was seen under the Montreal Protocol, this can in turn strengthen the obligation to help through financial and technology assistance. In contrast, it may be argued that weak or non-existent mutual obligations could have the opposite effect. Thus, under the Paris Agreement for instance, the presence of weak obligations regarding the implementation of NDCs may discourage parties from committing their financial resources towards the fulfilment of objectives for which parties will not be held individually answerable for failure to implement. There is therefore a need for clear mutual obligations as this would lead to greater solidarity.

This chapter is not oblivious to the political difficulties associated with arriving at agreements which impose clear responsibilities for parties. Most country parties are wont to protect their sovereignty and as such, tend to avoid clear cut obligations for which they may be held responsible. As has been noted however, IEL generally adopts a soft law approach and so the presence of responsibilities does not translate to punitive measures. Even in the absence of punitive measures, states would still be wary of committing themselves under multilateral environmental agreements. There is however reason to do so if solidarity is to be achieved. As has been noted, solidarity may require parties sacrificing some of their sovereignty to achieve the greater good. Considering the political difficulties in arriving at such agreements, negotiating parties may appeal to the enlightened self-interest of all parties to get possible solutions. It is however imperative that all hands should be on deck in order to achieve solidarity through the CBDR principle. Where the CBDR principle is strengthened by clear differentiated responsibilities of all parties concerned, this will in turn lead to greater solidarity in addressing global environmental challenges.

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