# Critical Mass Governance:

# Addressing US Participation in Environmental Multilateralism

by

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## Candidate's Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university. To the best of the author's knowledge, it contains no material previously published or written by another person, except where due reference is made in the text.

Luke Kemp Date: 29.09.2015

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## Abstract

A recurring problem for international environmental governance has been the legal participation of the United States (US). Due to a number of unique domestic institutional and political conditions, the US is effectively trapped in a 'ratification straitjacket'. This has made US ratification of most environmental treaties impossible. It has been a crucial obstacle given the role of the US as the foremost great power of the developed world and formerly as a hegemon. Despite the importance of this obstacle to environmental multilateralism, it has attracted little sustained, direct academic scrutiny. Moreover, the rise of China and a multipolar world provides unique opportunities to consider different approaches to managing US ratification and participation in environmental regimes. This thesis attempts to address this gap in the literature through two research questions:

1. How US ratification and participation be effectively enabled within an effective international architecture for environmental governance?

2. How can effective environmental governance without the US (or other recalcitrant states) be enabled through; major international institutions, decision-making processes, and operational treaties?

This thesis is structured as a thesis by publication that is composed of four peer-reviewed papers along with a context statement that covers the introduction, methods, discussion and conclusion. The four papers focus primarily on the United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Environment Programme (UNEP). The thesis examines how US ratification and participation can be addressed in the context of an international institution (UNEP and a potential World Environment Organisation), multilateral decision-

making (consensus and majority voting in the UNFCCC) and treaty design (a future climate agreement).

The results suggest that there are primarily two ways of dealing with US participation, both of which involve some form of plurilateralism. First, governance arrangements can attempt to pursue US participation by appealing to its interests in fragmentation and allowing for the use of presidential-executive agreements. Alternatively, an international regime can be constructed to bypass US ratification and instead attempt to maximise the participation of other states as well as willing subnational actors within the US. The former approach is termed 'inclusive critical mass governance'. In contrast, the latter is labelled as 'exclusive critical mass governance'. Both strategies to address US ratification rely on the use of semi-globalism and thus challenge the current dominant paradigm of creating consensus-based, broad-but-shallow international agreements. Based upon this, a theory of plurilateralism and accompanying theoretical framework is developed. The theory and framework of critical mass governance suggests that a small group of progressive actors can create the political, social and economic feedbacks necessary to spread environmental actions and encourage increasing cooperation over time. Where the feedbacks exist, there is a greater need to encourage a critical mass of progressive actions rather than incorporate the US. Ultimately, the success of international environmental governance does not necessarily depend upon the leadership or participation of the US, but simply the action of a critical mass.

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## List of acronyms and abbreviations

**BASIC=** Brazil, South Africa, India and China

**BRIC=** Brazil, Russia, India and China

**CBD=** Convention on Biological Diversity

**CINC**= Composite Index of National Capability

**CMG=** critical mass governance

**ESG=** Earth systems governance

**MEA=** multilateral environmental agreements

**NDC=** nationally determined contributions

**NGO=** non-governmental organisation

**UNCLOS=** United Nations Convention on the Law of the Sea

**UNEP=** United Nations Environment Programme

**UNFCCC=** United Nations Framework Convention on Climate Change**WEO=** World Environment Organisation

**WTO=** World Trade Organization

# Chapter I: Introduction

The world faces a number of interlinked environmental problems that pose a systemic threat to global civilisation. Human impacts on the Earth system have become so ubiquitous and powerful that some have labelled modern times the 'Anthropocene', an age where humans are significant drivers of global environmental changes (Steffen et al. 2011; Steffen et al. 2007; Crutzen 2006). The majority of this change has been environmentally detrimental, resulting in climate change, biodiversity loss, ocean acidification and desertification, among other impacts. Many have claimed that we are reaching ecological tipping points and passing the 'planetary boundaries' within which humanity can safely exist, particularly in terms of biodiversity loss and climate change (Rockström et al. 2009). The causes and effects of these environmental problems are global in nature, originating from and affecting numerous different nation states.

The challenges of governing the Earth system have prompted numerous multilateral responses in recent decades. More than 900 environmental treaties are currently in force (Biermann 2012). Unfortunately, the number of international responses has not been matched in terms of their success. This is illustrated by the poor track records of the two most important global environmental regimes: the *1992 United Nations Framework Convention on Climate Change (UNFCCC)* and the *1992 Convention on Biological Diversity (CBD).* Many consider the Kyoto Protocol of the UNFCCC to be a failure due to its inability to significantly curb global emissions (Victor 2009; Rayner 2010; Prins and Rayner 2007). However, it has provided numerous policies and procedures that continue to underpin domestic and international efforts. These include the targets and timetables approach and the use of emissions trading. The CBD has missed its initial biodiversity goals and lacks funding (Schreurs 2012). Consequently, extinction rates have

continued largely unabated and will likely do so into the future despite significant opportunities for policy interventions (Pereira et al. 2010). Many other threats such as ocean acidification have yet to be addressed or even recognised through international law (Kim 2012). In short, international environmental governance is failing to address the challenges of the Anthropocene.

International environmental issues are complex and wicked problems that pose unique challenges to the international community. These include the risk of catastrophic impacts and their intergenerational and international scale. In terms of international scale and cooperation scholars have put forward a number of reasons for the shortcomings of international environmental governance. These range from institutional fragmentation (Biermann et al. 2009), through to a lack of authority vested in existing institutions and an absence of legitimacy (Esty and Ivanova 2001).While there is evidence that highlights the importance of these different issues, none are a clear-cut Achilles heel for global attempts at environmental regulation. Many authors contest that institutional fragmentation is a reality that could be beneficial and lead to system resilience through institutional diversity and redundancy (Kim 2013; Abbott 2014). Similarly, there is no distinct causal relationship between input legitimacy and regime impact. I contend that while there are important considerations, the failings of international environmental governance are primarily due to the absence of leadership from the United States (US) and a mismatch between existing institutions and geopolitical realities. I will support this argument through the following introductory chapter. Ultimately, an insistence upon universal, consensus-based treaties and US participation has left global environmental efforts tied down by an incapable great power.

## 1.1 United We Stand, Divided We Stall: The Importance and Limits of US Environmental Leadership

In many cases, US involvement in international environmental treaties has been problematic. The US has a long history of signing and then being unable to ratify multilateral environmental agreements and instruments. This includes the Kyoto Protocol, as well as other examples such as the *1989 Convention on the Transboundary Movement of Hazardous Wastes and their Disposal;* the *1991 Geneva Protocol Concerning the Control of Emissions of Volatile Organic Compounds and their Transboundary Fluxes;* the *1991 Convention on Environmental Impact Assessment in a Transboundary Context;* the *1992 CBD;* the *1996 Comprehensive Nuclear Test Ban Treaty;* the *1998 Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade UNEP/FAO;* and the *2001 Stockholm Convention on Persistent Organic Pollutants* (Schreurs et al. 2009). Numerous other instruments have been neither signed nor ratified, including the *1998 Aarhus Convention Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters* and the *2000 Cartagena Protocol on Biosafety*. This list of signed and unratified and also unsigned and unratified environmental treaties seems likely to expand because the problem is deeply rooted in the US Constitution and domestic political landscape.

The US has a number of domestic institutional arrangements, that have made their engagement with international agreements difficult. First, Article II of the US Constitution requires a two-thirds supermajority vote in the Senate for the ratification of any international treaty (Skodvin and Andresen 2009). Second, enabling domestic legislation must already be in place before ratification can take place (Bang et al. 2012). These are not necessarily adverse institutional arrangements; it simply means that the US

takes the process of ratification very seriously. International actions are determined by domestic processes and considerations, more so than in many other nation states. Problems with engaging international law arise when these onerous institutional requirements are combined with both the domestic politics and foreign policy stance of the US.

The nature of US politics often makes it difficult to implement legislation, particularly with respect to environmental issues. For example, action on climate change is constrained by the presence of senators, in the upper house, from a number of oil- and coal-producing states (Skodvin and Andresen 2009) and the increasingly partisan and polarised political debate over climate change science and mitigation (Bang et al. 2012). Moreover, both the Senate and House of Representatives are vulnerable to lobbying by vested interests and industrial bodies, particularly the entrenched fossil fuel lobby (DeSombre 2000). As Brenton observes, 'In the US there is more dependence on cheap energy, more scepticism about the science, less willingness to submit to international economic regulation, and a political system more open to industrial lobbying than, for example, in the EU' (2013: 543). Another constraining factor has been the attitude of the US towards multilateral engagement through the United Nations (UN). It is well documented that the US has historically, across numerous different administrations, shown a distrust of UN-based multilateralism and involvement with international bureaucracies (Patrick 2002), particularly any related to international environmental law (Brunnee 2008). At its worst, this has led to 'American exceptionalism', an unusual situation in which the US has not become institutionally enmeshed with many of the bodies that it has helped create (Terhalle and Depledge 2013). This mixture of domestic

institutions and politics means that in the context of cooperation with international environment governance institutions, the US is essentially in a 'ratification straitjacket'[1].

The ratification straitjacket is not automatic: it occurs only when political opposition uses domestic processes and structures to stall and block ratification. The US ratification system is vulnerable to abuse, but is not inherently biased against international cooperation. Indeed, many agreements are passed through the Senate without issue or delay. This highlights the key link between domestic politics and the ratification straitjacket. International environmental cooperation is often constrained by the ratification straitjacket due to political controversy over domestic environmental regulation. As noted above, the politics of the environment in the US are particularly divisive. Historically, environmental regulation has only succeeded when there is a strong 'Baptists-and-Bootleggers' coalition between environmental advocates and impacted industries (DeSombre 2000). This rarely occurs and where there is a lack of domestic policy it is unlikely that the US can engage internationally. A case in point is climate change, with the non-ratification of the Kyoto Protocol accompanied by a failure to adopt federal-level mitigation policy.

But why is US leadership, or even participation, so crucial to the success of an international environmental regime? One reason is its capacity for financial contributions to different treaties and multilateral bodies; another is its status as a significant polluter with respect to a range of environmental problems. Downie has termed this as 'the exploitative power to destroy' (1999: 104), a power that it potentially possesses in abundance as the second largest greenhouse gas emitter. There is also a deeper institutional and cultural reason: the international need for leadership in multilateral

[1] This term will be used throughout the thesis.

environmental agreements (MEAs). The US appears to play a special role in this regard and possesses a certain mystique within the international community. While there is a lack of empirical data and literature on this topic, part of it may be historical. The reign of the US has often led to its participation and leadership being the key ingredient for a successful regime, as was the case with the Montreal Protocol on the control of ozone-depleting substances (Thoms 2002; Spencer 2007). Many countries refused to ratify the second commitment period of the Kyoto Protocol due to the absence of the US, and (as will be shown in Chapter V and the epilogue) the 2015 Paris Climate Agreement was crafted to allow for their legal participation. While it may not always have a numerical or logical premise, the world appears to culturally crave US leadership on environmental issues. Despite this importance to the success of regimes, there are still limits to US power and importance in environmental multilateralism.

There have been many cases of treaties or provisions being adopted despite US opposition. The 1990 London Amendments to the Montreal Protocol and the deep seabed provision of the *1982 UN Convention on the Law of the Sea* (UNCLOS) are two important examples. Similarly, the 1997 Kyoto Protocol and 2000 Cartagena Protocol on Biosafety were adopted and entered into force despite the obstructionist role the US played (Falkner 2000, 2005). However, the US has still not ratified UNCLOS, the Cartagena Protocol or the Kyoto Protocol, and all have been far from successful. While there is likely a range of factors contributing to their lack of effectiveness, the lack of US participation is one of the strongest ones, as has been noted by some commentators in relation to the Kyoto Protocol (Purvis and Stevenson 2010; Victor 2011). The Montreal Protocol and London Amendments proceeded despite US objections due to the presence of majority voting in the treaty, so the US did not have an effective veto over the amendments.

Thus, while US participation may not be necessary for regime creation, its engagement appears to be important for long-term regime effectiveness.[2] Grundig and Ward (2015) conducted a review of MEAs under the International Regime Database, to see what conditions of structural leadership are necessary to enable effective international environmental cooperation. They found that any group of leaders pushing for progressive measures must have greater structural power, and social capital, than laggard coalitions who oppose them. Additionally, 'The pusher coalition in terms of structural power increases regime effectiveness as long as the US is a member of this coalition' (Grundig and Ward 2015: 2). Thus, it appears that successful structural leadership must come from an alliance that includes the US. If we accept these findings, it would appear that US involvement is a necessary, but not sufficient, condition for regime success, and that 'In the long run, US participation is essential to providing effective solutions to global environmental problems' (Falkner 2005: 591). Due to its material power, influence and power to destroy as a polluter, the US possesses a veto power of sorts over the effectiveness of environmental regimes. The power to destroy argument is the weakest. On a numerical level, the pollution levels of the US are rarely high enough to give them a de facto veto. For example, the US currently accounts for 15% of carbon dioxide emissions, while China is worth 29% and the EU 11% (PBL 2014). Yet its financing, technology, political influence and ability to coerce or incentivise others to act in tandem are significant to regime success. As the largest developed economy and one of the most technologically advanced countries, the US has substantial leverage within climate negotiations in particular. This is noticeable in its dominance during discussions on technology transfer mechanisms and climate financing. Moreover, their inaction does

[2] Regime effectiveness refers to the ability of the regime to create cooperative actions that address the underlying collective action problem.

provide a political excuse for other polluters to resist mitigation measures. Concerns over free-riding, leakage and a loss of competitiveness caused by environmental regulation all become more pertinent arguments in a world where the foremost developed great power is a laggard. It would appear that US leadership, in some shape or form, is critical to the fate of international environmental governance.

Based on the work of Young (1989, 1991, 1998), there are predominantly four different types of leadership: intellectual, instrumental, power-based and directional. Intellectual leadership is the generation of ideas or systems of thought that both frame and encourage cooperation (Young 1991) while instrumental leadership sets the political agenda and in doing so often draws upon the idea of intellectual leaders. Power-based leadership uses coercion and incentives to shape outcomes and directional leadership is the setting of an example in dealing with a problem (Andresen and Agrawala 2002: 42). The directional, instrumental and power-based leadership are practised by nation states, while intellectual leadership can be provided by individuals. Interestingly, the US has been the foremost leader in terms of power-based and instrumental leadership for both the Kyoto Protocol and the Rio Conference on Environment and Development, having significantly shaped the outcomes (Andresen and Agrawala 2002). This is significant since this thesis focuses on case studies of both the climate regime and the United Nations Environment Programme (UNEP), the latter of which was shaped by the outcomes of the Rio Conference. Despite its inability to ratify the resulting legal instrument, the US largely moulded the Kyoto Protocol, especially in terms of market-based and flexibility mechanisms (Grubb et al. 1999). Yet in many cases, the leadership of the US was power-based rather than directional, and not always in the common interest of the international community.

It is likely that at least some of the fragmentation of environmental governance has been an outcome of US leadership in regime creation. US reluctance to ratify environmental treaties has often led it to create and promote alternative arrangements and institutions to address multilateral environmental problems. This has led to fragmentation, intentionally or not, which better suits US preferences for forum-shopping and decentralised international environmental governance. This is particularly noticeable in the climate regime, where there has been a proliferation of institutions beyond the UNFCCC initiated by either the US or Australia (the original non-ratifying states of the first commitment period of the Kyoto Protocol) (Vihma 2009; Karlsson-Vinkhuyzen and Van Asselt 2009).[3] The creation of the Major Economies Forum and Asia-Pacific Partnership on Clean Development and Climate are examples of this ploy to challenge Kyoto (Christoff 2006). Indeed, the partnership appeared to embody and promote a 'deregulatory ecological modernisation' discourse that was often in direct tension with the UNFCCC and its associated principles (McGee and Taplin 2009). These alternative forums have also been simple 'talking shops' that do not seek to make hard international rules, laws and regulations. It is an approach that fits the ideological and institutional preferences of the US. The missing ingredient for many institutions has been directional leadership, something that has been in short supply since the creation of the UNFCCC (Andresen and Agrawala 2002). The EU has provided some leadership, such as enticing Russia to join the Kyoto Protocol and enable its entry into force. However, its targets are not reflective of true directional leadership and it has been overshadowed by the US in terms of influencing and shaping the rules and structure of the climate regime. Yet directional leadership is arguably the most important form of leadership, and is needed to

[3] Australia is now a member of Kyoto, having ratified the agreement in 2007.

inspire action across the developing–developed nation divide and spur implementation beyond regime creation. It is also important to note that leadership by developed countries, such as the US, is written into the rules and provisions of the UNFCCC. Article 4.2(a) requires developed countries to demonstrate that they are 'taking the lead in modifying longer-term trends in anthropogenic emissions'. The absence of leadership from the US has provided legal and political cover for developing countries to avoid their own mitigation responsibilities. With respect to the climate regime, Purvis and Stevenson have declared that we 'must accept the reality that US leadership is not only warranted but also essential to avoiding unacceptable risks of catastrophic climate change' (2010: 29). The US needs to provide a model of mitigation at home for others to follow, and both champion and ratify strong international frameworks in order to provide effective directional leadership for international environmental governance. While the US has been capable of some degree of power-based and instrumental leadership, their ratification straitjacket has made directional leadership impossible in recent times.

While the US is still undoubtedly important to multilateral success, its ability to craft and maintain regimes is declining; its position as a 'hegemon' is coming under increasing challenge and perhaps even failing. The notion of leadership is similar to the international relations theory of 'hegemonic stability'. This theory posits that the success and failure of international regimes depends upon the presence of a single dominant actor – the hegemon – which will provide the stability and conditions required to create outcomes that are beneficial to all states (Snidal 1985; Eichengreen 1989). A hegemon is a dominant actor that can make others want what it wants (Wade 2002), rather than simply relying upon its superior military or economic power. In this sense, a hegemon's influence is subtle, yet enduring, as it shapes the international system to reflect its own norms and rules (Eckersley 2004). Hegemonic stability theory takes a cyclical view of history in

which the time of hegemonic rule is marked by order and stability and the decline of a hegemon, as we are arguably experiencing now, is marked by strain and volatility (Grunberg 1990).

The theory does seem to have some explanatory power when applied to the recent track record of environmental regimes. Spencer (2007) contends that the hegemonic influence of the US was the key determinant of the success of the Montreal Protocol and the failure of the climate regime thus far, with the US championing the former and acting as a laggard in the latter. The Montreal Protocol is widely regarded, by states, civil society and the scientific community, as the most successful international environmental legal instrument in history, while the Kyoto Protocol is lamented as a missed opportunity.

Some blame the absence of US ratification as the main source of the Kyoto Protocol's inadequacies (Victor 2009). In contrast, Depledge (2005) observes that the persistence of the Kyoto Protocol despite the withdrawal of the US has gone against the predictions of hegemonic stability theory; the non-ratification by the US led to a renewal in cooperative spirit rather than a collapse. Yet the Kyoto Protocol has not led to a significant reduction in global greenhouse gas emissions (Prins et al. 2010) and this renewed momentum and willingness to work without the US has not lasted. The UNFCCC negotiations are now developing towards a likely inadequate, but US-backed, 'pledge and review'[4] (Hare et al. 2010) model, largely in order to appease American interests.

The US has been extremely successful in moulding the trajectory of the negotiations beyond the Kyoto Protocol. At the same time, there has been no significant overall success in achieving multilateral agreements on urgent issues since the early 1990s (Naim 2009), a trend which coincides with the gradual decline of US hegemony and rise of

[4] This form of treaty will be explained and explored in depth in Chapter V.

China. The two previous statements may seem paradoxical: the failure of multilateral endeavours is related to declining US hegemony and multipolarity, yet the US is still the main shaper of multilateral environmental affairs. The US may no longer be a hegemon, but as the foremost great power of the developed world it still has enormous influence. Moreover, the decline of US hegemony has changed some of both their interests and actions, making US environmental leadership less likely and US obstructionism increasingly familiar.

While it is still a point of ongoing debate, the idea of US hegemonic decline and the movement from a unipolar world to a multipolar one is fast becoming conventional wisdom. A variety of reasons have been posited for the decline of US hegemony. Layne (2011) attributes the decline to military overexpansion, economic problems including the fiscal crisis (potentially weakening the role of the US dollar as the international reserve currency) and, perhaps most importantly, the rapid rise of new great powers such as China, India and Brazil. Wallerstein (2013) contends that the fall of US hegemony is now inevitable and has been driven primarily by its own actions, particularly militarily, which has drained its economy and impaired its ideological legitimacy. Others have taken a more moderate view. Zakari argues that the story is less about the fall of the US and more about the rise of others: 'America remains the global superpower today but it is an enfeebled one' (Zakaria 2011: 217). The US may be a superpower, but it is no longer the only superpower on the world stage. China is now the world's largest greenhouse gas emitter and, according to the International Monetary Fund, the largest economy in terms of purchasing-power parity (The World's Biggest Economies: China's back 2014). China has not taken on the mantle of a global leader in terms of regime creation and reform, and looks unlikely to do so for some time to come. The interests of China, for now, appear to be primarily national and regional, not global. Moreover, the rise of states such as Brazil

and India means that it is improbable that the world will find itself in another unipolar or bipolar structure in the near future; a multipolar world appears to be the most likely future. Accordingly, it is no longer tenable to think of the US as a superpower or hegemon, terms that imply a sole dominance within the international system. It is a great power and the strongest great power of the developed world, but there can be no hegemon in the new multipolar world.

There is strong evidence to suggest that the structural power of the US has previously granted them a virtual veto over MEAs and made their participation, if not leadership, indispensable. Yet the transition from a unipolar to a multipolar world raises a number of interesting questions, particularly regarding whether US leadership and ratification will continue to be as vital to the success of international environmental governance as it once was. Even the previously mentioned work of Grundig and Ward is based upon data that predates the US shift away from environmental multilateralism in the 1990s (2015: 9). It is now uncertain whether US directional leadership is necessary for environmental regime success in the 21st century. This thesis argues that the US is no longer a hegemon or international superpower that is essential for the success of multilateral environmental regimes. Yet they are still the foremost great power of the developed world and their previous hegemonic status and the cultural appeal of their leadership still makes their involvement preferable, and perhaps even necessary, in the short term. Accordingly, this thesis will explore options for both circumventing and allowing for US participation in effective international environmental governance. While managing US participation and ratification is still a key to achieving success in addressing environmental problems, the transition from a unipolar to multipolar world provides some unique opportunities for circumventing US veto power and the need for US directional leadership. Capitalising upon these opportunities and addressing US participation will rely largely on international

institutions, together with the related conduct and practices of environmental multilateralism.

## 1.2 The New Game of Governance: New Geopolitical Conditions

The world continues to undergo a significant shift in the global geopolitical order, but our governance structures and approaches do not fit these new realities. We are potentially in a post-hegemonic world, and there is now a fundamental misfit between geopolitics and governance structures. Von Moltke (2001) argues that a proper fit between the problem structure and institutions employed to address the problem is the key to determining regime effectiveness. Politics are part of the problem, and there is currently a mismatch between existing practices and new political realities. I suggest that the two fundamental changes that underpin this international order transition are the movement from a unipolar world based on US hegemony to a multipolar world; and the subsequent change in institutional norms and rules that reflect the decline of the US. Both of these developments are key causes for both the failure of US environmental leadership and the wider woes of environmental multilateralism.

### 1.2.1 The Rise of a Multipolar World

A key condition for governance in the 21st century is the reality of a world with numerous political centres of gravity ranging from Washington to Beijing to Brussels: the reality of a multipolar, not a unipolar, world. Climate change and wider environmental issues are geopolitical problems (Streck and Terhalle 2013). Roberts (2011) describes the newly emerging political dynamics and balance of power as a ‘new world (dis)order’ characterised by the decline of US hegemony particularly relative to China, the

fragmentation of the G77[5] and the weakening of the EU. The economic and political rise of the BASIC (Brazil, South Africa, India and China and) bloc or BRICs (Brazil, Russia, India, China) is significant, as it has contributed strongly to both the fragmentation of the G77+China group and the challenging of US superiority. The BASIC bloc, as a group of emerging powers, is drawn together by shared concerns over access to the global commons, such as atmospheric space, and is an alliance that is likely to persist for some time to come (Hallding et al. 2013). Their coherence is geopolitical and economic, but is also intrinsically tied to the concern that access to global resources will be limited. They have also made a point of challenging the existing neoliberal international order both rhetorically and politically (Hurrell 2006). Competitiveness concerns with the US have been fuelled by this rise of the BRICs to challenge the existing hegemonic order and the relative decline of the US (Roberts 2011). This has in turn contributed to the US's reluctance to lead by ratifying treaties or to provide strong directional leadership. An example of this is the Byrd–Hagel Resolution[6] prior to the Kyoto Protocol, in which the Senate agreed that the US would not take any binding domestic mitigation actions unless China and other major emerging economies were also legally bound to domestic targets and action. The enduring problem of cooperation through MEAs is developing country involvement and fears over free-riding and relative economic losses (Pauwelyn 2007; Thoms 2002). The rise of a multipolar world has meant that the US is now preoccupied with maintaining competitiveness and order, rather than providing leadership in a new area of governance. The emergence of multipolarity has also undermined and transformed

[5] The major group developing countries, created in 1964, which often negotiate as a bloc within the UN. The group was originally composed of 77 members, but has since swelled in size to 133.

[6] S.RES.98, 105th Congress, 1st session. (1997).

the rules and processes that were created during US hegemony, such as weighted voting in the Bretton Woods institutions.

### 1.2.2 Rules and Norms after Hegemony

The decline of US hegemony has led to a collective questioning of the rules and norms that underpin the international political system. A hegemon solidifies its rule through both a belief in the substance of its preferred order and a degree of trust in and perceived legitimacy of the associated procedures and rules. Ikenberry (2011) contends that the BRICs do not want to challenge the existing rules and principles of the international order; rather, they simply seek to increase their own voice and authority within it. This may be partially true; however, the rise of the BRICs has resulted in some institutional changes that have far-reaching implications. This idea will be explored in depth in Chapter V of this thesis. In summary, the erosion of US hegemony and the rise of a multipolar world has driven a shift in decision-making away from weighted voting and limited-membership UN treaties and bodies[7] and towards interlinked consensus decision-making and a desire for universal participation. I will argue that this paradigm is not suited for maximising the opportunities attendant on multipolarity, or for addressing the issue of US participation, and that this is evident from the recent failures of multilateralism.

The deadlocked negotiations in many forums, particularly the climate and trade regimes, has catalysed a multitude of proposed multilateral alternatives and sparked a series of important debates on the nature of governance. Below I detail two of the debates most important for this thesis and their linkages to the issue of US participation. The

[7] Although the latter is experiencing resurgence outside of the UN due to the failures of UN based processes. It should be noted that the majority of these new minilateral bodies are dialogue and consensus based endeavours, in contrast to the more operational and voting based Bretton Woods Institutions.

discussion chapter of this thesis (Chapter VII) places the results of my research into the context of these two debates. One key debate is over the dimensions of international treaties (ambition, compliance and participation) and whether treaty design (and perhaps even institutional structure) should prioritise participation or substance. In a similar vein, the debate over minilateralism versus multilateralism highlights the importance of participation. It suggests that effective environmental governance can be enabled by limiting the number of participating governments, in particular that multilateralism should be limited to a few powerful states that matter most in managing the environmental problem at hand. I will discuss this key approach in the following section.

### 1.3 Framing the Debate on Participation I: Minilateralism vs Multilateralism

Minilateralism is an emerging discourse within both academia and politics that is attracting support from academic commentators, diplomats and politicians. It focuses on simplifying multilateral negotiations by reducing the number of parties, generally to those whose collective action is necessary to solve the common problem. There has been increasing dialogue on using minilateralism, particularly within the climate regime, with commentators suggesting that progress can be achieved by simplifying negotiations through limiting the number of parties involved. Just for the UNFCCC there have been multiple proposals for both exclusive (Victor 2009) and inclusive minilateral forums (Eckersley 2012). Naim (2009) refers to the 'magic number' of bringing the smallest collection of parties to a forum while maintaining the largest impact, and believes the UNFCCC should adopt a G20 style format to only include the major emitters of the world. Eckersley (2012) presents a more moderate and inclusive approach, where a minilateral climate council would operate on differentiated representation of not only the most responsible and capable nations, but also the most vulnerable. This coverage of

minilateralism both academically and politically displays an 'emerging discourse' that could have profound implications for diplomatic multilateral practice, particularly within the UNFCCC (McGee 2011; Brummer 2014). This has led some to speculate that 'multilateralism has lost favour and credibility, while minilateralism appears to be an idea whose time has come' (Stevenson and Dryzek 2012: 2). Yet this thesis posits that minilateralism is a misdiagnosis of the problem: the fundamental problem of environmental multilateralism is not numbers, but power. The problem is not based on arithmetic, but centres on the role of the US, the most powerful actor. The implications of my research for this framing debate are further explored in Chapter VII, as are the links to the second framing debate of treaty participation.

### 1.3.2 Framing the Debate on Participation II: Ambition, Participation and Compliance within International Treaties

The effectiveness of an international agreement is determined by the dual factors of participation and substance. 'Participation' is simply the number of state parties involved, while 'substance' refers to the legality, targets, structures, and compliance and review provisions embodied within the agreement (Raustiala 2005). One way to conceptualise international agreements is as an interplay between participation and substance that results in agreements that either prioritise participation over the loss of substance ('broad-but-shallow'), or sacrifice participation for greater ambition and legal structure ('narrow-but-deep') (Aldy et al. 2003). In the context of the climate regime, the former has high or full participation with little per party mitigation while the latter has greatly restricted participation with much higher mitigation levels per party. Bodansky (2012a) provides a similar framework by breaking down an agreement into participation, ambition and compliance. Greater ambition often will not be politically feasible and come

at the cost of participation and/or compliance, while an agreement with universal participation will generally have the price of a lowest common denominator outcome with substantially lower ambition (Bodansky 2012b), particularly with a consensus-based decision-making system. Treaty design is by nature a game of trade-offs with a spectrum of options between the extreme models of broad-but-shallow and narrow-but-deep.

The framing of participation and substance is particularly useful in light of the US ratification straitjacket. An agreement, or institution, is likely to be significantly watered down to enable US participation (and may still run the risk of not being ratified as occurred with Kyoto); however, a loss of cost-effectiveness, environmental integrity (to some extent), free-riding concerns and potential political backlash will be the price to pay for a treaty that excludes the US and other key parties (Falkner et al. 2010; Aldy et al. 2003). Navigating the issue of US participation is ultimately the same conundrum as treaty effectiveness in general: it is a balancing act between participation on one hand, and substance on the other.

Both of these framing debates on participation are crucial to understanding the likely direction of international environmental governance, and underlying both is the principal issue of the participation of the US. Debates on participation and treaty design are also at the heart of debates about US participation, and answering key questions around the latter will undoubtedly hold lessons for the former.

## 1.4 Research Questions

The failure to address global ecological crises has been widespread and not confined to a single institution or practice. Thus, any research into governance models that can circumvent the need for US ratification, fit new geopolitical conditions and improve environmental multilateralism must explore different institutional levels and regimes. Accordingly, the research questions for this thesis are as follows:

1. *How can US ratification and participation be effectively enabled within an effective international architecture for environmental governance?*
2. *How can effective environmental governance without the US (or other recalcitrant states) be enabled through; major international institutions, decision-making processes, and operational treaties?*

This thesis explores how multilateralism can be transformed to deal with the conundrum of US participation at the institutional, decision-making and operational treaty levels. While it is not the central focus of this thesis, the research (particularly in Chapter VII) will also consider how multilateral activities can enable and push environmental policy domestically within the US. The research focuses on case studies of the attempted reform, and reform options, in the UNEP and the UNFCCC. The first (UNEP, covered in Chapter III) investigates the reform of a 'major international institution structure'. The decision-making and treaty design aspects of the second research question are examined using the UNFCCC (Chapters IV, V and VI). Reform options are a central focus, since if leadership and a lack of fit are fundamental problems undermining environmental multilateralism, then a key goal is to provide momentum and leadership through alternative means.

The central tenet of this thesis is that international governance on environmental issues no longer needs to rely upon the stability and leadership provided by a hegemon. Nor does it necessarily need to rely on the Sisyphean task of achieving complete global agreement.

## 1.5 Thesis Scope

This is a broad thesis by nature and has therefore focused on particular issues and actors. The thesis focuses on nation states, as they are the principal actors in international environmental governance. As part of a Westphalian UN system, nation states are the decision-makers and policy shapers of the main intergovernmental negotiations and bodies that constitute the major structures of international environmental governance. Despite the rise of non-state actors and the increasing prominence of non-state networks, states remain the focal point of the international system and the most fundamental units within intergovernmental environmental bodies. Given the focus of this thesis upon intergovernmental regimes (UNEP and the UNFCCC) and the role of the US (a nation state), it is both intuitive and logical to make states the centrepiece of the analysis. For example, Chapter IV focuses on decision-making, and the actors with voting and veto power within both of the institutions are states, with non-state actors having a more marginal role. However, non-state actors are considered, where relevant. For example, insights from interviews with non-state respondents (from non-governmental organisations [NGOs], academia and elsewhere) are an important source of data in the thesis, and Chapter VI draws on the role of subnational actors in the US. This is necessary due to the importance of domestic considerations in the formulation of US positions and actions.

This research takes a qualitative focus with a particular use of tools from systems thinking such as feedback analysis (see Chapter II for further details). While others in the field of international environmental governance have used game theory and quantitative rational actor-based models, this thesis does not. Most rational actor models, and game theory in particular, have a number of weaknesses (Colman 2003) and have repeatedly failed in the prediction of complex negotiations outcomes (Freedman 2013). Additionally, this thesis blends theoretical views primarily from both neorealism and constructivism, with a neoliberalist focus on international institutions. It is intentionally a project of theoretical eclecticism and a range of different theories are drawn on where relevant (particularly in the discussion chapters).

Third, this thesis centres upon the climate regime and, to a lesser extent, UNEP as the case studies for exploring governance without US ratification. While other potential useful case studies exist (such as the CBD, which has never been ratified by the US), they have been selected for a number of reasons. The climate regime has by far the largest body of academic literature analysing it, particularly in terms of the framing debates of minilateralism versus multilateralism and treaty dynamics. It is also particularly interesting and relevant given ongoing negotiations under the UNFCCC on decision-making (see Chapter IV) and the upcoming 2015 Paris climate summit that is seeking a new climate agreement (see Chapters V and VI). Thus, there is both an abundance of information as well as a distinct opportunity to conduct policy-relevant research within the regime. In the case of UNEP, the issue of US ratification in relation to creating a World Environment Organisation (WEO) is a fundamental, but overlooked, issue. The Rio+20 UN conference in 2012 provided a unique and rare opportunity to explore the politics of potential changes to UNEP.

Fourth, while the findings are only directly applicable to the two regimes in question, the findings may have relevance more generally for environmental multilateralism. The conceptual framework and governance models presented in the thesis may have some application beyond issues of a specifically environmental nature, but it would be erroneous to assume this given the difference in problem characteristics between issues such as climate and biodiversity or, more markedly, climate and trade (this justification will be further developed and discussed in Chapter VII).

The focus of the chapters in this thesis has been guided by the agenda setting and calls for academic engagement by different groups, particularly the Earth Systems Governance (ESG) Project. For example, the need to move towards forms of majority voting (Biermann et al. 2012; Biermann and Gupta 2011; 2012) and a WEO (Biermann et al. 2012; 2012) have been previously highlighted as potential key reforms for improving ESG. This thesis examines both the upgrade of UNEP (Chapter III) and voting models (Chapter IV) in relation to US ratification and participation. Thus, the research and the thesis have been shaped to address topical issues identified by the ESG Project and others, and with the interest of maintaining academic and policy relevance whilst exploring the thesis questions.

## 1.6 Thesis Outline

This is a thesis by publication and consequently most of the chapters comprising the body of the thesis have been prepared for peer-review journal publication. The introduction, methodology (Chapter II), discussion (Chapter VII) and conclusion (Chapter VIII) are the exceptions to this, as they are instead part of the 'context statement' that links together this research into a coherent whole. The thesis is structured into four

separate sections corresponding to the different levels identified in the second research question.

1. Chapter III explores the politics behind changing the global institution of UNEP, and puts forward a number of options for UNEP to progress in form and function without the ratification and/or participation of the US. This article was published as a working paper with the Earth ESG (presented in this thesis as Chapter III), and presented as a conference paper at the ESG 2014 Norwich Conference
2. Chapter IV examines the possibility of majority voting within the UNFCCC by exploring the legal, political and institutional barriers and opportunities for change in decision-making processes. A key finding is that majority voting is both legally and politically possible and could enable a number of forms of critical mass governance (CMG) without countries such as the US. A version of this paper has been published as a peer-reviewed discussion paper with the Frei Universitat Berlin (see Appendix II), and presented as a conference paper at the 2014 ESG Norwich conference. The final version was published as a peer-reviewed article with the international journal *International Environmental Agreements* (presented in this thesis as Chapter IV).
3. Chapter V explores how a 2015 climate treaty could effectively operate with US legal participation. This is done by varying treaty structure and content to allow for US participation through presidential-executive agreements. This paper has been published as a peer-reviewed article with the international journal *Climate Policy* (presented in this thesis as Chapter V).

4. Chapter VI addresses the opposite scenario by investigating how a 2015 climate treaty could operate effectively without US ratification. A suite of measures including the incorporation of subnational actors in the US and both facilitative and punitive non-party measures are highlighted and combined to suggest different models for dealing with US non-participation in a future climate agreement. This paper is in peer review with the international journal *Climate Policy* (submitted draft presented in this thesis as Chapter VI).

Each chapter is preceded by a short preface outlining the contribution of the research findings to the overall thesis and argument. The discussion chapter (Chapter VII) brings together the findings of each chapter and synthesises them into two different models for governing environmental issues without US ratification and/or participation. This is then used as a basis for the construction of a conceptual framework for visualising how a transformation towards these governance structures could occur. The results are then placed in the context of the two framing debates explored previously. A version of the discussion chapter has been accepted for presentation as a conference paper at the 2015 ESG Canberra conference. Following the discussion, a brief conclusion reviews the key lessons from the thesis and answers the research questions.

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# Chapter II: Methodology and Methods: Theoretical Eclecticism and a Systems Approach

## 2.1 Overview

The methodology detailed in this chapter provides a common thread throughout this thesis. It is a fusion of different tools from systems dynamics, international relations theories and the study of political feasibility, applied specifically to case studies under the thesis research questions.

## 2.2 Methods

This thesis relies upon the review of the relevant literature and a mixture of semi-structured interviews, participant observation and document analysis (such as party submissions) to generate empirical data. Data from interviews and participant observation were gathered through a number of fieldwork segments. Fieldwork was conducted at the Rio+20 summit in Rio de Janeiro (June, 2012), COP18 in Doha (November, 2012), COP19 in Warsaw (November 2013) as well as a number of smaller meetings under the UNFCCC, including a board meeting of the Green Climate Fund (Berlin, March, 2013), an ADP session (Bonn, May, 2013) and a UNFCCC subsidiary bodies meeting (Bonn, June, 2013). Semi-structured interviews provide a large degree of flexibility, allowing interviewers to skip questions, dwell upon others and engage in dialogue (Bailey 2007). This was important, given that the topics of the thesis articles are exploratory and there needed to be the space to follow various areas of interest. Sampling for the interviews was done via purposeful sampling and 'snow-balling' techniques (Patton 1990). Respondents were intended to be key, informed stakeholders, specifically negotiators or

diplomats who were familiar with the topic being addressed within the article. Key respondents were identified before negotiations and generally contacted via email before being approached in person. These interviews usually led to further relevant contacts in a snowball effect. Interviewees were given the choice of being identified or remaining anonymous, with anonymity being the default option when no option was selected on the consent form or specified verbally. All interviewees chose to maintain their anonymity. Within each article, the number of interviewees is specified as well as their profession (NGO, negotiator, ambassador or academic) and background (their region of origin or, for negotiators, the region they are representing). Thus, their relevance is highlighted without compromising their identity. Further details for interviews are included in the relevant articles. Further information on the compiled interview information and consent forms are in Appendix A. All of the interviews were conducted under, and in accordance with, approved ethical research protocols through ANU Office of Research Integrity.

## 2.3 International Relations and Theoretical Eclecticism

Despite possessing a transdisciplinary scope, this thesis is primarily located in the field of international relations. International relations has traditionally been dominated by the positivist theories of liberalism and realism, along with their more recent 'neo' variations and the post-positivist theory of constructivism. For international relations scholars, neorealism with its focus on structural anarchy has been the foremost choice, but neoliberal institutionalism has been the primary lens for most studying international environmental regimes (Vogler 2010: 2681). This thesis does not frame itself solely within one of these approaches; instead, it intentionally blends insights from each to create a theoretical eclecticism. This is sensible given that theories have differing strengths and weaknesses, particularly in their application and explanatory power. For

example, Brunee points out that constructivism is much more useful in explaining the actions of the EU within the climate regime, while realism proves to be more appropriate for the US (Brunnee 2008: 5). In this thesis, different features from constructivism, neoliberal institutionalism and neorealism are combined in a range of manners within both the individual articles and in the discussion (Chapters VII and VIII). Nation states are taken as the main actor for analysis throughout the thesis. Scholars from a variety of fields assert that, despite the rise of non-state actors and networks, states are still the primary unit of the international system and are central to combating environmental change (Biermann and Dingwerth 2004). The continued primacy of nation states is due to a number of reasons, including their role in catalysing policies, technology and new markets (Jänicke and Jacob 2004). Moreover, they are the base units that comprise intergovernmental institutions and negotiations. For example, the climate regime is the main area of focus for this thesis, and the UNFCCC, as focal point of the regime (Dai 2012: 623), only has nation states as parties with distinct decision-making powers. The analysis conducted in the majority of this thesis is realist in the sense of making states, particularly the US, a point of focus in most of the analysis.

However, this thesis deviates significantly from the neorealist school of thought in its appreciation of international institutions. Neorealists view international institutions and organisations as epiphenomenal: they simply codify the interests of powerful states and have little autonomy from, or influence over, them (Dai 2012: 624). In contrast, neoliberal institutionalism stresses the importance of international institutions, even for great powers, in decreasing both transaction costs and uncertainty, as well as making state behaviour more predictable (Keohane 1998). States can be thought of as profit-maximising entities that require international institutions to deal with the problems, and reap the benefits, of an interdependent state of existence (Sterling-Folker 2000). This

thesis looks at different institutional reforms, including decision-making and treaty design, to enable governance without US ratification and/or participation. Accordingly, it shares the neoliberal institutionalist perspective that international institutions are not epiphenomenal; institutions have a life of their own and can significantly alter and shape the preferences and actions of states (Milner and Waltz 1999: 56). This thesis also maintains an element of neoliberal institutionalism by focusing on output legitimacy, rather than input legitimacy as constructivism would (Eckersley 2007: 307). Output legitimacy, or effectiveness, is put forward here as a combination of the ability of an institution to produce outcomes (referred to as 'output': accepted rules, norms, principles, laws and operational agreements) and, more importantly, the ability of a regime to address the underlying collective action problem ('impact') (Underdal 1992; Easton 1965). This is reasonable, given that the legitimacy of international environmental cooperation is more likely to be undermined by a lack of results then procedural fairness, with the UNFCCC being one clear example of this (Vihma 2011: 7). Another influence from neoliberal institutionalism is seen in the perception of the nature of states. In a moderate neoliberal sense, states are seen as actors that often seek absolute gains, but will rarely pursue an absolute gain if it leads to a relative loss of power in relation to an adversary or competitor (Milner and Waltz 1999). Constructivism does not play a central role in the individual articles of the thesis. While discourses and normative dimensions are occasionally incorporated into the analysis (for example, see the 'barriers' section of Chapter IV), the focus is more firmly placed on institutional and legal features, as well as power politics. Yet, the lens of constructivism plays a much more significant role in constructing the conceptual framework and theory of this thesis within the discussion.

The final analysis and conceptual framework of this thesis, embodied in the discussion chapter (Chapter VII), adopts a specific stance of realist constructivism.

Barkin (2003) highlights that despite the general view that neorealism and constructivism are in direct opposition to one another, the core tenets of both theories are actually mutually compatible. Neorealism and constructivism, with their focuses on power and structure, and norms, respectively, are actually complementary (Hunt 2001). Realist constructivism aims to examine 'the way in which power structures affect patterns of normative change in international relations and, conversely, the way in which a particular set of norms affect power structures' (Barkin 2003: 337). The conceptual framework presented in Chapter VII explicitly pursues this idea, by exploring the interplay between the framing of environmental issues and the underlying international political power structure, and how the interaction between the two could shape the collective dynamics of state action in respect to climate change. This theoretical eclecticism is echoed in the general interdisciplinary approach of this thesis.

## 2.4 Interdisciplinarity and Systems Dynamics

There is a general consensus on the need for integrative approaches that transcend disciplinary boundaries and create new knowledge and mutual understanding across different academic fields (Proust et al. 2012). Scholars now contend that this is a general imperative within academia, particularly studies related to sustainable development (Newell et al. 2005). The need for a systemic understanding is necessary for both effective policy making and transitions to sustainability, where discipline-based, reductionist approaches are inadequate (Newell et al. 2005). This thesis provides an interdisciplinary approach through both a systems dynamics-based methodology and integration of a variety of tools from different fields. Each of the different articles and pieces of analysis does not attempt to use a single lens, but draws upon different fields, where relevant. The problem is contextual and the topic at hand determines the tools that are drawn upon. For

example, Chapter IV utilises both a legal analysis and insights from decision-making studies, while the discussion (Chapters VII and VIII) draws on ideas from economics, constructivism and sociology. Systems dynamics is used throughout the thesis and provides an interdisciplinary framing. This is a useful endeavour, since systems theory needs to be a cornerstone of any shared interdisciplinary language (Abraham et al. 1992).

A governance system is a complex, adaptive system and, as such, requires a holistic systems approach. System dynamics relies on the ontological premise that systems are interconnected entities comprised of feedback loops, delays and non-linear changes, and that the observed human behaviour arises from the underlying system structure (Meadows 1989). Causal loops are prevalent in systems and lead to systems behaviour, whereby the effects of change in a system either act to amplify (positive feedback) or stifle (negative feedback) the original change. Newell et al (2008) therefore outline the key elements of a systems approach as a) examining the underlying causal structure of a system, b) investigating the feedback mechanisms and the behaviour it creates and c) identifying leverage points and places for intervention to create positive change and a new system state. A systems approach based upon the examination of feedback and causal loops is both appropriate and useful in discerning reforms that can enable environmental governance that better manages US participation.

Causal loop diagrams are one way of visually depicting and analysing feedback behaviour and crafting systems interventions, and are the core of the methodology of this thesis. Causal loop analysis has been used for a plethora of issues including obesity (Newell et al. 2008), urban planning (Proust et al. 2012) and international relations (Jervis 1979, 1991; Gause Iii 1999). However, the coverage within international relations, besides the few aforementioned studies, has been scarce. Causal loop analysis has rarely been applied to issues of environmental governance. This makes the use of causal loop

analysis a novel methodological contribution for the thesis. Newell et al (2008) observe that there is a range of practised systems analysis tools, including influence diagrams, causal loop diagrams and complex modelling techniques. Causal loop diagrams were selected for this thesis since, unlike influence diagrams, they can account for the important aspect of systems feedback. However, given the qualitative nature of data involved within the different case studies, it was not appropriate to attempt to quantify variables and create a full simulation or model. Both causal loop and influence diagrams provide a suitable method to describe the system, by capturing and combining different perceptions of cause and effect (Proust and Newell 2010). A system, in this sense, is not necessarily an objective phenomena, but mainly a conceptual device used to make sense of, and interpret, the world (Checkland 1985). The aim of the research within this thesis is not then to provide a completely objective and accurate depiction of the system (which would ultimately be impossible), but a synthesised, visual display of the perceptions that interviewees, and myself, have of the system in question. This was done by compiling collected empirical data from interviews, observations and literature, and then coding to generate a list of key themes and variables. With the system diagrams, variables are those parts of the system that can come in amounts or degrees that can change over time. Data is once again drawn upon to find the processes that link the different variables together in terms of cause and effect, then translated into a diagram. From there, I then attempted to discern possible causal loops and points of leverage in the system.

Within the diagrams in this thesis, the arrows denote processes, like a flow of causation or information, variables are boxed (primary) or unboxed groups of words and feedback is signified either by a + (indicating a positive feedback relationship) or – (a negative feedback relationship). A causal loop in these diagrams is simply when two variables affect one and other through a chain of feedback. Within the causal loop

diagrams, a balancing causal loop (a case of negative feedback constraining change) is shown as a circled 'B' (Figure 1). A reinforcing feedback is illustrated as a circled 'R' (Figure 2). These diagrams are based upon qualitative data and used to recognise what is driving or constraining possible institutional change. Once the basic feedback behaviour of a system is understood, different options for interventions into the system and points of leverage can be identified.

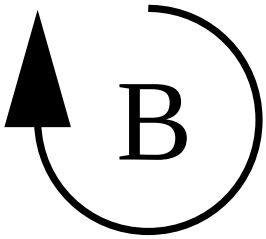


Figure 1: Balancing Causal Loop Symbol

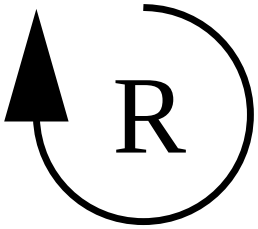


Figure 2: Reinforcing Causal Loop Symbol

Alongside causal loops, systems archetypes and leverage points are also key aspects of systems dynamics. A systems archetype is a 'common pattern of behaviour in organizations' (Braun 2002). They are isomorphic, underlying structures that often manifest in different institutions and organisations (Wolstenholme 2004). Archetypes allow for a greater, yet simplified, understanding of the system and therefore of the intended and unintended consequences of an intervention (Wolstenholme 2004; Braun 2002). Numerous archetypes have been identified in the field of systems dynamics, and some of these are drawn upon in Chapters III and V. Leverage points are also useful for understanding system structure and how to conduct interventions. Leverage points are areas where intervention can have a ripple effect and result in more widely spread

changes. Leverage points generally tap into patterns of feedback so that small change can be amplified into more significant change (Meadows 2008). The ability to create great effects through only a small deployment of resources makes these points an important consideration of strategy and a common part of systems interventions (Olson and Raffanti 2006). Meadows (1999) provides a list of leverage points in a system that are ranked from the least to most powerful:

**Table 1: Leverage Points (Meadows 1999)**

| Ranking | Leverage Point |
|---|---|
| 1. | The power to transcend paradigms. |
| 2. | The mind-set or paradigm out of which the system—its goals, structure, rules, delays, parameters—arises. |
| 3. | The goals of the system. |
| 4. | The power to add, change, evolve, or self-organise system structure. |
| 5. | The rules of the system. |
| 6. | The structure of information flows. |
| 7. | The gain around driving positive feedback loops. |
| 8. | The strength of negative feedback loops, relative to the impacts they are trying to correct against. |
| 9. | The lengths of delays, relative to the rate of system change. |
| 10. | The structure of material stocks and flows. |
| 11. | The sizes of buffers and other stabilising stocks, relative to their flows. |
| 12. | Constants, parameters, and numbers. |

This thesis uses the notion of leverage points and Meadows' ranking system to guide the topic of the different articles and proposed interventions. Thus, the first article (Chapter III) looks at changing the overall structure of environmental governance (leverage point 4), the second and third articles (Chapters IV and V) examine decision-making change (leverage point 5), the fourth article (Chapter VI) seeks to evolve treaty

design by making use of a number of different feedbacks to bypass US ratification (points 4 and 7), and the end discussion (Chapter VII) puts forward an overarching argument on changing the existing paradigm of environmental, particularly climate, governance (point 2). While these are leverage points for a change towards a multilateral model that can more effectively address US participation, it is not to say that they are easily implemented. In light of this, the methodology systematically considers the political feasibility of proposed reforms and interventions.

## 2.4 Political Feasibility

Analysing the political feasibility of proposed reforms is a core component of the thesis methodology. Political theorists generally agree that both desirability and feasibility are separate, yet equally important, categories when it comes to political design (Räikkä, 1998). For although political science feasibility and desirability are relatively distinct, they should not be treated in isolation. If political arguments are to guide action or be implemented, then feasibility becomes a fundamental part of desirability. Simply put, structure or policy is not desirable if it cannot be implemented within the necessary period to address the problem at hand. Wiens (2012) highlights this dilemma by asserting that institutional design is composed of two distinct sets of problems: architectural problems and engineering problems. Thus far, the literature within international environmental governance and other fields of intuitional reform have been preoccupied with developing architecture. This is evident in the abundance of grand architectural ideas for environmental governance, such as a WEO (Biermann 2000) or the orchestration of climate governance (Abbott 2014). Empirical study of the politics underlying such institutional change is much scarcer, which is an unfortunate oversight. A house is of no use if it does not obey the rules of gravity. Likewise, engineering is redundant if it is not

contributing to some kind of greater structure. The key is for engineering to inform and provide the basis for architectural design in international governance. In this case, the political scientists become the engineers, and political systems, feasibility and constraints becomes the laws of physics that they must work with. Unfortunately, the job of political scientists is trickier as political systems and feasibility are infinitely more malleable than the laws of physics. This thesis attempts to provide one example of a study that covers both engineering and architecture by developing different environmental governance architectures for addressing US participation that are explicitly built on case studies that consider political feasibility.

Recent studies have brought forward important ideas that underpin political feasibility: concepts such as transition, accessibility and soft constraints. The feasibility of any institutional model relies upon its capacity to actually implement the necessary changes within an appropriate timeframe. Gilabert and Lawford-Smith echo this when stating, 'Accessibility matters: there must be a way to bring the state of affairs about' (2012: 811). This engenders the need to develop a trajectory or pathway for the design. Soft constraints are factors that will shape the likelihood of any trajectory occurring, including economic, institutional, cultural and legal dimensions (Lawford-Smith, 2012). Analysing soft constraints and drivers and providing a reasoned, supported transitionary pathway are significant elements in justifying the accessibility and feasibility of any institutional design. This thesis attempts to combine causal loop analysis with the examination of soft constraints to detail politically feasible reforms and develop an understanding of the barriers and drivers that underpin their feasibility. Generally, the system (or intervention) and relevant literature is first detailed; soft constraints and drivers for change are then discerned through causal loop analysis; leverage points, interventions or scenarios are then developed based upon this analysis; and the proposed intervention

or scenarios are then examined in terms of political feasibility. This is the ideal application of the methodology, but due to differences in data and the problems being addressed, this approach varies across the thesis articles to some degree.

## 2.5 Application of the Methods and Methodology

The use of the outlined hybrid methodology and accompanying methods is a common strand throughout this thesis, although there are some necessary deviations. For example, while the first two articles (Chapters III and IV) make heavy use of empirical data from fieldwork, the latter two articles (Chapters V and VI) are much less reliant upon the data from interviews and observations. Chapter V, on weighted voting reform, was guided and catalysed by ideas from the interviews done for Chapter IV on majority voting. However, the majority of the analysis as well as the proposed weighted voting model were based more upon an expanded literature review and analysis of different voting schema, rather than the empirical data from fieldwork. Similarly, ten respondents were originally interviewed for Chapter VI, and while the empirical data was useful in informing me about elements of political feasibility, they were not central to the ideas and arguments put forward in the article. Thus, while empirical data was gathered for each of the different articles, it was in two cases used as more of a guiding source of supplementary information and not as a primary tool in examining the case study. Another point of differentiation is the use of scenarios: Chapters III, IV and IV make use of scenario building, but Chapter V does not. This was done simply due to the broader and theoretical nature of the case study, and to allow for greater in-depth analysis of the proposed weighted voting model, which was the main novel contribution of the article.

Despite these differences in the application of the thesis, the methodology is generally a point of congruence for the different articles as well as the discussion chapter. All of the papers and the discussion utilise causal loop diagrams, with two of them also drawing upon relevant systems archetypes (a notion that will be explained in the appropriate sections). Critical appraisal of political feasibility is, once again, a method that is adhered to in every section of the thesis. Overall, the thesis methodology provides a key point of congruence between the articles and the end analysis, as well as a novel contribution to the field by employing systems dynamics tools in combination with the consideration of political feasibility. Chapter III – the first article – of this thesis provides one clear example of a relatively successful and complete application of the thesis methodology.

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## Foreword to Chapter III: Realpolitik and Reform

This first article addresses the thesis research questions by focusing on the reform of a global institution: UNEP. The reform of UNEP is explicitly and repeatedly connected to issues of existing geopolitics and US ratification. Indeed, what is termed as the 'US ratification straitjacket' (a term also mentioned in Chapter I) is the foremost obstacle to changing the form of UNEP and creating a WEO. The ratification straitjacket, alongside developing country preferences for a change in UNEPs function as the main driver of change, demonstrate that US ratification and multipolarity are the key underlying influences shaping the future of UNEP. As the first article of the thesis, this establishes a justification for the choice of topic and direction of the thesis. US leadership and multipolarity are the main forces that shape UNEPs fate, and the possibility of a WEO, but have not received sustained coverage in academia or politics. Accordingly, the novel contribution of this article is also the main link it has to the overall thesis.

Chapter III has a number of similarities and differences, both in terms of themes and approach, with the other papers of this thesis. Similar to the majority of the chapters, it makes use of causal loop analysis. The most distinct difference between this paper and the others is its focus. While the latter three articles of this thesis concentrate upon the climate regime, this piece centres its analysis upon UNEP. This provides a useful degree of institutional variety beyond the climate regime. It also allowed me to make use of the unique opportunity that Rio+20 offered as a case study. It is a summit that only occurs once a decade and was a pivotal moment when UNEP reform was transparently debated. Thus, the choice of this case study was logistical, but also done for purposes of diversity and fit to the second thesis research question.

Two key lessons for the central thesis can be drawn from this paper. First, there is a clear divide between governance approaches that move ahead without the US (the two

‘critical mass’ scenarios) or those which attempt to accommodate the US while maintaining a degree of effectiveness (UNEP Unknown and the ‘incremental upgrade’ scenario). This creates the foundation for the notion of CMG presented in the discussion. It also provides a basis for the core idea that there exists a choice between governance based on the structural leadership of a majority without US participation, or a more nuanced and decentralised way forward that allows for US participation (exclusive and inclusive of CMG, respectively). Thus the UNEP reform case study lays a theoretical platform for the successive articles and end argument of the thesis.

This article was published as a peer-reviewed working paper with the ESG Project and presented as a conference paper at the ESG 2014 Norwich Conference. The published working paper is presented here as Chapter III.

# REALPOLITIK AND REFORM AT RIO+20

## *The Politics of Reforming the United Nations Environment Programme (UNEP)*

Luke Kemp

Earth System Governance

MAY 2014

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## ABSTRACT

This research aims to explore the barriers and opportunities to change in the form and mandate of United Nations Environment Programme (UNEP) and to develop scenarios for the future of UNEP based upon observed drivers and constraints for change. It provides an original contribution to the existing literature by analysing the political dynamics underlying UNEP reform based upon a case-study at the Rio+20 Conference on Sustainable Development and the use of a systems dynamics approach. Scenarios, emergent from interviews and observation of negotiations, suggest that UNEP can undergo a change into a World Environment Organisation (WEO) either through a slow, incremental upgrade, or a speedy transition to a WEO without US participation, pushed by a coalition of proactive states. Other more operational options include a network and regional focused structure or a merger with the United Nations Development Programme (UNDP). In terms of mandate, there was political momentum from developing countries for UNEP to take a stronger role in implementation, but continued opposition from industrialised non-EU states against adopting a stronger coordinating function. This article argues that the most politically feasible and attractive future pathway for UNEP is to become a more decentralised, operational agency with a mandate focusing upon capacity building, information gathering and dissemination, implementation and a possible, although less feasible, movement towards integration with the United Nations Development Programme (UNDP). Moving towards a WEO in the longer term will require addressing the issue of US ratification potentially through a 'Critical Mass WEO' or a World Sustainable Development Organisation (WSDO).

# SERIES FOREWORD

This working paper was written as part of the Earth System Governance Project, a ten-year research initiative launched in October 2008 by the International Human Dimensions Programme on Global Environmental Change under the overall auspices of the Earth System Science Partnership.

Earth system governance is defined in this Project as the system of formal and informal rules, rule-making mechanisms and actor-networks at all levels of human society (from local to global) that are set up to prevent, mitigate and adapt to environmental change and earth system transformation. The science plan of the Project focusses on five analytical problems: the problems of the overall *architecture* of earth system governance, of *agency* of and beyond the state, of the *adaptiveness* of governance mechanisms and processes, of their *accountability* and legitimacy, and of modes of *allocation and access* in earth system governance. In addition, the Project emphasizes four crosscutting research themes that are crucial for the study of each analytical problem: the role of power, of knowledge, of norms, and of scale. Finally, the Earth System Governance Project advances the integrated analysis of case study domains in which researchers combine analysis of the analytical problems and crosscutting themes. The main case study domains are at present the global water system, global food systems, the global climate system, and the global economic system.

The Earth System Governance Project is designed as the nodal point within the global change research programmes to guide, organize and evaluate research on these questions. The Project is implemented through a Global Alliance of Earth System Governance Research Centres, a network of lead faculty members and research fellows, a global conference series, and various research projects undertaken at multiple levels (see www.earthsystemgovernance.org).

Earth System Governance Working Papers are peer-reviewed online publications that broadly address questions raised by the Project's Science and Implementation Plan. The series is open to all colleagues who seek to contribute to this research agenda, and submissions are welcome at any time at workingpapers@earthsystemgovernance.org. While most members of our network publish their research in the English language, we accept also submissions in other major languages. The Earth System Governance Project does not assume the copyright for working papers, and we expect that most working papers will eventually find their way into scientific journals or become chapters in edited volumes compiled by the Project and its members.

Comments on this working paper, as well as on the other activities of the Earth System Governance Project, are highly welcome. We believe that understanding earth system governance is only feasible through joint effort of colleagues from various backgrounds and from all regions of the world. We look forward to your response.

Frank Biermann

*Chair, Earth System Governance Project*

Ruben Zondervan

*Executive Director, Earth System Governance Project*

# 1. INTRODUCTION

In 1972 growing concern over emerging transboundary ecological problems resulted in an important change in the institutional framework of international environmental governance. That year the Stockholm Conference on Environment and Development established the United Nations Environment Programme (UNEP). UNEP is a catalytic programme which operates under the UN General Assembly with 6 primary functions (ENGFELDT 2002): assessment of environment and trends; coordinating UN environmental activities; provision of advice and capacity building; developing links with scientific bodies; awareness-raising; and the promotion of international environmental law. UNEP was essentially designed to be the environmental conscience and agenda setter for the UN. It consists of a secretariat operating on an annual budget of roughly US$220 million (SIMON AND DRÖGE 2012) and, until recently, a governing council of 54 member parties. Since its creation there have been arguments over what central role should UNEP play in international environmental governance and what form it should take. Many academics and politicians have pushed for UNEP to become a 'World Environment Organisation' (WEO)[1]: a specialised agency for the environment within the UN rather than a programme beneath the UNGA. These discussions have been further fuelled by UNEP's mixed performances over the past few decades. This unsatisfactory track-record, along with an intensified political debate on the need for a WEO led to a review of UNEP at the Rio+20 UN Conference on Sustainable Development.

For better or for worse, the outcomes of Rio+20 suggest that the barriers to adopting a WEO are still greater than the drivers for transformation as there is no mention of a change in the form of UNEP. The topic of upgrading UNEP is contained primarily in paragraph 88 of the Rio+20 outcome document. Paragraph 88 does promise increased funding, the adoption of universal membership in the governing council and an expansion of UNEP's mandate to incorporate implementation upon national requests. Most of these results can be seen as a simple progression of the Cartagena decision emerging from the World Summit on Sustainable Development in 2002, which promised to 'consider' universal participation in the governing council and attempted to boost funding through an indicative scale of contributions (PERREZ AND ZIEGERER 2008). The proposal by the European Union (see Appendix A) to upgrade UNEP into a specialised agency, a WEO, was ultimately defeated. The outcome represents a triumph of the opponents of a WEO (the US, Canada, Japan and some members of the G-77) over the proponents (primarily the EU and the African Union [AU]). The result was controversial as tensions ran high until the closing plenary with some parties from Europe threatening to reopen the negotiated text to insert a mention of a WEO, but the US successfully warned against such action (ENB 2012). This conflict is just the tip of the iceberg in regards to the politics of upgrading UNEP at Rio+20. Yet the political

[1] For both consistency and clarity I will be using the terminology outlined by the UNEP Department of Environmental Law and Conventions by referring to a specialised agency form as a WEO. The term UNEO, which has often been used interchangeably with WEO in previous literature, will denote an organisation (not a programme) that is located under the General Assembly (UNEP 2011).

dynamics of UNEP reform has received little critical attention in academic literature thus far.

My research will seek to remedy this by accomplishing two primary objectives:

1. *To explore the barriers and opportunities to change in the form and mandate of UNEP.*

2. *To develop scenarios for the future of UNEP based upon these political drivers and constraints.*

My analysis progresses through four stages; a review of the background literature on UNEP and a WEO; an analysis of the current political blockades and opportunities for change in UNEP; emergent scenarios for change in UNEP; and observations on the ways forward based upon the current political dynamics.

## 2. FLAWS, FUNCTIONS AND REFORM: THE DEBATE ON UPGRADING UNEP

Before examining the role of UNEP and potential options for reform it is logical to firstly examine the blemishes which have made reform so desirable. UNEP faces a range of problems that have impacted its effectiveness and led to a general agreement on the need for reform. Over time there has been agreement on possible reform options, but no consensus on what would constitute the optimal structure for UNEP (IVANOVA 2012). Many of the criticisms of UNEP thus far have centred on its status as a subsidiary body under the UN General Assembly (UNGA) and its lack of finances. UNEP largely lacks the finances to fulfil its mandate and its current budget pales in comparison to agencies such as UNDP which operate with an annual budget of US$4.1 billion (SIMON AND DRÖGE 2012:106), although this is understandable given that UNDP has an operational mandate and therefore greater financing needs. UNEP's status as a subsidiary body has meant that it has to pass its budget and plans through the UNGA for approval, making them susceptible to being watered down or modified (OLSEN AND ELDER 2012). This status has also meant that UNEP has insufficient political authority to fulfil its original coordination mandate (BIERMANN 2002). Others have pointed to organisational factors such as leadership and management problems, its location in Nairobi, and a lack of a clear mission and focus (IVANOVA 2005A; DOWNIE AND LEVY 2000; IVANOVA 2005B; SANDBROOK 1999). Despite these issues, UNEP has experienced some success, particularly in its regional seas programs and in catalysing numerous Multilateral Environmental Agreements (MEAs) (DESAI 2006). Some have even praised UNEP to be a productive body given its constraints (NAJAM 2003). Simon and Droge have suggested that "UNEP is a victim of its own success" (2012: 106) since its role as a catalyst has outstripped its abilities as a coordinator. Overall UNEP has not been greatly successful in fulfilling its mandate, especially in coordination, due to a combination of internal and external problems. The struggles of

UNEP have led to a deeper debate about what role it should be fulfilling within international environmental governance.

Arguments on upgrading UNEP need to address the fundamental question of what is the most suitable role for UNEP- coordination or operation. There has been a convergence around the need for a more coordinated form of international environmental policy (BIERMANN ET AL., 2009, ESTY AND IVANOVA, 2001, DESAI, 2006) as it is currently fragmented and lacks authority. Fragmentation is evident from the plethora of bodies involved with overseeing international environmental policy including the secretariats of many MEAs (BIERMANN 2002) and the environmental departments of numerous international organisations such as the World Bank, (CHARNOVITZ 2002). There is no clear global authority cases of overlap or competition none are likely to cede responsibility to UNEP, leading to inefficiencies (BIERMANN ET AL. 2009), competition and even contradictory policies e.g. The Montreal Protocol encouraging the use of HFCs, a powerful greenhouse gas. Accordingly many WEO supporters state that UNEP should be upgraded into a WEO that would provide leadership and central coordination (OLSEN AND ELDER 2012; CHARNOVITZ 2002; KIRTON 2005; BIERMANN 2000). Alternatively UNEP could address the growing problem of implementation of international environmental policy. Robinson (2002-2003) highlights that new environmental agreements rarely have a national agency analogous to the international entity leading to weaknesses and gaps in national policy-making and action. UNEP may already be heading in this direction due to operations under the GEF portfolio and Bali Strategic Plan on Technology Support and Capacity Building as well as internal drive to engage on the ground level (BAUER, 2009, MEE, 2005). This tension over function is succinctly posed by Ivanova's question of "should it [UNEP] serve as a brain or anchor institution in the UN system … Or should it shift towards a more operational role?" (2012: 584). This discussion of function does not only pertain to UNEP, but has also factored in the literature on a WEO. Etchart (2012) observes that there is general agreement that a WEO should possess policy functions, yet a divergence on whether it should incorporate implementation and capacity building and to what extent.

The idea of constructing a WEO is older than UNEP itself and has spanned the realms of both politics and academia. Initial proposals for a WEO began in 1969 with both US diplomat George Kennan (1969) and the then UN Secretary General, U Thant, calling for such a body (AYLING 1997). A few years later this idea was dismissed during negotiations in favour of its current subsidiary body form. Szasz (1992) asserts that the dismissal was indicative of developing country suspicions and a lack of concern for environmental issues by developed nations. Ivanova (2007A) in contrast has suggested that this was a rational choice to help avoid operational competition as well as to ensure that environmental issues were not siloed within the UN system. Regardless of the reason, there has been a continued demand for the establishment of a WEO. From 1998 to 2005 there were numerous calls for a WEO including from state leaders such as Jaques Chirac, Mikhail Gorbachev and heads of both the UNDP and World Trade Organisation (WTO) such as Gustave Speth and Renato Ruggiero (IVANOVA 2007B). This persistent support for a WEO has continued in lead-up to Rio+20 and has also been noticeable in academia.

A significant number of proposals for and justifications of a WEO have emerged within academia. These proposals range from a specialised agency that would act as an economic forum for bargaining (TUSSIE AND WHALLEY 2002) or a more virtual, network-based Global Environment Organisation (GEO) which would focus on global scale environmental problems (ESTY AND IVANOVA 2001) through to a sovereignty impairing entity with enforcement powers (PELLETIER 2010). Biermann suggests that such benefits of a WEO form include increased autonomy over its organisational design, the ability to take funding from innovative financial mechanisms such as a tax on bunker fuels (2000) as well as the authority to coordinate existing MEAs and act as a site for the co-location of MEA secretariats (2007). The reception of these proposals has not been universally positive.

Support for the idea of a WEO has been balanced by a number of critiques. These criticisms have primarily stood on two foundations: a) a specialised agency will not automatically address the key problems of environmental governance and b) a specialised agency status would not resolve the internal issues of UNEP which limit its efficacy. Firstly, many authors have suggested that transforming UNEP would be a waste of political capital. Najam claims that the creation of a WEO would be little more than "organisational tinkering" (2003: 367) as the fundamental problem is the political will of governments and not institutional structure. Others have suggested that a WEO cannot be both effective and realistic, as an umbrella organisation that doesn't change decision-making processes or impinge upon sovereignty would be largely irrelevant, while a quasi-supranational EU style model with enforcement powers and majority voting decision making would be utopian (OBERTHÜR AND GEHRING 2004). Others have pointed to practical issues in implementation. Von Moltke (2001A) suggests that a WEO would create numerous turf wars with little gain and advocates organisational change in the WTO instead. Juma (2000) points out that the combination of MEA secretariats under a WEO would require the daunting task of gaining the consent of each MEA Conference of the Parties (COP). Critics have instead recommended a more bottom-up process such as the clustering of MEAs (VON MOLTKE 2001B) or the co-location of MEA secretariats (NAJAM 2003) as ways of achieving coordination without a WEO. Secondly, the internal problems of UNEP are another basis for WEO scepticism. Hiermeier states that upgrading UNEP into a specialised agency won't necessarily lead to greater material resources or strength and "will not automatically make it a more effective institution" (2001: 769), as it will not solve deeper organisational issues. Ivanova (2012) raises a similar concern by suggesting that there is no clear link between status and increased funding and authority, and UNEP would be better served by improving its organisational culture, capacity and credibility. Institutional and organisational critiques both provide counterarguments to the case for a WEO. One commonality between both camps on the WEO debate has been the lack of analysis on the underlying politics of UNEP reform.

Throughout the literature on reforming UNEP there has been consistent noting of the importance of political support and a surprising lack of attention to the specific political issues underpinning the lack of progress thus far. Many WEO proposals or suggestions on reforming environmental governance have ended with the caveat that any change hinges upon political will (BIERMANN 2002; ESTY AND IVANOVA 2001;

SIMON AND DRÖGE 2012; KIRTON 2005). Yet there has been little to no in-depth analysis of the political factors that may help or hinder specific reforms. Vijge (2012) has performed the best example of a study on political dynamics by analysing the reasons for the absence of large scale institutional reform in international environmental governance. She concluded that reform has been stalled due to turf wars, lack of trust between states and a self-reinforcing cycle of incremental and symbolic changes. My research builds upon her work by continuing to look at the existing political and institutional barriers to governance reform, but it focuses solely upon UNEP and provides an original contribution through the use of a systems thinking perspective, concentrating upon a case study of Rio+20 and incorporating the drivers of change into the overall analysis.

## 3. APPROACH

I undertook tracking and observation of negotiations at both the Rio+20 conference and the third preparatory committee. This included access and contribution to the tracking document used by the Major Group of Children and Youth (MGCY). This participant observation was supported by 12 semi-structured interviews with key, informed stakeholders. Respondents included UNEP officials, leading academics, NGO representatives, and negotiators[2].

Systems thinking principles were then used to represent my analysis in the form of influence diagrams. Influence Diagrams are a visual method of representing and combining the perceptions of cause and effect from numerous stakeholders (PROUST AND NEWELL 2010). They provide a holistic visual guide that aids in developing predictive scenarios and identifying 'leverage points' in a system. Arrows in these diagrams depict the flow of influence between different variables. The prominence of an issue or link is reflected in its size. When polarity is shown (+ or –) it indicates how one variable is affecting another, a + meaning it causes an increase in the rate of change in the next variable, and a – meaning a decrease. Diagrams have been compiled by the author after transcribing and coding data to discern key variables and links.

## 4. IMPLEMENTATION OR COORDINATION? THE CONFLICT OVER UNEP'S MANDATE

Echoing Ivanova's question, discussion on two core functions -implementation and coordination- underpinned the negotiations of upgrading UNEP. Functions of capacity-building and improving the science-policy interface through information gathering and dissemination managed to progress through negotiations with little controversy. This supports previous claims that the strength of UNEP lies in its scientific assessments, regionalised structure and commitment to capacity building

[2] Sources have been kept anonymous for reasons of confidentiality.

(TARASOFSKY 2002). Conversely UNEP's weakest point -its role as a coordinator- was the main point of controversy.

### 4.1 THE COORDINATION CONUNDRUM

Coordination, particularly of the MEAs, was a major sticking point throughout negotiations. The end outcome under 88(c) was to "enhance the voice of UNEP.... within the United Nations system" but with no further elaboration on how this would occur. The stipulation of "within the UN system" was added by the US who clearly did not wish to see UNEP go work beyond the UN[3]. The US, Australia and Canada, amongst others, consistently opposed any notion of giving UNEP a more powerful coordinating role, especially over the MEAs. The US objected to the EU's idea of giving UNEP oversight over the MEAs claiming that "you are adding a layer of bureaucracy over the legally independent Conference of the Parties (COPs), which is something we are not entirely comfortable with"[4]. The JUSCANZ (Japan, United States, Canada, Norway, Switzerland, Iceland, Lichtenstein and New Zealand) states were clearly not in favour of any centralised coordination of the MEAs.[5] The fragmentation of international governance is often in the strategic interests of powerful states as it allows for greater freedom, less responsibility (BENVENISTI AND DOWNS 2007) and the ability to selectively engage with preferred institutions in a phenomenon known as "forum shopping" (MURPHY AND KELLOW 2013). This same trend of preferring fragmented institutional arrangements has been seen in the climate regime in the intentional proliferation of institutions beyond the United Nations Framework Convention on Climate Change (UNFCCC) generally initiated by these countries (VIHMA 2009; KARLSSON-VINKHUYZEN AND VAN ASSELT 2009). Additionally, the US in particular is renowned for a distrust of multilateralism and international bureaucracy (PATRICK 2002). This idea is supported by one respondent who commented that "they (the JUSCANZ countries) do not like centralised governance in any form or shape and that's ideological"[6]. Ideological and perhaps strategic opposition appear to underlie the JUSCANNZ scepticism towards a central coordinating role for UNEP.

Turf wars also appeared to be key factors that again thwarted attempts to place MEAs under UNEP. As one interviewee stated quite bluntly "the MEAs really do not want to be under UNEP"[7]. One interviewee suggested that the fear of losing current European based MEAs (such as the climate and desertification conventions located in Bonn) could have hindered the European push for a WEO.[8] Colocation of MEAs to Nairobi could be a factor that constrains European political will to advocate for a stronger coordination role. Implementation, on the other hand, is a function that could benefit from the Nairobi headquarters.

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[3] Personal observation of negotiations 16/06/12
[4] Personal observation of negotiations 16/06/12
[5] It should be noted that there was a large divide in the JUSCANZ alliance with Switzerland being a leading proponent of a WEO and Norway falling closer the EU, rather than the JUSCANZ, position.
[6] Interview with an American Academic 22/08/12
[7] Interview with a UNEP official 26/07/12
[8] Interview with an American Academic 22/08/12

### 4.2 IMPLEMENTATION

The idea of UNEP taking on a more operational role had a considerable amount of support, particularly from developing countries. Throughout negotiations the G-77 was vocal on the need to include capacity building, strengthened regional offices and an increased implementation role. This is reflected in 88(g) of the Rio+20 outcome document, which specifies that UNEP should "strengthen its regional presence, in order to assist countries, upon request , in the implementation of their national environmental policies". This is an important point as implementation was not included in the original mandate of UNEP and the need to strengthen regional governance and implementation has been a reoccurring topic of concern (STRAND, 2002, TARASOFSKY AND HOARL, 2004). This push for an operational role occurred very early on with one developing country at the first preparatory committee calling for the transformation of UNEP into an action orientated implementation programme with increased resources (SF 2010). One UNEP official noted that "this (implementation) is a very clear signal that we are hearing from developing countries"[9]. The US attempted to delete any mention of 'implementation' as part of an attempt to keep UNEP constrained to its original mandate. Despite insistence that "we intend on maintaining UNEP's current mandate"[10] they eventually yielded to the compromise of 'upon request' as reflected in 88(g). The Nairobi location which is often seen to be a burden to coordination would be an asset in terms of capacity building and implementation. As one interviewee noted "if you look at implementation it needs to be done in developing countries, we're the only large body in the south"[11]. As shown in Fig. 1 the outcomes and dynamics of Rio+20 indicate that UNEP is heading towards a greater function of implementation, with the coordination role remaining as a key sticking point. The key point to take from the diagram is that coordination is faced mainly with negative feedbacks, issues that are likely to limit any strengthening of the coordination mandate and reinforce the existing status quo. Implementation, however, is mainly connected to positive feedbacks such as the favourability of the Nairobi headquarters, level of G-77 support and expansion of smaller scale offices and activities[12], which are likely to further drive a movement towards implementation.

[9] Interview with an anonymous UNEP official 14/06/12
[10] Personal observation of negotiations 16/06/12
[11] Interview with an anonymous UNEP official 26/07/12
[12] The "R" in the diagram denotes a reinforcing or 'positive' feedback loop.

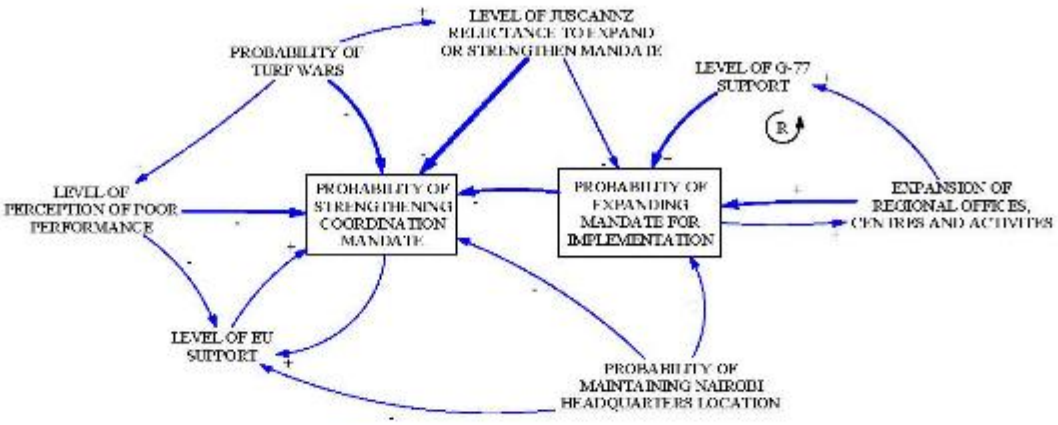


*Figure 1: Political Barriers and Opportunities for a Change in UNEP's Mandate*

## 5. THE POTENTIAL FORM OF UNEP - WHITHER THE WEO?

The negotiations on upgrading UNEP into a specialised agency at Rio+20 caused both splits between groups and within blocs due to a number of different crucial issues which will be explored below. Disputes and an inability to reach a compromise agreement ultimately led to the Brazilian hosts, desperate for a consensus outcome, cutting any mention of form from the text two nights before the summit began. Below I detail a number of the barriers to the adoption of a WEO and potential ways forward.

### 5.1 ACTOR-BASED BARRIERS

#### *5.1.1 The US Ratification Straitjacket*

The creation of a specialised agency subsuming UNEP would involve a treaty process that would require ratification (as specified under the UN Charter). The US has domestic institutional and political constraints which would make ratification of a WEO almost impossible, leading to stubborn US opposition. It is a requirement by the US Constitution to pass a two thirds majority vote in the Senate and enact enabling domestic legislation before any international treaty can be ratified (BANG ET AL. 2012). Combined with a political climate where scepticism on environmental issues and multilateralism is rife, the US is effectively in a straitjacket when it comes to ratifying international environmental treaties. Indeed, the US has a long history of signing and then being unable to ratify numerous multilateral environmental agreements and instruments (SCHREURS ET AL. 2009) such as the Kyoto Protocol (DEPLEDGE 2005) the

1989 Convention on the Transboundary Movement of Hazardous Wastes and their Disposal, 1991 Geneva Protocol Concerning the Control of Emissions of Volatile Organic Compounds and their Transboundary Fluxes, 1991 Convention on Environmental Impact Assessment in a Transboundary Context, 1992 Convention on Biological Diversity , the 1996 Comprehensive Nuclear Test Ban Treaty, 1998 Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade UNEP/FAO and the 2001 Stockholm Convention on Persistent Organic Pollutants.

There are also numerous incidences where they have neither signed nor ratified treaty, such as the 1998 Aarhus Convention. A WEO in particular appears to antithetical to the aforementioned US ideological preference for a decentralised system. This US ratification straitjacket proved to be the main block against establishing a WEO. As one respondent noted "it's a political barrier for an effective WEO- the US will either water down text or not participate."[13] This political barrier was seemingly made even more difficult by its timing during an election year as President Obama was unlikely to attempt such a controversial measure. One interviewee lamented after paragraph 88 had been finalised "if we had thought about it we'd realise that a WEO would be impossible in an election year in the US."[14] US resistance to a WEO is likely to persist barring a radical change in the US constitution or domestic politics.

*5.1.2 A Developing Problem: Consensus and the G-77*

While the majority of the G-77 members were receptive to the notion of a WEO, particularly the AU, the bloc was not. The G-77 operates on the decision-making rule of consensus[15], often leading to lowest common denominator positions which are the least controversial. In the case of Rio+20 the dissent of a few prevented the group from supporting the establishment of a WEO. India, along with some Latin American states contested the idea of a WEO, as they saw it as an over-strengthening of the environmental pillar that would act in the interests of the global north. The AU, on the other hand, was a strong advocate of a WEO as it would become the first specialised agency to be located in the global south, and Africa if it maintained its location in Nairobi. This split between the G-77 became very visible in the final days of Rio+20 with the AU showing clear frustration with opposition within the G-77[16]. This has been a persistent tension in the group since the debate on a WEO started. One respondent commented on the history of this "schism or the different perceptions of the G-77 on the UNEO"[17] throughout previous governing council discussions. A change in the decision making process of the G-77, the blocs disintegration, or the persuasion of developing country WEO critics (such as by clarifying misconceptions or an enhanced implementation role for UNEP, both of which will be explored later) could provide headway on this barrier.

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[13] Interview with a UNEP official 26/07/12
[14] Interview with an NGO representative 22/06/12
[15] The G-77 operates on the basis of negative consensus. Thus, a single stated objection can block the adoption of a group position.
[16] Personal communication with an African delegate 20/06/12
[17] Interview with a former African negotiator and governing council minister 24/10/12

### *5.1.3 European Unity and Tactics*

The EU was the primary advocate for a WEO, but it may have not been unified enough in its advocacy and even been counterproductive by employing rigid negotiating tactics. The EU successfully put the idea of a WEO into the Rio+20 agenda, as evident through Paragraph 51(alt) of the zero draft (see Appendix A) which is taken straight from the EU submission. Despite this successful advocacy, the EU was seen as too inflexible to effectively adapt to negotiations. The EU was often split with Germany and France leading a core group pushing for a WEO, while a number of other European nations remained sceptical of the ability of UNEP to effectively utilise new authority or to operate without the US[18]. A fragmented European insistence upon a WEO form effectively blinded the EU from pursuing a compromise agreement. One respondent claimed that for the EU the "ability to change the game plan when they needed to just didn't seem to exist."[19] This led to missed opportunities for compromise arrangements such as upgrading UNEP into an organisation (not a programme) under the UNGA with greater autonomy as a first step towards a WEO, or securing a mandate to oversee clustering of the MEAs. Unity and greater responsiveness would likely make the EU into a more effective WEO champion.

## 5.2 ISSUE-SPECIFIC AND PROCESS-BASED BARRIERS

### *5.2.1 Treaty Process*

The actual process of negotiating a treaty was seen as another negative aspect of adopting a specialised agency, particularly since it could be an overly long and complex process. This problem was noted by respondents who voiced concerns that "there is this whole risk of negotiating a treaty for a specialised agency….it could take years and years"[20]. The negotiation process could even potentially lead to restrictions in UNEPs mandate and position as the international political and financial atmosphere is not as favourable as it was in 1972[21].

### *5.2.2 Trust and Efficacy*

The reputation of UNEP was often cited as a barrier to a change in form, as many actors saw it as ineffective. The idea of giving an ineffective body more resources and authority was simply unacceptable for some parties. This even appeared to open a fissure within the EU with the main proponents -Germany and France- having to persuade many other nations within the block, who were unconvinced that UNEP was a good candidate to be upgraded into a WEO[22]. This problem of image was succinctly expressed by one respondent, who stated "UNEP could evolve if it were stronger as an entity… the barrier is they need to prove themselves, they need to become efficient,

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[18] Interview with a UNEP official 26/07/12 and interaction with a European delegate 13/06/12
[19] Interview with a veteran NGO representative 03/11/12, supported by an interview with an European IISD delegate 31/07/12 and interview with a UNEP official 26/07/12.
[20] Interview with an anonymous UNEP official 26/07/12
[21] Ibid
[22] Personal communication with an EU delegate 13/06/12

they need to become assertive."[23] A change to a WEO form may not solve this issue, since as Charnovitz argues "UNEPs credibility and legitimacy is derived from its effectiveness" (2012: 46). UNEP's chances of being granted specialised agency status will improve if it is able to improve its image and gain trust amongst states.

*5.2.3 Misconceptions*

Misunderstandings plagued negotiations and hindered communication between states. There was a widespread lack of comprehension regarding the details and outcomes of UNEP reform. One interviewee highlighted that there was a "lack of knowledge about the legal options.... A lot of negotiators were not really knowledgeable about the alternatives and also the consequences."[24] An example of this was when a US negotiator insisted that they could not consider specialised agency status as it would require mandatory assessed contribution. This was incorrect since a specialised agency does not require assessed contributions for funding. While most specialised agencies draw funding from assessed contributions there is no rule stating that this is a necessity, and a WEO could instead utilise voluntary contributions and innovative mechanisms to secure adequate finances (UNEP 2011). It was apparent that others, mainly from the G-77, were under the impression that a WEO would be a powerful body that would set standards and utilise enforcement mechanisms[25]. This was despite the fact that the form being pushed by the EU was far from a sovereignty-impairing model. The Science Advisor to the Prime Minister of Malaysia noted his first-hand experience of these exact same misconceptions by G77 diplomats prior to Rio+20 and asserted that "the reality is that there is a serious need for a WEO and that proposals for it look nothing like a WTO" (HAMID 2011). A lack of clarity on the details of the WEO proposal led to misunderstandings and a degradation of trust. A clear vision and communication by WEO proponents, particularly the EU, both pre and peri negotiations could ensure this fog of uncertainty is lifted.

*5.2.4 The Foil of Funding*

One of the key stumbling blocks that repeatedly occurred throughout negotiations was financing. States eventually agreed to give UNEP "secure, stable, adequate and increased resources from the regular budget of the United Nations and voluntary contributions" under paragraph 88(b) of the Rio+20 outcome, an agreement that has been further reinforced by resolution 67/213 of the UNGA. The benefits of this change to financing are questionable as it gives UNEP no new sources and fails to specify the increase or where the money from UN regular budget will come from. Ivanova notes that the resolutions could still be beneficial by increasing the contribution of resources coming from the UN regular budget to cover management and administrative costs (2013). However, resolution 67/213 only asks the secretary general to have the UN budget reflect the revised work programme of UNEP; the actual financial impact of these decisions are still uncertain.

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[23] Interview with an American academic 26/07/12
[24] Interview with a European IFSD delegate 31/07/12
[25] Personal communication with a G-77 delegate and ambassador.

Most parties did not welcome the idea of significantly increasing funding, especially through assessed contributions. One respondent noted that "assessed contributions are unfortunately a taboo"[26]. The rationale for this aversion to additional funding, especially via assessed contributions, appeared to be based upon the current financial climate. Financing issues tend to be contentious in most environmental negotiations and in this case the wider context of the global financial crisis helped ensure that no significant new sources of funding were likely to be put forward.

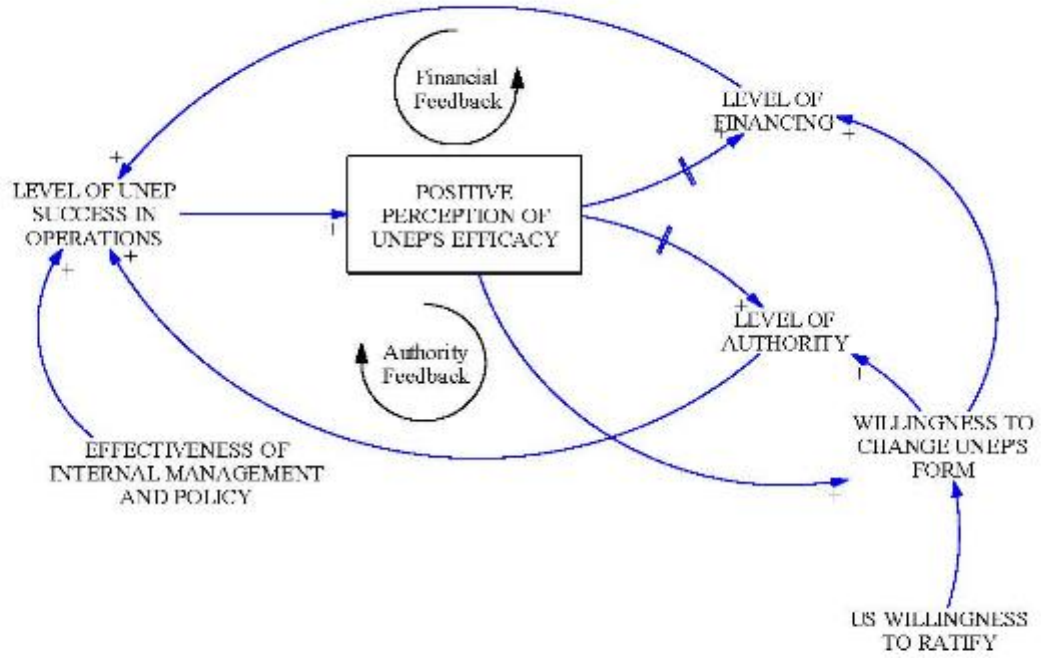


*Figure 2: Success to the Successful UNEP Archetype*

Figure 2 depicts how some of the most important variables relating to a change in UNEP's form interact together. The perception of UNEP's efficacy is a key factor that has been crucial in determining the agencies authority over MEAs as well as its financing. Importantly, as seen above, the level of perception was a significant variable in why some states did not push for a WEO, and even underlined some of the divides within the EU. There are clear feedbacks in this state of affairs: a change in form is largely determined by trust and perception, but this is in turn affected by financing and authority, issues which could heavily influence UNEP's form. This is a typical 'Success to the Successful' systems archetype whereby recognised success in operations drives an increase in financing and authority and heightens the probability of an upgrade occurring. Further financing and authority allow for further success, creating a positive feedback loop or 'virtuous cycle'. In the case of UNEP currently, it is

[26] Interview with an anonymous UNEP official 14/06/12

more of a "Failure to the Failures' archetype with existing shortcomings limiting authority, financing and the chances of a change in form. This diagram also helps to explain the division within academia on the importance of specialised agency status. On one hand proponents of a WEO namely see UNEP's level of authority, as determined by form, as the leverage point in this system: a change in form can drive an increase in financing and authority leading to future operational success that will perpetuate the system. Yet for now UNEP is locked in a chicken and egg dilemma that can be overcome by a change in legal form to a specialised agency. WEO sceptics, on the other hand, see improvement in UNEP's internal management and policy (through a change in goals, organisational practices and a refinement of mandate) as the main way to switch to a 'Success to the Successful 'cycle. In any case the perception of UNEP's efficacy, and therefore trust in UNEP as an institution, is a variable that can both drive changes in financing and authority as well as a potential change in form, but the latter is inevitably held in check by the a central limiting factor: the US ratification straitjacket.

Overall, the fate of UNEP was decided by a few key issues and actors. A lack of political will underlined by a potent blend of mistrust, miscommunication, money and ratification troubles tainted the talks on form.

## 6. SCENARIOS: CHANGING UNEP AFTER RIO+20

Analysis of the constraints and drivers for change in UNEP led to the development of four pathways for change in UNEP. They are displayed below in Fig. 2 along with a brief explanation of each scenario. Each of the four blocked variables represents different end-states or scenarios for UNEP, and the surrounding variables different drivers and barriers influencing the probability of these outcomes. Two of these scenarios end with a WEO type form (one of which goes through an intermediate UNEO form), one with the form of a World Sustainable Development Organisation (WSDO) and the other with a change to the mandate, function and organisational structure of UNEP, but not its legal status. Underlying most of the scenarios are the two key leverage points in this system (as noted by the strength and number of influencing links): US ratification and the level of G77 support.

### 6.1 INCREMENTAL UPGRADE

A common recommendation[27] was that UNEP undergo a progressive upgrade over time into a specialised agency. Indeed this "phased approach" was suggested by scholars prior to Rio+20 (OLSEN AND ELDER 2012). This scenario relies upon the idea that time could allow UNEP to improve the perception of its efficacy and build support. This WEO would have global membership, but the pathway hinges upon the

[27] Interview with a EU delegate 14/06/12, interview with a developing country IFSD negotiator 19/06/13 , interview with a UNEP official 26/07/12 and interview with a former African Governing council minister 24/10/12

debateable idea that over time the US could change domestically and overcome its ratification straitjacket. This scenario would mimic the progression of the United Nations Industrial Development Organisation (UNIDO) which was initially established as a programme of work on industrialisation, and then as a special organ of the UNGA before, almost three decades later, being upgraded into a specialised agency. For UNEP, this would entail firstly being renamed as an organisation under the General Assembly (a UNEO) with universal membership (the latter of which was achieved at Rio+20) before being converted into a WEO. This could be done by re-establishing UNEP as a hybrid subsidiary organ under the UNGA that would operate with greater autonomy and take an organisation title in line with article 22 of the UN charter (CHARNOVITZ 2002). This would represent potential progress, but it is questionable if a change in name and autonomy would fix many of UNEP's problems, or if the domestic constraints of the US can be overcome in a timely manner.

### 6.2 A CRITICAL MASS WEO

This pathway involves a number of states pushing forward with a WEO either outside or within the UN without the participation of the US. This scenario is tailored towards addressing the primary barrier of US ratification in the most direct way possible- simply leaving them out. It relies upon capitalising on the key political opportunities of European leadership and G77 support. The idea of a 'critical mass' in socio-dynamics refers to a certain threshold number of adopters that when passed makes an idea widely acceptable and self-sustaining (BALL 2004). The 'Critical Mass' in social movements is often the core group which pays for initial start-up costs and induces wide-spread collective action or adoption (OLIVER AND MARWELL, 1985). While the term has not been used in relation to international governance, it is logical that if a sufficient number of powerful states adopted a new institution it could become normalised and lead to the spread of support. A critical mass WEO would mean a specialised agency that is supported by enough power and countries, regardless of US support, may be effective and well-financed. While a Critical Mass WEO could function effectively, it is unlikely to pressure the US into ratification. History shows that the US rarely gives into international pressure for ratifying treaties, as they still have noted ratified treaties with near universal membership such as the Convention on Biological Diversity.

This scenario would echo the development of other international institutions which began without full membership but snowballed into larger self-sustaining forms. For example, the WTO/GATT originated with a small membership excluding many countries such as China, but has since expanded in terms of both membership and powers. Both the UN itself, as well as the Ozone negotiations also began with a smaller group of participating states before growing (BRENTON 2013). A Critical Mass WEO would be a quicker process than an incremental upgrade, but would require support from the BRICs and EU, and have the problem of operating without the US and its financial contributions. One respondent summarised this scenario by suggesting that "You find a coalition of countries that is willing to organise a World Environment Organisation and accepts the rather unusual step of doing it without the United States

of America..... A coalition of Europe, Africa and the BRIC countries."[28] This would require a formidable leadership role by the EU along with strong persuasion of the BRICs. Such persuasion could potentially involve giving the organisation a greater implementation role to appeal to developing interests or co-locating the WEO headquarters in another developing nation capital[29] (e.g. Beijing) alongside Nairobi. Moreover, as the Prime Minister of Malaysia has noted, the creation of a WEO would allow for developing countries to become the architects of an international body which serves their needs (RAZAK 2011). This scenario could be achieved either through a resolution under the UNGA, which would require a majority vote (thus avoiding the problems of consensus that plagued Rio+20), or could be established outside of the UN. If such a critical mass between the EU and BRICs was achieved a WEO could be an effective body, since, as noted, such a mass of countries would likely, lead other countries to join. This would be particularly true if incentives such as an operational role, could be used as leverage for participation. However, effectiveness is largely contingent upon which tasks the WEO would focus upon e.g. coordination of MEAs could be blocked by the US via vetoing the consent of different MEA COPs to allow UNEP a coordinating role, although this would not be as large an issue for MEAs without US ratification or non-MEA bodies. Effectiveness in implementation largely relies upon if adequate funding could be sourced.

The issue of funding is crucial since the absence of the United States and perhaps some other non-EU industrialised states in membership would constitute a significant drop in funding. However, a WEO could draw upon diverse and flexible funding arrangements which could compensate for the lack of US funding. Specialised agencies have their financing arrangements enshrined within their constitutions and elaborated upon in financial regulations (UNEP 2011). Funding modalities can therefore go beyond the usual convention of assessed contributions and be done in creative ways which suit the financial climate (UNEP 2011). This would allow for a Critical Mass WEO to pursue unique and innovative funding arrangements such as a bunker fuel tax (BIERMANN 2000). There has also recently been a greater willingness to finance UNEP, as evidenced by Brazil and China pledging $6 million to the programme, placing them in the top 20 donors list (IVANOVA 2013). If a Critical Mass WEO appealed to developing country interests it could have a basis to receive further financial, and not just political, support from major emerging economies. Additionally, measures could be established to ensure non-parties to the Critical Mass WEO could still provide financing, perhaps directly to individual projects. A well-financed critical mass WEO is possible and could even constitute an increase on UNEP's current funding arrangements.

### 6.3 UNEP UNKNOWN

This scenario would see UNEP adopt a decentralised form and refined function without changing its legal status. Thus it would stay as a subsidiary body but would change its organisational structure and focus. This scenario would avoid most political issues, including the issue of US ratification, and instead focus upon building the

[28] Interview with a European academic 18/07/13
[29] Ibid

efficacy and image of UNEP while simultaneously refining its role and clarifying its relationship with UNDP. On this basis it is a relatively feasible scenario which avoids most of the major barriers associated with a change in form while capitalising upon potential opportunities in an alteration to functions. One respondent summarised this pathway in stating that "UNEP is a good candidate of evolving into something different and setting the stage for a completely different institutional form that is more network organised."[30] This would include decentralision of power to more empowered regional offices linked with regional public policy networks, including in UN centres such as New York and Geneva, something which some respondents pointed to as a key to improving UNEP's image and policy functions. UNEP already has six regional offices plus an increasing network of centres of excellence such as the Global Resource Information Database (GRID) centres (KORNÉLIA 2012). This scenario would capitalise upon this trend of growing links with public policy networks by placing more finances towards regional offices and expanding them further, as well as concentrating on scientific and knowledge building activities rather than coordination. This scenario also involves UNEP taking a more operational role in terms of capacity building, implementation and scientific assessment. Such a form would fit the role advocated by Heirmeier (2001-2002) with a focus upon capacity building and data reporting, monitoring and verification augmented with an implementation role. This scenario relies upon the support of the G-77 as well as leadership from within UNEP. Two key barriers in implementing this scenario are the issue of financing and clarifying the relationship between UNDP and UNEP. Ivanova (2005A) suggests that UNEP can distinguish itself by aiding in norm and capacity building, institutional strengthening and some limited implementation at the regional level, instead of focusing primarily upon the implementation niche that UNDP currently covers. Operational agencies by nature receive a much greater degree to funding then normative organisations do, so arguably UNEP would receive the necessary increased funding if such changes were to occur.

### 6.4 UNEP-UNDP MERGER AND CRITICAL MASS WSDO

The notion of sustainable development conceptually merges environment and development together and in many ways it is logical to have our institutions reflect this. The merger of UNEP and UNDP would be the likely outcome of the institutional framework morphing to fit this logic. As one respondent noted "if we could have established today the UN… we might have established a sustainable development program that would have integrated the mandates of UNEP and UNDP simultaneously."[31] Hence, whilst this pathway was seen as preferable by some, it was also seen as somewhat idealistic as UNDP and UNEP have already developed separately and are firmly locked in their own path-dependent structures. Yet a UNDP-UNEP merger is not a new idea: the former head of UNEP (and its foremost reformer), Klaus Töpfer, appeared to support the creation of a World Sustainable Development Organisation (BIERMANN ET AL. 2009), and scholars have suggested both a UNDP-UNEP merger (MEE 2005) or a WSDO which dissolves UNEP, UNDP the Global

[30] Interview with American academic 22/08/13
[31] Interview with a developing country delegate and IFSD negotiator 19/06/13

Environment Facility (GEF) and CSD into it (SIMONIS 2002). Brazil has previously called for such an organisation and this option would likely attract support from developing countries who often fear a WEO on the basis that it may be over strengthening the environmental pillar (BIERMANN ET AL. 2009; HAMID 2011). A WSDO would likely garner the support most of the G-77, including the BRICs, and act as a north-south compromise on the issue of upgrading UNEP. A WSDO would still likely face the political obstacle of US ratification, however it may be more likely to enable a 'critical mass' of proponents by directly appealing to the interests of the G-77. Considering the G-77 support for implementation and capacity building and their previous calls for a WSDO, their backing for a WSDO appears to be likely. Accordingly, the WSDO scenario is likely to be similar to the Critical Mass WEO scenario, but provides a different way for creating the necessary political support; it is a critical mass through a more appropriate pathway. Although, it could face opposition from some developed countries and perhaps the UN programmes themselves. There are also conceptual problems with how this new organisation would look and perform. Some academics have voiced concerns about such a body. Biermann has criticised a merger on the basis that it would be "a marriage of unequals" (2007: 114) that would undermine environmental interests and be a difficult task given the differing mandates of the two organisations. Such criticisms are understandable, although negotiations on the mandate and constitution of such an organisation could ensure that development and environment are addressed with equal footing. Moreover, the comparative advantages of UNEP and UNDP could complement one another. The merger could capitalise upon the strengths of both organisations by combining the scientific and technical expertise of UNEP with the well-established country based network of UNDP (MEE, 2005) while helping to avoid any duplication of effort in capacity building and implementation.

## 7. THE FUTURE OF UNEP: THE BRAIN OR BODY OF INTERNATIONAL ENVIRONMENT GOVERNANCE?

The barrier of US ratification is the largest factor constraining a change in the form of UNEP, while the support of the G77 for an operational role is a clear leverage point for change. The scenarios and the future of UNEP are largely shaped by these two factors. Both the scenarios of "*Incremental Upgrade*" and "*Critical Mass WEO*" directly face the principal barrier of US ratification as well as negative perceptions of UNEP's efficacy and mistrust. These scenarios also rely upon the EU rising from its current fiscal turmoil to take on the mantle of leadership. *UNEP Unknown* on the other hand faces primarily more technical obstacles clarifying its relationship with UNDP, acquiring finances and improving internal management structures, but side-steps the issue of US ratification. Morphing the mandate of UNEP is also a political problem, but one that is not as severe as the barriers facing a WEO, such as US ratification. In pursuing the scenario of *UNEP Unknown* the burden falls more upon the leadership of UNEP itself and would likely have the active support of many nations, particularly the G-77, and could ride the wave of political momentum from developing countries for a more operational role. Accordingly a more regional and operational focus as embodied

in UNEP Unknown, despite its technical obstacles, seems to be the most feasible pathway forward for UNEP out of the existing scenarios. The previous successes and strengths of UNEP, along with its structure and headquarters location all contribute to UNEP having a competitive advantage in terms of information provision, norm and capacity building along with some implementation at a regional level. Even prior to Rio+20 it appears that countries have been attempting to incrementally expand the mandate of UNEP in this direction and respond to this "secret ambition" (BAUER 2009: 191) of UNEP. In regards to Ivanova's question on function, it appears that there is political support for UNEP to take on a greater operational role in regards to capacity building and implementation, particularly at a regional level. In contrast, the function of coordination faces a number of challenges in terms of legal issues, turf wars, location and authority. My research suggests that the political dynamics and outcomes of Rio+20 support UNEP taking on a more operational character. This is not to say that coordination is not important, but if it is not politically possible to make UNEP a central coordinating body then other ways to address this function should be explored.

Ideas such as clustering MEAs (perhaps with UNEP overseeing such a process) or colocation of secretariats (VON MOLTKE 2005), as well as new bodies that could take on a coordination mandate such as a High Commissioner for Future Generations (KORNÉLIA 2012) require further study in order to develop alternative paths to improving international coordination. Such a decentralised approach to coordination is much more likely to appeal to the ideological stance of the US and avoid the ratification straitjacket. The concept of a WSDO and/or UNEP-UNDP merger requires attention as the *UNEP Unknown* scenario lends itself to being combined with the networked form of UNDP which would provide an opportunity for UNEP to both clarify its relationship with UNDP and have a direct influence over the development activities of the UN. Furthermore, if UNEP should be a Specialised Agency then a WSDO may also be the best way to circumvent the issue of US participation and achieve critical mass support by appealing to the interests of the G77. However, the exact blueprint, and the cost and benefits of a UNEP-UNDP merger need more detailed exploration.

In terms of form, the international community needs to make a decision as to whether a WEO is necessary, and if one without US participation is worthwhile. For the issue of function, it appears that UNEP should follow the political support for a more operational character. There is a lack of political support for UNEP to be a supreme coordinating or decision-making body for international environmental efforts, particularly in light of US opposition. UNEP should not abandon its coordination functions, but any significant organisational progress is unlikely to be made by pursuing a role as a central coordinator. The idea of having UNEP as a coordinating brain for international environmental governance for now does not have the traction to occur; instead the political tide appears to be pulling it towards becoming, alongside UNDP, the implementing body as well.

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# ANNEX A: EU PROPOSAL FOR A WEO

The following Paragraph (51 alt) is taken from the Rio+20 Zero Draft and represents the European proposal for a WEO.

51 alt. We resolve to establish a UN specialized agency for the environment with universal membership of its Governing Council, based on UNEP, with a revised and strengthened mandate, supported by stable, adequate and predictable financial contributions and operating on an equal footing with other UN specialized agencies. This agency, based in Nairobi, would cooperate closely with other specialized agencies.

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## Foreword to Chapter IV: Framework for the Future

Chapter IV explores the implications of introducing majority voting into the UNFCCC and feasible ways of doing so. It addresses the thesis research questions by exploring governance without the US via decision-making change. This is emphasised as one method of allowing for multilateral decisions and actions without US consent. Notably, the US has also been historically a key barrier to introducing majority voting and is likely to continue to be so. Majority voting is intricately tied to the issue of US participation both in terms of the latter being a barrier to the former and the former being an effective coping mechanism for the latter.

The findings of this paper have a number of clear implications for the wider thesis. First, it provides a strong argument for the utility of majority voting as a practice but notes that, due to feasibility, the best way forward is the introduction of voting to new treaties and bodies under the UNFCCC. This is used as a core part of the article on managing US participation within the 2015 climate agreement (Chapter V). Second, this chapter outlines how the current decision-making paradigm undermines effective international environmental governance. Third, this article explicitly links the move away from consensus towards majority voting as a way to enable governance without the US. This section on CMG echoes the central ideas of this thesis presented in the discussion and conclusion.

It should be noted that voting has implications beyond US participation. The US has rarely directly blocked the adoption of agreements as it is successful at shaping them to reflect their interests. Voting provides a procedural enabler for semi-globalism and, importantly, for agreements to be designed without having the US use consensus procedures to water down their substance (as occurred with the Kyoto Protocol). As discussed in this paper and Chapter V (under the CMG scenario), it can also provide the

basis for more efficient and effective governance with US participation. Voting provides a way not only to deal with the US, but also a wider approach to deal with recalcitrant states generally and enable CMG. As highlighted in the paper, the political feasibility of this is for now questionable, but it nonetheless provides an important institutional opportunity.

A version of this paper has been published as a peer-reviewed discussion paper with the Frei Universitat Berlin (see Appendix II) and presented as a conference paper at the 2014 ESG Norwich conference. The final version was published with the international journal *International Environmental Agreements* and is presented here as Chapter IV.

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ORIGINAL PAPER

# Framework for the future? Exploring the possibility of majority voting in the climate negotiations

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**Abstract** The United Nations Framework Convention on Climate Change (UNFCCC) is struggling in its attempts to address the threat of anthropogenic climate change and create an effective international climate agreement. A substantial part of the problem is consensus decision-making within the Convention. Majority voting is a potential alternative which is already being discussed within the UNFCCC. A comparative analysis of consensus and majority voting suggests that majority voting is superior in terms of both efficiency and effectiveness by allowing for quicker decision making and semi-global approaches to a climate agreement (termed here as "Critical Mass Governance"). This paper aims to investigate how majority voting could be implemented in the UNFCCC and to consider politically feasible and effective approaches to voting arrangements for the Convention. There is a legal opportunity to introduce voting through adoption of the draft Rules of Procedure, but this faces political opposition. A type of Layered Majority Voting with larger majorities for financial and substantial matters is considered to be the optimal approach in balancing political feasibility and effectiveness. For now, voting is not politically feasible for the UNFCCC, but could be introduced into future bodies or treaties under the Convention.

**Keywords** UNFCCC · Climate policy · Majority voting · Consensus · International governance · Climate regime · MEA

## 1 Introduction

The United Nations Framework Convention on Climate Change (UNFCCC—the Convention) is the cornerstone of the international climate regime. Despite its central role and importance, the Convention has struggled to achieve any lasting or effective agreement

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towards its aim of avoiding dangerous anthropogenic climate change. Consensus decision-making has been identified as one of the key reasons for the difficulties the Convention faces in reaching agreement (Biermann and Gupta 2011; Schroeder et al. 2012). The UNFCCC currently uses consensus as a default rule, since in 1991 the proposed official Rules of Procedure were blocked by Saudi Arabia at the Intergovernmental Negotiating Committee preceding the first Conference of the Parties (COP) (Michaelowa and Luomi 2012). "Draft Rule 42", which specifies options for majority voting, was the basis of dissent from Saudi Arabia. In the absence of specific rules on decision-making, there has been a general understanding amongst Parties that consensus is needed for the adoption of substantive decisions (Yamin and Depledge 2004; Bodansky and Rajamani 2012).

The recent history of the UNFCCC highlights the difficulties faced with both the constant pursuit of consensus and its legal ambiguities (which will be further explored in Sect. 2). The Copenhagen Accord could not be adopted by consensus and was widely seen as a failure in terms of both process and outcomes (Bodansky 2010). COP16 in Mexico in 2010 achieved an agreement mainly through the skilful diplomacy of the Mexican chairs and their liberal interpretation of consensus. At COP18, agreement was achieved at the expense of Russia, whose objections were ignored at the final plenary session (Stowe 2012). These declarations of consensus, despite clear objections, are a clear example of "rule beating" in a system: behaviour which appears to be in line with the rules but is actually distorting the system (Meadows 2008). The attainment of this false consensus[1] has proven costly in the past. Russia in 2013 blocked the progress of the Subsidiary Body for Implementation (SBI) for a full 2 weeks at the Subsidiary Bodies meeting in Bonn (Kemp 2013). They did so by vetoing the adoption of the official agenda, demanding the addition of an item discussing decision-making and procedural matters. Russia provides a recent example of how rule beating to reach consensus can have undesired repercussions. Moreover, this is not an isolated incident with consensus and procedural disputes having been frequently used in the past to delay and stall sessions in a similar fashion (Vihma and Kulovesi 2013: 242). Indeed, some have suggested that Saudi Arabia originally blocked the original Rules of Procedure so that they could maintain a veto, or at least the threat of one, within the ongoing negotiations[2] (Depledge 2008).

One provision that has been presented as a way forward for the procedural problems of the Convention is the use of majority voting. Mexico and Papua New Guinea have recently proposed a move towards majority voting through amendments to Articles 7 and 18 of the Convention (UNFCCC 2011b).[3] Discussions on this proposal at COP17, COP18 and COP19 have been unsuccessful thus far, and consensus is still employed within the negotiations. There is voting on a limited number of items such as amending the Convention, or in the case of a challenge to the ruling of a presiding officer (Yamin and Depledge 2004; LRI 2010; UNFCCC 1996). The latter is an interesting provision, one which was almost used by a chairman in the negotiation of the Kyoto Protocol (Yamin and Depledge 2004: 444). But an objection to a ruling is a fairly rare situation and limited form of application for voting. This article is concerned with the more significant issue of voting on the adoption of substantive decisions which is likely to make an impact on the efficiency and effectiveness of decision-making in the climate regime.

[1] An occurrence where consensus is declared, but is done so in manner which clearly breaks from the general legal definition and practice under international law.

[2] Interview with a high-level secretariat member 12-06-2013.

[3] It should be noted that this proposal, and most proposed voting arrangements, uses voting as a last resort when all efforts to reach consensus have failed.

Decision-making rules are crucial leverage points for the design and reform of international institutions. Voting arrangements are key to determining who legitimately controls an institution and its outcomes (Koremenos et al. 2001). Yet many other MEAs are affected by the same lack of official rules of procedure. The Convention on Biological Diversity (Young 2002), the Stockholm Convention and the Rotterdam Convention (UNEP 2012) all currently operate with "interim" rules and consensus processes due to disputes over voting. Future arrangements within the UNFCCC could influence decision-making in these MEAs as well as in newly created environmental bodies. Many scholars (Biermann 2000; Esty and Ivanova 2001; Olsen and Elder 2012) have advocated for a form of qualified majority voting or weighted voting to be employed within a proposed future World Environment Organisation (WEO). Voting is not just of importance to the UNFCCC, but will likely have ramifications for the wider realm of environmental governance.

Despite the importance of this issue, and the attention it is receiving within the UNFCCC, there has been no sustained analysis of how majority voting could be implemented into the UNFCCC or other multilateral environmental agreements (MEAs). That being said, these procedural discussions and proposals for voting are not new to the UNFCCC. As Vihma and Kulovesi (2013: 245) note "the discussion on reforming the UNFCCC is as old as the regime itself". The use of voting, and how to structure a voting scheme in the UNFCCC, has been a topic of debate since the conception of the Convention, one that continued throughout the 1990s (Werksman 1999: 4). Depledge and Yamin (2009: 450) have called for a form of "smart voting" that would probably require a method of weighting to ensure that decisions were broadly supported across negotiating coalitions, but also note that voting discussions have "largely stalled in the climate-change regime, and carries considerable ideological baggage dating back to the Convention's adoption". The Mexican proposal provides a unique opportunity to investigate whether the issue of voting is still in limbo, if so why, what are the implications of voting and what forms of smart voting could provide a way forward. This paper explores these issues through the following questions:

1. Is majority voting more efficient or effective than consensus?
2. What are the institutional, political and legal barriers to and drivers for changing decision-making processes, particularly towards voting procedures, in the UNFCCC?
3. How can majority voting be implemented within the UNFCCC? What is the most politically feasible approach to voting arrangements for the Convention?

In the first of five stages of analysis, I conduct a review of consensus decision-making within the UNFCCC and provide a comparative review of consensus and voting in relation to the efficiency and effectiveness of outcomes. Efficiency is defined as institutional output in terms of reaching agreement (Vihma and Kulovesi 2013) and effectiveness as the actual ability or likelihood of adopted decisions to actually impact or solve the underlying collective action problem (Underdal 1992), which is, in this case, climate change. I then examine the legal, political and institutional barriers and opportunities for a change from consensus to voting before discussing a number of different voting options. Based on the preceding analysis, a flexible model of "Layered Voting" is constructed as an optimal framework for a smart voting system.

Data were collected through 13 semi-structured interviews with key informed negotiators, academics and secretariat officials (present and former), as well as observations from negotiations and interactions at COP18 (November, 2012), COP19 (November, 2013), the 38th session of the Subsidiary Bodies (June, 2013) and the second session of the Ad Hoc Working Group on the Durban Platform (ADP) (April, 2013).

## 2 Clarifying consensus

Consensus has no clear legal definition under the Convention. Currently, decision-making in the UNFCCC is primarily based on two different sources, of varying legal nature: articles pertaining to decision-making in the Convention text itself and the draft Rules of Procedure. The Convention text is legally binding as it has been adopted and ratified by all Parties, but it only provides basic rules such as stipulating the right to vote under Article 18 (UN 1992: 19), that the Convention can be amended by a three-quarter majority vote of Parties present and voting under Article 15.3 (UN 1992: 18) and, under Article 7.2(k), that the Rules of Procedure shall be adopted by consensus (UN 1992: 11). Since the Rules of Procedure were not legally adopted, they are now provisionally applied to each COP and session of the UNFCCC. When there is a clash between the Convention and Rules of Procedure, the rules specified in the Convention will prevail (Yamin and Depledge 2004: 434). But neither of these sources explicitly defines consensus decision-making.

Consensus is usually interpreted as the absence of a stated formal objection to a decision (LRI 2011a). In a very general sense, consensus is theoretically the absence of an applied veto (Bodansky 2009). This is how consensus is interpreted under the only two current international legal instruments that define it: the United Nations Convention on the Law of the Sea (UNCLOS) under Article 161.7(e) and the Dispute Settlement Understanding (DSU) of the WTO under Annex II of the WTO agreement, both of which specify consensus as the absence of formal objection to a decision by Party at that meeting (UNFCCC 2011a). However, there have been numerous incidences where the COP has formally declared consensus despite stated objection from Parties, including the previously noted examples of COP16 and COP18. This type of occurrence is by no means unique to the UNFCCC. In 2002, at COP6 of the Convention on Biological Diversity a formal objection by Australia was explicitly overruled by the presiding chair, and a consensus decision was adopted (Nolte 2013: 376). In a response to a subsequent request from the CBD Executive Secretary to clarify the meaning of consensus, the UN Legal Counsel advised that while the presiding chair had indeed broken established practice by declaring consensus, the decision was preserved since Australia only submitted a reservation, not a formal objection, after the incident (Nolte 2013: 376; UNFCCC 2011a: 10). Thus, consensus, as generally practised and interpreted under the UN, requires both the absence of formal objection during the adoption of a decision, and the objection is maintained after the decisions adoption. Yet in the practice of the UNFCCC, a great deal of interpretative power is given to presiding chairs in determining whether there is a consensus amongst Parties. Consensus as practised in the UNFCCC is, in many ways, a contextual affair, and a great deal of discretion is given to the presiding chairperson(s) in determine whether consensus exists (Werksman 1999: 6), a fact which is evident in the history of the negotiations. Such ambiguity can both help and hinder the efficiency of consensus decision-making.

## 3 Efficiency: building consensus in the shadow of a vote

The idea that voting is more efficient, in that it is quicker and less prone to delays than consensus, is relatively uncontroversial. The basic reasoning is that 193 countries, all with vetoes, addressing a controversial and complex global problem, do not equal a successful agreement, let alone a great deal of speed in reaching agreement (Vihma 2011). Similar

sentiments have been expressed in regard to the practice of consensus with the World Trade Organisation (WTO) (Pauwelyn 2005; Low 2001; Tijmes-Lhl 2009). Former WTO director-general Pascal Lamy has branded the practice of consensus as "medieval" and stated that "there is no way to structure and steer discussions amongst 146 members in a manner conducive to consensus (…). The decision-making need(s) to be revamped" (Denny et al. 2003). Even within the Council of the European Union, where voting is allowed, the qualified majority voting threshold of 74 % has been criticised by scholars as too high, making it less effective efficient and unfairly biased towards the status quo, particularly with the enlargement and increasing diversity of EU membership (Baldwin et al. 2001; Leech 2002). The EU itself recognised the problems of consensus within a large and diverse group and, through the Treaty of Nice, attempted to accompany an expansion in membership with an extension of voting to areas previously covered by consensus (Baldwin et al. 2001). The tendency for unanimous decision-making to be restricted by the least enthusiastic Party has been dubbed the "Law of the Least Ambitious Program" (Hovi and Sprinz 2006: 28): with "lowest-common denominator" outcomes serving the interests of the least ambitious Party. Széll (1996: 212) observes that consensus "by placing a veto in the hands of each Party, it effectively ensures that the convoy advances of the slowest vessel". Biermann et al. (2010) highlight that political science has shown majority voting to be a speedier process than consensus, namely because a stalemate cannot be maintained by an individual or small number of Parties.

One lesser acknowledged benefit of voting is that it can act as a consensus builder. Voting often acts as a deterrent to blocking, a kind of nuclear threat that encourages compromise. In consensus decision-making, the objecting Party can simply maintain a veto until its demands are met. There is little incentive to compromise, leading to consensus often being "the best decision rule least likely to produce consensual behaviour" (McGann 2004: 14). Voting switches the emphasis away from minority blockers and gives greater leverage to the majority. The threat of a vote often forces the least ambitious to become more accommodating.

Many international institutions with majority voting have never had to use it. Both the Montreal Protocol (UNEP 2007) and Global Environmental Facility (GEF) (del Castillo 2009) are notable examples of environmental agreements which have majority voting but have passed all decisions by consensus. Hovi and Sprinz (2006) observe that out of a large sample size of international institutions, the majority (79 %) practise consensus, but only a minority (47 %) actually have it codified into their rules. It is a recurring phenomenon for international bodies with formal voting procedures to practise consensus (Lockwood Payton 2010). The Council of European Council has a well-known "culture of consensus" (Heisenberg 2005: 82): explicit voting is rarely done in the council (Mattila and Lane 2001; Mattila 2004), and when it does occur, it is usually only due to the dissent of a single Party (Mattila 2009). There is even a case of this occurring within the UNFCCC when during the negotiation of the Kyoto Protocol Chairman Estrada, in face of numerous objections to the ruling that there was consensus on a decision, offered to put his ruling to vote, resulting in the dissenting Parties withdrawing their objections (Yamin and Depledge 2004: 444). Unsurprisingly, countries generally prefer to avoid conflict and reach consensual agreement rather than resort to a confrontational vote (Werksman 1999: 6). The shadow of a vote hanging overhead, like a procedural Sword of Damocles, provides a condition that is often more conducive to consensus outcomes than consensus is.

## 4 Effectiveness: Critical Mass Governance

Voting in most cases should lead to either more progressive or no worse agreements than consensus would. While voting is more efficient, the issue of whether it leads to substantially different results than consensus is more difficult to ascertain (Lockwood Payton 2010). Consensus and voting may lead to the same results simply at different rates. Arguably, transferring power away from blockers and building consensus could lead to progressive decisions where deadlock would otherwise exist. However, some interviewees expressed concerns that if a country was outvoted on certain issues, it would simply refuse to abide by the decision or to implement it. It should be noted that institutions generally have mechanisms in place to ensure that this does not occur. For example, the Montreal Protocol provides financial incentives to Parties through the Multilateral fund, and a ban on trade of controlled substances with Non-Parties, to encourage continued participation. It is a combination of measures which has been exceedingly successful (UNEP 2007). Similarly, the UNFCCC would need to develop the necessary institutional infrastructure, particularly in terms of incentives[4] and penalties, to encourage state compliance with voting outcomes. Yet the possibility that some states would either drop out of the Convention or a treaty due to objections over substance is not necessarily a negative one. While some may view it as a potential weakness, a semi-global approach could prove to be ultimately more effective in achieving the aims of the Convention.

Voting could produce more progressive outcomes by allowing for decision-making and implementation by a semi-global, critical mass of countries within the regime, an entire treaty or specific areas. Such a form of "Critical Mass Governance" (CMG) could take one of three different forms within the UNFCCC: (1) the entire regime operates by a critical mass of countries, while those who are unwilling to work by voting drop out of the regime (this will be analysed later); (2) a treaty could work by a critical mass whereby a large segment of countries creates a semi-global agreement that is not watered down to appeal to the participation of recalcitrant states; or (3) voting is used within specific issues under a treaty (or within separate "operational protocols") in order to allow individual negotiating tracts and issues to move forward by a semi-global critical mass.

The creation of a "critical mass" agreement which avoids the issue of appealing to the USA and other traditional laggards could be both possible and preferable. This is important to consider since the desire to appease certain Parties has led to watered-down and inadequate agreements. An example of this is the history of the participation of the USA. As the largest developed country emitter, and an economic superpower, the USA is in a key position to take a leadership role on addressing climate change. Unfortunately, instead, it has undermined the climate regime on numerous occasions, including signing the Kyoto Protocol and subsequently not ratifying it (Depledge 2005). Importantly, not only was it incapable of ratification, but also the protocol had numerous concessions put into accommodate US preferences (Paterson 2009; Hovi et al. 2012) with even the design of the compliance system being largely American in origin (Bang et al. 2007). While the negotiations towards a 2015 agreement are now undergoing are a strong push towards architectures that accommodate the USA, this movement will likely lead to weak outcomes (Hare et al. 2010; Paterson 2009) which, if legally binding, may still not be ratified by the Republican-dominated US Senate.

Accordingly, a "deep, but narrow" climate agreement with strong substance and commitments which expands in membership over time could be preferable to a "broad, but

[4] Carbon markets and financing serve as two possible examples here, although both are relatively contentious issues.

shallow" (Aldy et al. 2003) one. While many scholars (Barrett 2003; Barrett and Stavins 2003; Bodansky and Diringer 2014) have argued for the need of initial wide participation for the purposes of legitimacy and to address free-riding concerns, there are numerous reasons to believe that an agreement that prioritises substance and ambition, over participation, could be a more effective approach. First, membership could expand due to a number of factors including both impacts of climate change and rising oil prices pushing laggards towards multilateral engagement (Christoff 2006), actions by the critical mass decreasing the costs of mitigation activities (Bosetti and De Cian 2013; Marwell and Oliver 1993) and renewable energies (Gerlagh and Kuik 2007), and countries engaging in "bandwagoning" behaviour (a well-documented phenomena in international relations) (Schweller 1994). Second, there have already been a number of proposals (although limited and unconnected) for approaches to climate governance which work on this idea of starting smaller and using political and economic feedbacks to increase participation over time. These include the idea of "Dream Big, Win Small" (Urpelainen 2013), creating an "orchestra" of smaller, targeted treaties (Sugiyama and Sinton 2005), working on gaining traction with smaller numbers on the "building blocks" of an agreement (Falkner et al. 2010) and building "climate coalitions of the willing" to create best practice and pressure the USA over time (Christoff 2006). One interview respondent alluded to this prospect in mentioning a concept from the film Field of Dreams in that you could "build it (an effective architecture) and they will come".[5] In practice, this would be the second form of CMG. The entire Convention would operate by voting, and a majority of Parties would use this to create their own protocol without seeking to appeal to the interests of the USA and perhaps other Parties which would fundamentally undermine treaty substance. But for countries to engage in "bandwagoning", and for the economic feedbacks to be strong enough, the critical mass would likely require the leadership of China or the USA, neither of which is currently supportive of majority voting or likely to engage in such a monumental act of directional leadership.

Similar ideas have been put forward under other international institutions. Low (2001) has advocated for a form "Critical Mass Decision-making" within the WTO, suggesting that a subset of Parties could push a progressive agenda ahead on particular issues and create a better differentiation of commitments while maintaining multilateral cohesion. Low further suggests using a form of consensus at the inception of an agreement and letting the critical mass dictate terms from there. This is close to the third form of CMG where voting would be applied in order to unblock specific issues. For example, a 2015 agreement could consist of numerous optional opt-out protocols where a smaller number of progressive Parties could work by voting to advance particular issues (e.g. REDD+, market-based mechanisms or building pre-2020 mitigation ambition) and build trust and momentum for the wider regime. Parties who refuse to yield to the outcomes of voting on these issues could simply "opt-out" of that protocol. I have previously outlined how such a form of CMG could allow for an agreement with US legal participation through presidential agreements on different protocols and avoid the need for Senate or Congressional approval (Kemp 2015). Thus CMG can provide a flexible and effective approach that resolves the conundrum of US legal participation.

This is a logical and promising approach since on individual topics there is often only one, or a small handful of countries, blocking progress. For example, India and Saudi Arabia prevented action on hydrofluorocarbons (HFCs) and "black carbon" recently at COP19, but the main blocker for regulating aviation and bunker fuels has been Singapore.

[5] Interview with a developed country academic 07-12-2012.

Given this differentiation of interests, it makes more sense to use voting to bypass particular Parties on certain topics, rather than from an entire regime or treaty. This would presumably make the application of voting to specific issues under a new protocol the most politically feasible, and perhaps effective, form of CMG. It could be argued that forms of CMG already exist in numerous climate "clubs" (Weischer et al. 2012) and minilateral initiatives outside of the UNFCCC, or even the Kyoto Protocol which only covers a subset of emitters. However, the Kyoto Protocol is more of an example of a narrow and shallow treaty since it covers an exceedingly small number of Parties in terms of commitments and has numerous loopholes. Concessions and weaknesses within the Kyoto Protocol are testament to the compromises that occurred to achieve a consensus outcome amongst Parties, including for those who did not eventually ratify it such as the USA. Minilateral initiatives, such as the Major Economies Forum, have generally been more "soft-law" initiatives and sites for informal dialogue (Brummer 2014), and cannot be considered as "deep" or ambitious mechanisms representative of CMG. CMG as proposed here is a legitimate focal point of the climate regime, a deep legal agreement under the UN, not a complementary measure outside of it.

Free riding and leakage could be potential problems for both of these forms of CMG within the climate negotiations, but this is unlikely. The threat of carbon leakage is rarely significant in an economy-wide[6] sense (Barker et al. 2007; Zhou et al. 2010). A review by Branger and Quirion (2014) of ex-post econometric studies observed that no study has found any statistically significant sign of carbon leakage. More specific studies, particularly on the EU ETS, have confirmed this in regard to both leakage (Branger et al. 2013; Reinaud 2008) and loss of competitiveness (Anger and Oberndorfer 2008; Demailly and Quirion 2008). As Hallegatte et al. (2013: 14) observe "there is little support for the existence of a significant pollution leakage effect from international trade". There are also benefits to a small group of countries moving forward exclusively, including first mover advantages and "positive spillovers" (Barker et al. 2007) such as the development and diffusion of low-carbon technologies and diffusion of policies (Ovodenko and Keohane 2012; Busch et al. 2005). Measures against Non-Parties, such as border tax adjustments,[7] could also deter free riding (Aakre 2014; Purvis and Stevenson 2010; Branger and Quirion 2014).

The creation of any form of critical mass agreement is improbable since voting usually acts as a consensus builder. Universal participation rather than plurilateral action is the dominant norm of most MEAs, including the climate regime (Hoffmann 2012). Parties are more likely to use voting arrangements to build consensus, rather than openly exclude laggards. A critical mass outcome that does not have universal participation would not necessarily be a negative occurrence; it could actually be more effective in addressing global carbon pollution.

## 5 Legal aspects: implementation

There are primarily two ways of adopting majority voting into the UNFCCC. First, the Convention could be amended to allow for voting. Second, the Rules of Procedure with a resolved Draft Rule 42 could be officially adopted by the COP. As noted previously, the Rules of Procedure would need to be adopted by consensus. This is perhaps why Papua

[6] Across all economic sectors, not just carbon-intensive industries.

[7] It should be noted that the legality of these measures under the WTO is still a topic of debate amongst legal scholars.

New Guinea and Mexico have opted to pursue reform through the first path, i.e. amending the Convention itself.

### 5.1 Amendments to the Convention

Superficially, the implementation of majority voting through amending the Convention has promise, but upon closer inspection, it possesses tremendous legal difficulties. Under Article 15.3, the Convention can be changed through a three-quarter majority vote (UN 1992: 18). Yet, Article 15.4 of the Convention stipulates that changes to the Convention are only binding upon those Parties who have accepted and ratified it (UN 1992: 18). Pursuant to both Article 15.3 and 15.4, the Convention could be amended by majority vote, but the amendments would only apply to those who ratify the amendments thereafter (Brunnée 2002: 18). Thus, majority voting could be introduced via a three-quarter majority vote, but the dissent of a few Parties could result in an interesting situation for the Convention: the majority of Parties who ratify the amendments would work by voting, but the remaining Parties would continue to operate with consensus. Parties functioning under different decision-making rules could ultimately be counter productive by requiring one set of COP decisions for the Parties operating by majority voting and a different set of decisions for those working under consensus. This would engender confusion in an already complex process (LRI 2011b). Such a situation is likely to occur since ratification is often a long process and gives all states time to either reject or indefinitely abstain from, the ratification process.

Yet, this could be a useful and simple pathway to enable the first form of CMG. The critical mass (which would need to be at least three quarters of Parties) in this case would simply be those countries that are willing to work ratify the amendments and work by voting. However, this form of CMG would likely be inferior to the other two forms as the critical mass is defined by those who are willing to work by voting, rather than those necessarily seeking environmentally effective outcomes (although there would probably be some overlap between the two categories). Another important point is that empirical studies have shown that states are much more likely to stay in an "opt-out" agreement rather than join an "opt-in" agreement (Galbraith 2013). If majority voting was implemented through adopting Rules of Procedure (which will be explored next), it would be more of a "opt-out" scenario requiring Parties to intentionally leave the Convention suggesting that more Parties would potentially stay within the framework.

### 5.2 Rules of Procedure

Introducing majority voting through the adoption of the Rules of Procedure, while requiring consensus, does not need ratification, making it an attractive path for implementation. The Rules of Procedure with a resolved Draft Rule 42 could be officially adopted by the COP, although that would require consensus agreement. There is a possibility that a blocker would veto such a measure, as Saudi Arabia did to the original Rules of Procedure. However, there is a loophole since consensus is a flexible concept which has no official legal definition within the UNFCCC. As recent experiences in COP16 and COP18 show, consensus can technically be achieved despite opposition. There is a political avenue for a strong COP president to push through the adoption of the Rules of Procedure despite minor opposition.

An important point is that the adoption of the Rules of Procedure, unlike amendments to the Convention, does not require ratification. The only way to veto their adoption would be

to maintain a formal objection after the decision has been made and follow through with a legal process to dispute the ruling of consensus (UNFCCC 1996; Schwarte et al. 2011). Countries who have been overruled to achieve consensus previously, such as Bolivia or Russia, have not taken such action. Bolivia threatened to take legal action through the ICJ but has thus far failed to do so (Schwarte et al. 2011). Russia, despite its most recent actions, has also not followed through to procedurally dispute the consensus ruling. This suggests that the political nature and long legal process of questioning a consensus decision deter Parties from doing so.

Perhaps another reason is that it is difficult to imagine how exactly a legal decision could be executed. Article 14.2 of the Convention stipulates that dispute settlement between Parties can occur through negotiation, other peaceful means or submission of the dispute to the ICJ (UN 1992: 17). However, the compulsory jurisdiction of the ICJ only occurs when both Parties have agreed to submit to its decision (Posner 2004). To complicate matters further, it is unclear who the disputer would take legal action against: the host nation and chair, or the entire COP? The chair is seen simply as a facilitator of the will of the Parties and not a Party representative; taking a case against the entire COP is difficult as it require all Parties to the Convention to submit to the jurisdiction of the ICJ. Furthermore, if a Party did maintain a formal objection, it is unclear what the outcome would be since consensus is not officially defined within the UNFCCC or UN (although there is an established practice in the wider UN). If Parties were overruled to pass the Rules of Procedure, there is a high probability that they would not follow through with any threatened challenge and the decision would stand; even if they did take legal action, it is unlikely to be successful in repealing the Rules of Procedure through the ICJ due to the aforementioned problems of establishing jurisdiction and consent.

Overall, given the problem of ratification, the adoption of the Rules of Procedure is a legally feasible way to introduce voting into the UNFCCC. However, to do so would likely require overwhelming support from the majority of Parties, particularly to create the social pressure and introduce the necessary financial and institutional measures to minimise the incentives for Parties who disagree with majority voting, or any decisions taken by a vote, to withdraw from the Convention or practice non-compliance. Given the political and institutional dynamics outlined in the subsequent two sections, this would not appear to be politically feasible. The legal opportunity may exist, but the political will, for now, may not.

## 6 Political dynamics

No agreement exists on the current voting proposal. Bodansky and Rajamani (2013) note that the COP is currently split on deciding between consensus and voting with no clear solution to the deadlock in sight. Formal contact groups at COP17 and COP19 as well as informal meetings at COP18 have been the basis for negotiations thus far. There is a general divide between supporters such as members of the Association of Independent Latin American and Caribbean States (AILAC), the EU, and others such as Guyana and Suriname who have repeatedly supported voting (ENB 06-12-2011), and rejection from Bolivia, Venezula and Saudi Arabia who have insisted upon a consensus based approach (ENB 01-12-2011). "Stonewall responses" (Vihma 2011: 7) from China and the USA could be an indication of opposition (Vihma and Kulovesi 2012). They simply need not take a position since Saudi Arabia is already blocking any consensus on this issue. The politics of this are complex, and reasons vary for both the rejection and support for the proposal (Table 1).

**Table 1** The positions of major negotiating groups on voting

| Negotiating group | Stance |
|---|---|
| AILAC | The AILAC grouping is one of the strongest proponents of the majority voting proposal. Member states such as Colombia and Costa Rica vocally supported the proposal during discussions at COP17 (ENB 01-12-2011) and have since then maintained this sympathy. In the most recent talks on voting, Colombia called for the adoption of Rules of Procedure as a "key matter for transparency" and noted that "it's clear that consensus is not always possible"[a] |
| Bolivarian Alliance for the Peoples of our America (ALBA) | ALBA has been opposed to the majority voting proposal. The reasons for this are quite clear: ALBA members such as Bolivia have been amongst the foremost users of the veto (regardless of their intentions), and Bolivia may still have negative memories of COP16 |
| The Alliance of Small Island States (AOSIS) | AOSIS has not yet discussed the majority voting proposal as a bloc or consequently developed a common position on this.[b] The current chair of AOSIS is supportive of majority voting[c] |
| BASIC | Most of the BASIC bloc such as China and India have refused to take a public stance on this issue, which suggests that they may oppose the notion (Vihma 2011). In the most recent negotiations, both China and India stated that consensus has worked very well in many cases and that the focus should be on improving implementation, not decision-making.[d] However, it is unclear whether this constitutes direct opposition to voting or was part of their wider strategy of pushing for greater access to financing and "means of implementation" under most discussions and agenda items |
| EU | The EU has been supportive of the majority voting proposal (ENB 06-12-2011). During interviews and interactions, many EU respondents mentioned that while they supported the principle of majority voting, they would prefer some form of weighted voting in comparison with the traditional "one country–one vote" system. However, during COP19, the EU was less supportive of the Mexican proposal. While supporting the idea in principle, they noted that the adoption of amendments to the Convention would not come into place before COP21, thus restricting the utility of pursuing voting reform[e] |
| The Least Developed Countries (LDCs) | The majority voting proposal has not yet been discussed officially by the LDCs. Some were open to the idea and suggested that the bloc would be likely to support it given their frustration with the current process and desire for a speedier process to address the urgent threat of climate change[f] |
| Umbrella Group (industrialised, non-EU countries) | Some states such as the USA and Canada have refused to take a clear public stance, which suggests that they have concerns. In the most recent discussions on voting, Canada questioned the problem of ratification and asked "how would voting rules operate". The USA observed that their time and effort would be better spent formulating the 2015 agreement rather than engaging in a debate on decision-making. In private, other countries in the bloc expressed concerns that G77 could easily unify and outvote developed countries on matters of finance[g] |

[a] Observation of contact group on voting agenda item under COP at COP19 18-11-2013

[b] Interaction with AOSIS Chair Ambassador Marlene Inemwin Moses 19-02-2013

[c] Ibid

[d] Observation of contact group on voting agenda item under COP at COP19 18-11-2013

[e] Ibid

[f] Interaction with an East African Delegate 04-06-2013

[g] Interaction with an Umbrella Group Delegate 06-06-2013

The political dynamics behind the majority voting proposal are important to determine both the optimal design of a voting system and the general political feasibility of such a shift in procedure. Yet country positions are fluid and can change over time, so political feasibility can change (Downie 2012). This can be seen in the current voting proposal with a number of countries, even Saudi Arabia, becoming more open to discussion around the issue since the blockage of the Subsidiary Bodies meeting in 2013.[8] At COP19, Saudi Arabia, while opposing voting for most matters, declared that "the one area when we can talk about voting is when we talk about financing".[9] While this does show a change in their public position, the suggestion is likely to be a strategic appeal to undermine and obstruct the voting proposal by playing upon the fears of Umbrella Group members of voting on financial matters.

## 7 Institutional barriers and drivers for change

Institutional dimensions such as discourses, rules and information flows shape how countries engage with the issue of decision-making change. There are two distinct types of institutional forces at play: barriers that reinforce the status quo and drivers that create momentum for the transformation of decision-making processes.

### 7.1 Barriers

#### *7.1.1 Pandora's box*

Some respondents suggested there is a concern amongst Parties that amending the Convention would be similar to opening "Pandora's box",[10] as amendments could set a precedent for ongoing change to the principles and annexes of the Convention. This view is understandable given that there is a concurrent proposal by Russia to amend the annexes of the Convention. Major developing countries strongly oppose the notion of revisiting the annexes since it would likely result in a change to their status and responsibilities. Such anxiety was evident at COP18 in the final draft text of the Ad Hoc Working Group on Long-Term Cooperative Action which specified that the process of reviewing the temperature goal of the Convention "is not a review of the Convention itself" (UNFCCC 2012). A recurrent aspect of ADP negotiations has been the assertion by some Parties that they will not reopen or reinterpret the Convention.[11] Fears over re-opening the Convention work against the adoption of majority voting through amendments, although not for the adoption of Rules of Procedure.

#### *7.1.2 Consensus as a norm*

There was a common perception amongst interviewees that consensus is a UN cultural norm, more so than voting. This is partially true. Consensus is perhaps the best reflection of the notion of sovereignty. But voting in no way violates the principle of sovereignty, since

[8] Interaction with a Pacific Island Delegate 14-06-2013.

[9] Personal observation of contact group on voting agenda item under COP at COP19 18-11-2013.

[10] Interaction with a Western European Delegate 03-13-2012, interview with an Eastern European Delegate 012-06-2013 and an interview with a high-level secretariat member 12-06-2013.

[11] Interview with an Eastern European Delegate 012-06-2013.

by nature, international law and treaties generally require some restriction of sovereignty. Moreover, as with any form of international law, Parties can make reservations to outcomes or decisions taken by a vote or by consensus (UNFCCC 2011a). In fact, a large number of international bodies use majority voting, including the EU, ILO, WTO, Montreal Protocol, GEF and the main decision-making body of the UN, the UN General Assembly.[12]

### *7.1.3 Financial matters*

Concerns over voting on financial issues appear to be a political blockade for both developing and developed Parties. Many developed countries fear that "they could be overridden by the G-77 on budgetary and financial matters"[13] in a situation of voting and accordingly "want to maintain their veto over financial matters".[14] This issue has a long history, with the US threatening to veto the original Rules of Procedure due to this concern.[15] Consequently, financial matters must be given a higher voting threshold in order to make voting politically palatable for developed country donors. However, there is then the possibility that the G77 may dislike the idea of developed countries having a veto over financial matters.[16] Yet opposition to voting on this basis would illogical given that it would still be an improvement over the current predicament.

### *7.1.4 Veto attraction and institutional memory*

Over time Parties have grown to enjoy their veto power and may forget the problems that consensus previously caused. As one interviewee bluntly stated "the Parties now like what they have, they have a veto".[17] A veto ensures that Parties will be taken seriously, regardless of economic or geopolitical significance.[18] It also guarantees that states have a greater degree of individual control over the outcome of negotiations.

A related problem is that of the institutional memory of the UNFCCC. Some interviewees saw consensus decision-making as having been quite successful prior to recent setbacks, sentiments that were also expressed by Saudi Arabia and India during COP19. Yet this overlooks the history of the Convention, including its inception. As one interviewee noted, the Convention itself was adopted over the protests of a number of countries who still had their plaques raised to speak[19] and "it's something we have conveniently

[12] The UN Security Council employs a unique combination of majority voting and consensus with affirmative votes from 9 out of 15 Security Council members, and no application of a veto from one of the Permanent five members required to pass a decision. Interestingly, the main points of criticism and suggestions for reform have been targeted at permanent member veto rights. For an overview of UN Security Council reform literature please see Bourantonis, 2004, *The history and politics of UN Security Council reform*, or, more recently *Luiseged, 2013, Vetoing the veto: voting reform and the United Nations Security Council.*

[13] Interview with a high-level secretariat member 12-06-2013.

[14] Interview with a senior UNFCCC secretariat advisor 12-06-2013.

[15] Interview with a former high-level secretariat member 14-05-2013.

[15] Interview with a senior UNFCCC secretariat advisor 12-06-2013.

[17] Interview with a senior UNFCCC secretariat advisor 12-06-2013.

[18] Ibid.

[19] Interview with a former high-level secretariat member who attended this session 14-05-2013.

forgotten".[20] The UNFCCC was adopted without consensus in 1992. Negotiations at COP6 at The Hague in 2000 collapsed due to an inability to reach consensus. The history of negotiations in relation to decision-making is not an entirely successful one, but there appears to be a failure in the institutional memory of the Convention.

### *7.1.5 Semi-global fears*

As noted earlier, there was widespread concern, particularly amongst interviewees who were Party delegates, that the application of a vote could lead to incidences of non-compliance, or Parties simply dropping out of the Convention. While this paper has put forward an argument that effective climate governance could still be conducted under such a situation, this is not the dominant perception of most negotiators. Accordingly, this fear acts as a clear deterrence for many delegations to strongly pursue the use of majority voting.

### *7.1.6 Voting as a double-edged sword*

One very legitimate appeal raised against voting was that consensus and the use of a veto can also be used to block environmentally ineffective decisions. Arguably, the blocking of the adoption of the Copenhagen Accord at COP15 by Tuvalu and a number of ALBA and African countries constitutes one incident when a veto was used to block an unambitious outcome. This is a fair criticism and a risk that must accompany any resort to a voting system. Although based on the history of negotiations, it appears more likely that in most cases, the majority will be pushing for progressive rather than regressive outcomes. Importantly, this raises the question of whether in such predicaments, it is better to have no decision rather than a suboptimal one?

### *7.1.7 Misconceptions on voting*

A recurrent idea amongst interviewees was that voting was a "divisive" process that could easily create wedges in an already overly politicised and antagonistic arena. However, as previously noted, this is rarely the case and voting tends to act as more of a consensus builder, although there are exceptions. One interviewee noted that the International Whaling Commission (IWC) tends to rely upon frequent voting rounds and has devolved into a continuous "numbers game".[21] This is a valid observation and a movement to voting could run this risk. However, the IWC has far less significant or far-reaching economic impacts as the UNFCCC has, so such a numbers game is less likely to develop. Coupled with the strong culture of seeking consensual outcomes, the UNFCCC is more probable to mimic the Montreal Protocol than the IWC in its application of voting rules.

### *7.1.8 Path dependency*

Path dependency is a meta-barrier that encompasses most of the other blockades to decision-making change. The numerous barriers to change have developed into a self-perpetuating culture and institutional practice that has locked in the current institutional state. Yet when the Rules of Procedure were first discussed in 1992, the vast majority of

[20] Interview with a high-level secretariat member 12-06-2013.

[21] Interview with a former secretariat member and academic 09-07-2013.

Parties supported the notion of voting. It was only Saudi Arabia and the USA due to concerns over financial matters, who threatened to stop the adoption of voting arrangements[22]; and solely Saudi Arabia who eventually blocked their adoption. Over time much of the Convention has established discourses and reasons to cement consensus into place; one respondent referenced this by claiming that "because of our practice we have now created an institutional law of consensus".[23] Path dependency can be broken as there are numerous precedents of international organisations evolving their rules over time; the International Standards Organisation switched from consensus to majority voting (Maggi and Morelli 2006), as has the EU in a number of policy areas (Pauwelyn 2005). The question then becomes what can drive a change in decision-making processes away from the current institutional trajectory.

## 7.2 Drivers for change

### *7.2.1 Political crises*

An important factor in breaking path dependency in the UNFCCC is crisis. Political failures have a catalysing effect upon the negotiations. The most recent example is Russia blocking the SBI. Not only did Russia kick-start decision-making reform discussions, but it also highlighted some of the procedural limitations of the current system. Tuvalu highlighted the "supreme irony" of Russia's actions by describing it as "crashing the car to prove the seatbelts don't work".[24] When veto rights are abused, it undermines faith in consensus and creates an impetus to change. One interviewee stated "I would characterise what has just happened (the SBI blockage), despite being painful, as an opportunity".[25] Crisis helps to deconstruct the status quo and in doing so provides the space to develop new ideas and procedures.

### *7.2.2 Attractiveness of majority voting*

Majority voting, despite some reservations, was seen to be a more efficient and speedy decision-making process in contrast to consensus by most interviewees. Highlighting successful previous applications of voting and delivering information on the implementation and consequences of voting could also help to make new arrangements more familiar and further enhance this positive perception. This is important since most Parties would "rather stick with a known quantity than something completely different".[26] Another way of making Parties more at ease with voting would be to highlight voting procedures used within related bodies and implement it into new ones. One interviewee noted that this more "bottom-up approach" could be extremely useful since it largely avoids the difficult conversation on the Rules of Procedure while aiding the work of other bodies under the Convention.[27] The Global Environmental Facility (GEF) makes use of a double-weighted

[22] Interview with a former high-level secretariat member who attended this session 14-05-2013.

[23] Interview with a legal expert and civil society member 14-06-2013.

[24] Personal observation at the final SBI plenary 14-06-2013.

[25] Interview with a senior UNFCCC secretariat member 12-06-2013.

[26] Interview with a US academic 05-12-2012.

[27] Interaction with a developing country delegate 05-12-2012.

majority voting system[28] (del Castillo 2009), the Kyoto Compliance Committee employs a system of double-qualified majority voting[29] (Scott 2010: 238) which is similar to the Montreal Protocol voting scheme, and the CDM Executive Board also makes use of voting. Moreover, the Green Climate Fund is currently debating the use of voting measures within the Board.

## 8 Scenarios

Based upon the preceding analysis of the legal, political and institutional dynamics within the UNFCCC, there are six main scenarios for decision-making change in the Convention. These scenarios, together with the legal pathways towards them, are depicted in Fig. 1. One of these scenarios (*Dual Institutions*) follows from implementation via amendments to the Convention, while the remaining scenarios are based upon adopting the Rules of Procedure.

### 8.1 Dual institutions

The least likely way of introducing majority voting would be amendments to the Convention without universal ratification, leading to a split regime, or the first form of CMG. In this case, there would need to be two separate COPs: one governed by consensus and the other by majority voting, and each with their own outcomes. Due to worries over this possibility, along with the "Pandora's box" fear, this scenario is doubtful.

### 8.2 Alternative A

This scenario would see the adoption of the Rules of Procedure according to Alternative A of Draft Rule 42.1 (see "Appendix") . Since this scenario does not specify a larger majority for financial matters, it is unlikely to occur.

### 8.3 Alternative B

This scenario would see the adoption of the Rules of Procedure according to the current Alternative B of Draft Rule 42.1. This would simply be the official adoption of consensus within the UNFCCC. This is improbable since Parties are unlikely to invest the necessary political will of adopting the Rules of Procedure in order to maintain the status quo; the current wording actually has a lower (two-thirds) qualification for financial matters.

[28] Passing of decisions by vote under the GEF requires an affirmative vote of both a 60 % majority of total members and a 60 % majority of financial contributions, which is expressed as a distribution of voting entitlements to members based on their financial contributions. This can be seen as a kind of hybrid between the one country–one vote model and the weighed voting model of the IMF and World Bank.

[29] Measures adopted by the Enforcement Branch of the Kyoto Compliance Committee requires both a three-quarters majority vote of Parties present and voting and a simple majority of both Annex I and non-Annex countries.

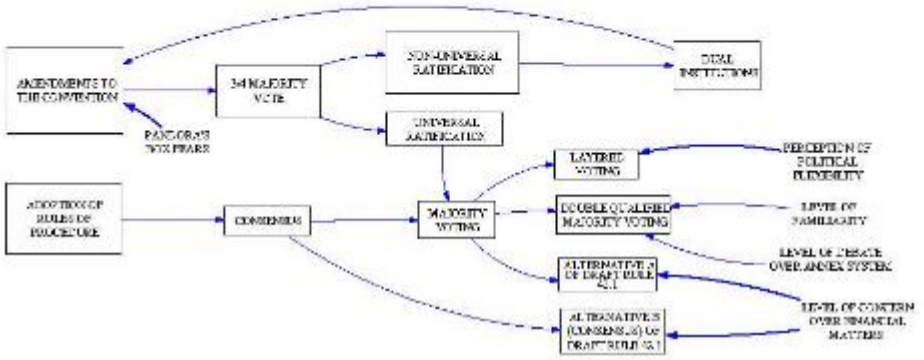


**Fig. 1** Scenarios for decision-making change in the UNFCCC

### 8.4 Double-qualified majority voting

This scenario would involve the adoption of an amended Draft Rule 42 with a double qualification upon financial or substantial matters, or both. The Montreal Protocol uses an innovative voting system whereby two qualifications need to be met for an affirmative vote: a two-thirds majority of countries present and voting who must account for at least 50 % of the total consumption of substances controlled under the protocol, and a simple majority of both developing and developed countries present and voting (UNEP 2007: 6). The second qualification was implemented via an amendment due to the increasing participation of developing countries within the protocol. This allayed the fears of developed countries that the G-77 would unify and utilise its superior numbers to control outcomes. A double-qualified majority voting system of a similar nature could be effective in persuading developed countries who have voiced this fear. There is a precedent since, as highlighted in Sect. 7.2.2, the Kyoto Compliance Committee makes use of a very similar double-qualified majority voting system. However, as one interviewee noted, such a system would have to work in the context of the current annexes within the UNFCCC, which have become increasingly contested (much more so than when the Kyoto Compliance Committee was created) and may make the idea politically unpalatable.[30]

### 8.5 Layered Voting

This scenario involves adopting an amended version of Draft Rule 42 which stipulates a higher majority for matters of finance and the adoption of protocols. Layered Voting is the assignment of varying qualifications to different voting matters based on political concerns. The benefit is that it allows for more controversial or important matters to have more stringent voting qualifications placed upon them. Countries will not walk away from the Convention due to a dispute over a procedural matter such as the election of a chair, while more sensitive matters, such as financing measures, could be given a higher voting threshold. Voting issues can be separated along four main lines: procedural, substantial and financial matters, and the adoption of legal instruments. I suggest changes to Draft Rule 42 that would lead to the following system of Layered Voting:

[30] Interview with an academic and former UNFCCC secretariat member 21-04-2013.

- Procedural issues shall require a simple majority vote.[31] Given respondent concerns over the Russian blockage and previous procedural delays, this would appear to be a feasible and preferable arrangement. This would echo the driver for change under Sect. 7.2.1 by framing voting on procedural issues as a way of addressing a recent and recurring crisis.
- Matters of substance shall require a two-thirds or three-quarter majority vote. This provides a balance between the benefits of voting and political feasibility.
- The adoption of protocols or legal instruments shall require a simple majority vote covering over 50 % of current emissions regulated under the UNFCCC.[32] This is similar to the entry into force requirements of the Kyoto Protocol and thus would draw upon a driver for change by replicating a known and accepted precedent.
- Financial matters shall require a majority vote of 90 % of Parties present and voting. Alternatively, financial matters could utilise a double-qualified majority voting system, since, as mentioned under the previous scenario, this addresses the main concern that developing countries will outvote developed Parties on financial matters. But the limitations mentioned before make use of this form of voting politically unlikely. Another option would be a consensus requirement, which may be more appropriate given that decisions with budgetary implications generally need to be passed through stringent domestic processes and may be less compatible with a majority decision.

Layered Voting is one form of smart voting as it is a flexible option that could be modified to suit political conditions and necessitate broad support on particular issues. As highlighted in each of the provisions, this current formulation of Layered Voting is built upon existing drivers and barriers to decision-making change. In a situation of low political appetite for change, then an alternative version of Layered Voting could be a two-thirds majority vote for procedural matters, 90 % threshold for substantial matters and consensus (or consensus minus one or two) for the adoption of legal instruments and decisions related to finance. Given the low levels of support amongst major powers, this alternative may actually be a more acceptable way forward. At the very least Layered Voting could be used to simply streamline procedural disputes, a prospect advocated by one respondent: "using voting to unblock procedural matters, that's where it gets interesting".[33]

Layered Voting provides a pragmatic and effective way of introducing majority voting into the UNFCCC through a flexible design that can be suited to the political context to address specific concerns and maximise political feasibility. Technically, Layered Voting is applicable to other MEAs which work on consensus (CBD, Stockholm Convention, etc.) by default since the same distinction between issues (financial, procedural, substantial, etc.) can be established in these fora. Perhaps more importantly, Layered Voting is a model that could be applied to new bodies or treaties under the Convention or elsewhere. Indeed, Mexico and Papua New Guinea have proposed a Layered Voting system, similar to the one outlined here, for the 2015 Paris climate agreement (I have been advising both delegations based on the research presented in this paper). Their proposal for a Layered Voting system has made it into the latest draft negotiating text of the 2015 agreement (see Appendix).

[31] While some procedural matters are defined in the draft Rules of Procedure, there are ambiguities. Where ambiguity exists, the distinction between procedural and substantial issues is left to the discretion of the Chair, as per rule 42.3 of the draft Rules of Procedure.

[32] Conditions for entry into force for any protocol would still need to be specified under that particular instrument as per Article 17(3) of the Convention.

[33] Interview with a senior UNFCCC secretariat member 12-06-2013.

## 9 Conclusion: risk and opportunity

There is a clear legal opportunity, through the adoption of the Rules of Procedure, to implement majority voting into the UNFCCC, but such a move seems unlikely. Without the strong support of one, or preferably more, of the great powers in the negotiations, any movement towards majority voting is politically unfeasible. A crisis, such as the blockage of negotiations in Paris by a small number of Parties, as happened in Copenhagen, may catalyse the necessary will. Yet, there is also the possibility that the raised stakes of such a momentous event will make Parties more risk adverse towards such drastic measures. For the climate regime, the greater potential of voting lies in applying it to new bodies under the Convention (Depledge and Yamin 2009: 450), in the "bottom-up" approach to reform mentioned earlier. There is even the potential to utilise voting under a protocol or treaty in the future, such as the 2015 agreement, or even a new regime. In any case, Layered Voting provides a flexible framework that could be applied based upon the existing barriers and opportunities for change in the specific context. But for the Convention, the possibility of majority voting will stay firmly locked away within Draft Rule 42.

The UNFCCC provides one high profile example of a lesson that has been too frequently taught in international institutions: consensus comes at a high price. Perhaps the climate regime and its struggles will be well known enough that the political community will finally take heed of this lesson. Decision-making, in the UNFCCC and beyond it, whether it seeks consensus outcomes or a more plurilateral approach, would be better served through the use of smarter forms of voting. It is, hopefully, a lesson that future treaties and agreements can learn from.

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## Appendix: Supplementary Materials

### Layered Voting in the Draft Paris Agreement

Co- Chairs' Tool: A Non-Paper Illustrating Possible Elements of the Paris Package: Draft Agreement, Section I. (http://unfccc.int/resource/docs/2015/adp2/eng/4infnot.pdf).

[54.2. **Parties shall make every effort to reach agreement by consensus. If all efforts to reach consensus have been exhausted and no agreement has been reached, the decision shall, as a last resort, be taken by a two-thirds majority vote of the Parties present and voting, except:**

(a) **For decisions on financial issues, in which case decisions shall be taken by consensus;**

(b) **For decisions on procedure, which shall be taken by a majority vote of the Parties present and voting.]**

**DraftRule 42**

[1. **Alternative A**
**The Parties shall make every effort to reach agreement on all matters of substance by consensus. If all efforts to reach consensus have been exhausted and no agreement has been reached, the decision shall, as a last resort, be taken by a two-thirds majority vote of the Parties present and voting, except:**

(a) **as otherwise provided by the Convention, the financial rules referred to in Article 7, paragraph 2 (k) of the Convention or the present rules of procedure**[.] [;]

[(b) **for a decision to adopt a proposed protocol, which shall be taken by [consensus] [a three-fourths majority of the Parties present and voting][.]** [;]

[(c) **for decisions under paragraph 3 of Article 4 and paragraphs 1, 3 or 4 of Article 11 of the Convention, which shall be taken by consensus.**]

1. **Alternative B**
**Decisions on matters of substance shall be taken by consensus, except that decisions on financial matters shall be taken by a two-thirds majority vote.**
2. Decisions of the Conference of the Parties on matters of procedure shall be taken by a majority vote of the Parties present and voting [**, except that adoption of a motion or proposal to close or limit debate or the list of speakers shall require a two-thirds majority vote of the Parties present and voting**].
3. If the question arises as to whether a matter is one of a procedural or substantive nature, the President shall rule on the question. An appeal against this ruling shall be put to the vote immediately, and the President's ruling shall stand unless overruled by a majority of the Parties present and voting.
4. If, on matters other than elections, a vote is equally divided, a second vote shall be taken. If this vote is also equally divided, the proposal shall be regarded as rejected.
5. For the purposes of this rule, the phrase "Parties present and voting" means Parties present at the meeting at which voting takes place and casting an affirmative or negative vote. Parties abstaining from voting shall be considered as not voting.]

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## Foreword to Chapter V: Bypassing the Ratification Straitjacket

This article provides an overview of the issue of US ratification in relation to the 2015[8] climate agreement and options to conduct an effective treaty with US legal participation. It directly addresses the research questions by examining how a future climate treaty could operate effectively with US legal participation. The paper outlines a number of tools that can be used to allow for US legal participation without Senate ratification, with an end model of CMG presented as an ideal solution. This provides the basis for a future discussion around CMG in the thesis discussion chapter (Chapter VII) and the presented model of inclusive CMG.

This article draws upon voting ideas presented in Chapter IV and the choice between US and non-US ratified governance that is established in Chapter III. It uses the same methods and methodology as the previous pieces, with a concentration upon feasibility and scenario building, but with notable deviations. Data was gathered for this article through 11 semi-structured interviews and observations at COP19 in Warsaw, November 2013. However, after coding and analysis it was found that while the data was useful in providing background knowledge of the existing politics, the actual ideas and proposals were mainly formulated from the literature review. Thus, interview quotes and references to negotiating observations are not used within the article, unlike Chapters III and IV, which heavily rely upon gathered empirical data.

In many ways this article is the crux of the thesis, as it embodies the CMG idea and provides a tangible model based on the findings of the previous articles. It provides a template for how CMG can be implemented in the climate regime. Thus, it offers a

[8] It should be noted that this thesis was written and submitted prior to the 2015 Paris climate agreement.

potential, operational example of how environmental treaties can legally and institutionally function with US legal participation. This culminating model gives a basis to the move towards prescriptive theory in the discussion chapter (Chapter VII). The argument put forward for a legal treaty, and the assessment of existing non-binding 'pledge and review' approaches, not only provides a platform for this paper but also makes an important contribution to the overall thesis. These sections provide a critique on current attempts to accommodate the US and bypass ratification and reject the assertions of bottom-up approaches. In doing so, it engages with the second framing debate of this thesis.

This paper has been published with the international journal *Climate Policy*. The published paper is presented as Chapter V.


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# Bypassing the 'ratification straitjacket': reviewing US legal participation in a climate agreement

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# Bypassing the 'ratification straitjacket': reviewing US legal participation in a climate agreement

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The issue of US ratification of international environmental treaties is a recurring obstacle for environmental multilateralism, including the climate regime. Despite the perceived importance of the role of the US to the success of any future international climate agreement, there has been little direct coverage in terms of how an effective agreement can specifically address US legal participation. This article explores potential ways of allowing for US legal participation in an effective climate treaty. Possible routes forward include the use of domestic legislation such as section 115 (S115) of the Clean Air Act (CAA) and the use of sole executive agreements, instead of Senate ratification. Legal participation from the US through sole executive agreements is possible if the international architecture is designed to allow for their use. Architectural elements such as varying legality and participation across an agreement (variable geometry) could allow for the use of sole executive agreements. Two broader models for a 2015 agreement with legal participation through sole executive agreements are constructed based upon these options: a modified pledge and review system and a form of variable geometry composed of number of opt-out, voting-based protocols on specific issues accompanied by bilateral agreements on mitigation commitments with other major emitters through the use of S115 and sole executive agreements under the Montreal Protocol and Chicago Convention ('Critical Mass Governance'). While there is no single solution, Critical Mass Governance appears to provide the optimum combination of tools to effectively allow for US legal participation whilst ensuring an effective treaty.

**Policy relevance**

This article provides some recommendations on how to create an effective, legally binding treaty that allow for US legal participation without Senate approval. Given the recent election of a Republican majority in the US Senate and Congress, increasing willingness of the President to utilize his executive powers, as well as a strong shift in negotiations to appease US interests, the insights of this research are timely and relevant to delegations and other United Nations Framework Convention on Climate Change (UNFCCC) actors. It will also be of use to domestic US actors involved with climate policy by illustrating how to allow for effective and sustainable US multilateral engagement that bypasses domestic political gridlock.

*Keywords*: agreement; climate; protocol; ratification; US; 2015

## 1. Introduction

A milestone international climate agreement, in which it is expected that countries will commit to climate change-related GHG emissions mitigation targets for a period beyond 2020, will be negotiated during the 21st Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) in Paris, 2015. The success of the agreement is considered

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by many to depend on the participation of the US, a world superpower and second-largest GHG-emitting country. The constraints on US ratification of any international legal instrument, particularly an environmental one, have been a recurring stumbling block for the international climate regime, most notably when the US signed but could not subsequently ratify the 1997 Kyoto Protocol (Depledge, 2005). While US leadership is seen as a necessary ingredient for the success of an international climate deal (Grundig & Ward, 2015; Purvis & Stevenson, 2010; Terhalle & Depledge, 2013), the US has been unable to take initial federal legislative steps, participate legally, or take an international leadership role in the climate negotiations. The problem is rooted in the US Constitution and is unlikely to change in the foreseeable future (an issue that will be explored in Section 2.2). Essentially, the US is in a 'ratification straitjacket', making it highly unlikely that it will ratify an environmental treaty through the Senate or Congress.

While the role of the US in the climate regime has been subject to considerable scrutiny, exploration of architectures that directly address its participation has been limited. Published research covers a number of topics including sub-national action on climate mitigation within the US (Lutsey & Sperling, 2008; Schreurs, 2008; Selin & VanDeveer, 2011) and lack of environmental multilateral engagement at the federal level (Bang, Froyn, Hovi, & Menz, 2007; Bang, Hovi, & Sprinz, 2012; Paterson, 2009; Purvis, 2008). There has also been a proliferation of literature examining possible architectures for a future agreement (Aldy, Barrett, & Stavins, 2003; Aldy & Stavins, 2007; Bodansky, 2009; Bodansky & Diringer, 2014; Haites, Yamin, & Höhne, 2013; Sugiyama & Sinton, 2005; Victor, 2009, 2011). Notably, the intersection between these issues and how to address the question of US ratification in the 2015 climate agreement has received less attention. Two important exceptions to this are the work of Chang (2010b) on US executive agreements that could be conducted in relation to climate, and more recently by Bodansky on the legal options for US acceptance of a 2015 climate change agreement. This article will build upon their work and look beyond domestic options towards political considerations. Importantly, it will specifically investigate what architectures are needed for legal engagement to occur without compromising the effectiveness of the agreement. Altering an agreement to allow for US legal participation is worth little if it significantly undermines the overall effectiveness of the treaty. This article will explore how to create an effective climate agreement with US legal participation by addressing the following two research aims:

- To provide an overview of the existing legal and institutional options that would facilitate US legal participation in a future climate agreement
- Based upon existing options, to construct an 'optimal' agreement that would allow for US legal participation whilst providing an effective international architecture

The topic of US participation will be discussed by first outlining the particular institutional and political hurdles the US faces in engaging in international climate policy, followed by discussion of the importance of the legality of any future agreement and existing proposals for the 2015 agreement. The likely options for an effective and feasible 2015 climate agreement with US ratification will then be explored. Models built from combining these options and their respective feasibilities will then be analysed, before determining the 'best case' model.

## 2. Background

### 2.1. The great divides: US climate politics

The landscape of US climate politics is marked by two great divides that have made progressive climate legislation near impossible. The first divide is the opposition that exists between the Democratic and Republican parties. Climate change is a partisan issue, with Democrats regularly expressing belief in climate science and favouring strong mitigation actions, and Republicans often being sceptical of the science and opposed to mitigation measures. Gallup polls and surveys show that these stances have become increasingly polarized over time (Pew Research Centre, 2013; Dunlap & McCright, 2008). Even when bipartisan support exists, the US Congress and Senate are prone to gridlock and are rarely capable of radical shifts (Bang, 2010; Tjernshaugen, 2005). Given that the Republican Party currently holds a majority in both the Senate and Congress until at least the next round of elections in 2016, ratification of a strong climate treaty, or federal mitigation legislation, are forlorn hopes.

The effect of Republican opposition and polarization over climate change can be seen in the Senate and its unwillingness to engage internationally with any legal agreement on climate change. The Senate has already signalled, through the 1997 Byrd–Hagel Resolution[1], an unwillingness to engage in any international climate agreement that does not require GHG emissions reductions from major developing countries. Recently, a bill to simply acknowledge the role of human activity as a driver of climate change was defeated in the Senate (Goldberg, 2015). The US has consistently been sceptical of UN-based multilateralism (Patrick, 2002), particularly environmental multilateralism (Brunnee, 2008), and along with the power of lobbying groups and increasing partisanship on climate issues there appears to be little to no appetite for international climate cooperation in the Senate or Congress (Bang et al., 2012; Depledge, 2005; Purvis, 2004; Purvis & Stevenson, 2010).

Despite the deadlock in the Senate and Congress, both the Obama administration and many US states appear to be politically willing and capable of carrying out significant, however still restricted, domestic mitigation and international engagement. The Obama administration has proven willing to pursue an active climate agenda and test the frontiers of executive powers with a multitude of climate-related initiatives, which include a pledge of US$3 billion to the Green Climate Fund, a bilateral deal on climate, as well as a related pact on reducing hydrofluorocarbons (HFCs), with China, and the Environmental Protection Agency (EPA) implemented Clean Power Plan for regulating energy sector emissions. Sub-nationally, a number of states, such as California, have implemented a range of broad climate mitigation measures and policies in lieu of federal-level policy (Lachapelle & Paterson, 2013; Lutsey & Sperling, 2008; Rabe, 2008; Rabe, Roman, & Dobelis, 2005; Schreurs, 2008). Rabe (2011) has described the current situation as 'contested federalism', with both leading states and the Executive simultaneously moulding climate policy across the country. Overall, current US climate politics is a balance between a proactive Executive and a number of progressive states against a recalcitrant Congress and Senate.

This current landscape of US climate politics holds a number of key lessons for the establishment of any future treaty. First, any future agreement should seek to engage the US, at least in the short term, solely through the Executive rather than the Senate or Congress. Second, that implementation domestically will need to rely upon existing legislation or the action of US states as new legislation from Congress on emissions mitigation is unlikely to be forthcoming.

### 2.2. The US 'ratification straitjacket' and options for legal engagement

The US possesses a number of unique institutional arrangements, which, when combined with the political deadlock outlined in Section 2.1, make the ratification of international agreements, particularly environmental ones, extremely difficult. These issues have been clearly identified and have resulted in a number of environmental agreements being signed but not ratified by the US, such as the Kyoto Protocol (Depledge, 2005), or neither signed nor ratified, such as the Aarhus Treaty (Schreurs, Selin, & VanDeveer, 2009). Generally, most perceive US ratification as a matter requiring a supermajority vote in the Senate. Article II of the US Constitution states that the President 'shall have power, by and with the advice and consent of the Senate, to make treaties, provided two thirds of the Senators present concur'. Accordingly, the enactment of an Article II treaty on a future climate agreement requires a two-thirds supermajority affirmative vote and 60 votes overall to avoid an opposition filibuster (Chang, 2010b, p. 339), conditions that are highly unlikely to be met in the near future. The US is thus stuck in a 'ratification straitjacket', with its ability to engage multilaterally on climate change via the Senate or Congress constrained by political dynamics that are likely to change only once political consensus and domestic legislation are in place.

However, the US is capable of legally engaging with international agreements through a number of other methods that go beyond Article II treaty ratification. All of these require the consent of the President, as they are the 'sole organ' through which the US engages with international law:

- *Article II treaty ratification*: requires the consent of the executive and a two-thirds majority vote in the Senate.
- *Congressional–executive agreements*: requires the consent of the Executive and *ex post* or *ex ante* legislation to be passed by Congress.
- *Sole–executive agreements (also known as presidential–executive agreements)*: requires only the consent of the President, as long as the agreement lies within the independent constitutional powers of the Executive and can be implemented under existing domestic law. A form of these is the acceptance of an international agreement by the Executive that is pursuant to a previously ratified treaty (a treaty–executive agreement).

There is general consensus that executive agreements, both congressional and presidential, have the same legal status as Senate ratification once enacted (Krutz & Peake, 2009; Purvis, 2008). Importantly, executive agreements are not a rarity. Over the past sixty years over 94% of international agreements have been treated as executive agreements rather than Article II treaties (Peake, Krutz, & Hughes, 2012). This trend has continued under President Obama, with 407 executive agreements completed at the 111th Congress alone (Peake et al., 2012, p. 1298). No congressional–executive or sole–executive agreements have been repealed through judicial challenge in the past (Bodansky, 2015; Chang, 2010b). Congressional–executive agreements are interchangeable with Article II treaties and have a wide scope of issues that can be covered. However, as noted previously, Congress is also politically divided and part of the ratification straightjacket that has held the US in place. On this basis, congressional–executive agreements cannot be considered as politically feasible.

Sole–executive agreements appear to be the only politically feasible way forward beyond the ratification straightjacket. Indeed, Peake et al. (2012) have shown through a quantitative regression analysis

that executive agreements are more widely used in times of high partisanship in the Senate. When one or both houses are blocked, the option of executive agreements has become a logical choice for presidents to carry out their foreign policy objectives. Although sole-executive agreements are not as common as congressional-executive agreements, they nonetheless have been repeatedly used in relation to environmental agreements. The 1991 Air Quality Act with Canada, 1979 Long Range Transboundary Air Pollution Convention (LRTAP) and the recent 2013 Minimata Convention on Mercury have all been completed via presidential-executive agreements (Bodansky, 2015, p. 14). However, the uses of sole-executive agreements are not interchangeable with Senate ratification and have a number of limitations.

The ability of the President to enter into a sole-executive agreement is dependent upon a number of factors that restrict its uses. Legal scholars are in general agreement that the authority of the President to enact sole-executive agreements is reliant on the following:

- The independent powers of the Executive, particularly in relation to the foreign affairs mandate under the Constitution – the extent of these powers is extremely unclear and therefore open to, potentially broad, interpretation (Chang, 2010b, p. 353)
- Authority devolved from existing Article II treaties – in effect, the President is empowered to maintain and take care of existing international commitments and obligations (e.g. such as those under the already ratified UNFCCC)
- The agreement is not inconsistent with existing domestic law and there is preferably the presence of relevant enabling domestic legislation

Given these requirements, the applicability of sole-executive agreements is contingent upon the content of an international agreement. The execution of sole-executive agreements on new financial commitments or binding emissions targets is unlikely to be possible given that these are not covered by an existing ratified treaty (e.g. the 1992 UNFCCC), the foreign affairs mandate, or any existing domestic legislation or statutory language (Bodansky, 2015). However, there does seem to be general agreement among scholars (Bodansky, 2015; Chang, 2010b; Purvis, 2008) that sole-executive agreements can be enacted upon the following climate-related issues:

- Monitoring, reporting, and verification (MRV) and information sharing
- Procedural requirements such as provisions to submit, maintain, and review an nationally determined contribution (NDC)
- Capacity building
- The creation of an international compliance mechanism (assuming it is not in breach of pre-existing World Trade Organisation (WTO) law)
- Scientific and technological cooperation
- A sole-executive agreement could be entered on aviation emissions through the Chicago Convention on International Civil Aviation (hereafter the 'Chicago Convention') and implemented through existing legislation (Chang, 2010b)
- An agreement on HFCs could be conducted as an amendment to the Montreal Protocol and enacted through a sole-executive agreement

While a sole-executive agreement is unlikely to be possible for a full binding treaty with emissions reductions and financial targets, it is possible for a number of significant issues. However, the

permanence and stability of sole-executive agreements are questionable as they can be abolished by Congress through the implementation of a later-in-time statute that is inconsistent with the executive agreement (Bodansky, 2015; Purvis, 2008) or through an executive action by a future Executive (Chang, 2010b). There are other avenues for political retaliations. These could include restricting the funding of implementing bodies such as the EPA, as Congress must approve the budget and any appropriation of funds. The use of sole-executive agreements on climate change, while possessing legal potential, is a politically risky move. But, before attempting to work around the ratification straightjacket it must be asked whether a legally binding agreement that requires legal participation is necessary?

### 2.3. To bind or not to bind? The importance of legality

The conventional wisdom is that legally binding policy instruments are most effective in international diplomacy. However, it has been suggested that non-binding agreements can be more effective (Victor, 2006), particularly because of their increased flexibility and speed in implementation without requiring domestic legislation (Brummer, 2014). Voluntary international commitments on tuberculosis are one example of the successful application of such an approach (Heywood, 2013). Criticism of the popular preference for legally binding instruments suggests that it can lead to weakened structure and substance (Raustiala, 2005). When states know that they will be bound under international law they are likely to be cautious about making ambitious commitments or creating strong enforcement structures in order to avoid a loss of reputation and/or punitive measures.

There are also many reasons for opting for a legally binding approach, particularly in relation to climate change. Hare, Stockwell, Flachsland, and Oberthür (2010) highlight that, with respect to the 2015 agreement, legal commitments promote confidence in target delivery, facilitate the implementation of domestic legislation, and have become a preferred choice as more stringent targets are required to stabilize global warming within 2 °C above pre-industrial levels by 2100. Legal contracts offer greater credibility and stability than non-binding pledges (Raustiala, 2005) and provide a long-term, reliable framework for private and public action and investment.[2] This is a particularly important issue given the threat of infrastructure lock-in and likely requirement to peak emissions before 2015 or 2020 in order to limit warming to the 2 °C target (IEA, 2011; Rogelj et al., 2011). Investment and finance flows needed to reach the long-term temperature goal require the credibility and stability that only legal commitments can provide.

Legality is also important as a provider of legitimacy. Importantly, a non-legally binding agreement is unlikely to garner the legitimacy and support of civil society, the public, or many states. Indeed, many parties have already based their continued presence in Ad Hoc Working Group on the Durban Platform (ADP) negotiations on the assumption of creating a legally binding agreement (Voigt, 2012). Legitimacy, credibility, and stability all mean that for an agreement that reaches the existing 2 °C goal a legally binding nature is likely to be a necessity.

## 3. Literature review: wider lessons for addressing US participation

The agreement in Durban in 2011 to create a successor to the Kyoto Protocol has led to a number of different proposals (Barrett & Toman, 2010; Falkner, Stephan, & Vogler, 2010; Haites et al., 2013; Urpelainen, 2013). Agreement elements have been analysed (Bodansky, 2009; Briner & Prag, 2013) and

existing policy options have been reviewed (Aldy et al., 2003; Bodansky, Chou, & Jorge-Tresolini, 2004; Briner & Prag, 2013; Morgan, Tirpak, Levin, & Dagnet, 2013). Some of these proposals provide relevant insights.

Proposals from Sugiyama and Sinton (2005), Urpelainen (2013), and Falkner et al. (2010) all advocate an incremental approach in which negotiations progress via a number of agreements on smaller individual issues, creating momentum for an eventual global treaty. The rationale for this is quite simple: while it may be impossible to craft an effective deal for all parties across all issues, enough political will and momentum exist on certain issues to move them forward. In essence, acquiring 'low-hanging fruit' may create feedbacks and longer-term benefits.

Bodansky (2009) sets out a number of different models for the next agreement, including an expanded top-down Kyoto-style agreement, a bottom-up agreement that would be the simple formalization of pledges made in Copenhagen (2009) and Cancun (2010), or a 'multi-track' approach in which an agreement could include both universal elements and optional aspects. Similarly, the official Australia (2013) and New Zealand (2014) submissions to the ADP (Workstream I) have advocated for varied participation (variable geometry) and, to an extent, legality across a future agreement. Both Australia and New Zealand have proposed that an agreement could include a legally binding deal on a minimal number of core commitments, along with binding or non-binding optional provisions[3] and attached national schedules that include NDCs. These suggestions rely on the logic that a feasible agreement will probably need to provide countries with the ability to opt out or not be bound on certain issues. Variable geometry, varied legality, and incremental approaches are all relevant ideas for the effectiveness and feasibility of a 2015 treaty, especially in relation to the US.



## 4. Options for US ratification and partial ratification

### 4.1. International architecture

#### 4.1.1. Pledge and review

The pledge and review model involves countries putting forward their own nationally determined and non-legally binding pledges, which are then reviewed periodically (Bodansky et al., 2004; Heywood, 2013). It is a politically feasible approach that allows for maximum participation to the detriment of ambition. However, as noted previously, the absence of legally binding targets or financial commitments and a focus on the provision and maintenance of an NDC and supporting MRV would make a pledge and review style agreement capable of having US legal participation via a sole-executive agreement. This is probably why it is supported by the Obama administration, which has championed this model since mid-2009, including in its most recent UNFCCC submission (US, 2014), leading some scholars to label this bottom-up, pledge and review model as the 'American Approach' (Hare et al., 2010, p. 601).

Yet, even with US legal participation via the use of a sole-executive agreement, an agreement based on the pledge and review model would have weaknesses, making it unlikely to be effective. The effectiveness of pledges substantially depends on strong, systematic, and regular reviews and assessments of targets, coupled with stringent MRV (Victor & Salt, 1995). However, as Hare et al. observe, 'verification can only go so far' (2010, p. 608). Experience with the Kyoto Protocol indicates that even comprehensive, common accounting rules can be manipulated (Hare et al., 2010), and it is very risky to assume

that countries will significantly increase their targets on the basis of review and international pressure. Moreover, strong review structures tend to lead to weaker pledges as states attempt to ensure their capacity to comply with self-imposed targets (Raustiala & Slaughter, 2002). At worst, pledge and review could lock in lowest-common-denominator behaviours. Existing national emission reduction pledges amount to reductions consistent with a 4 °C (Fekete et al., 2013) or even 6 °C (PwC, 2013) rise in global temperatures. Modelling by Riahi et al. (2013) suggests that following existing pledges could restrict policy and technology options, increase overall mitigation costs, and make existing long-term stabilization targets unattainable. The price of a pledge and review agreement structured to allow for US legal participation is likely to be the inadequacy of that agreement to meet the UNFCCC objective of avoiding dangerous anthropogenic warming. When a pledge and review model consists of non-binding pledges coupled with legally binding rules, it can be considered an agreement with varied legality.



#### 4.1.2. Varied legality

If the legality of a treaty is the clear hurdle to US participation then altering the legal nature of the agreement is a logical solution. There are primarily three legal options through which the 2015 agreement can be made: (1) a legal protocol; (2) amendments to the existing 1992 UNFCCC treaty; or (3) COP decisions. These legal options can be paired with non-binding schedules, annexes, and targets. The likely outcome of negotiations would appear to be a mixture of these different elements (Voigt, 2012). Indeed, the current US strategy appears to be to construct an agreement that is only legally binding on issues that can be accepted through sole-executive agreements. The 2014 US submission to the ADP states that it expects that 'certain elements set forth above will be internationally legally binding', including the need for countries to submit a pledge as well as MRV provisions (US, 2014, p. 7). Both of these elements are capable of being accepted via sole-executive agreements. Similarly, a recent *New York Times* investigation outlined how the Obama administration is planning on creating a hybrid agreement that uses 'politically binding' elements (presumably COP decisions) alongside amendments to the UNFCCC in order to bypass the need for Senate ratification (Davenport, 2014). Amendments to the annexes of the Convention, while requiring a three-quarters majority vote of the COP, would probably only require an instrument of acceptance from the Executive, and not Senate ratification. Amendments to the provisions of the Convention could very well require a new ratification process (Bodansky, 2015, p. 27). Moreover, this is politically unfeasible given that a number of developing countries have been adamant that the principles and provisions of the Convention must remain untouched. Accordingly, a 2015 agreement could be designed so that the only legally binding elements are compatible with acceptance through sole-executive agreements and the rest is carried out through politically binding COP decisions.

#### 4.1.3. Variable geometry

Variable geometry models for a 2015 climate agreement could facilitate US legal participation by allowing for parts of the agreement to be optional, or splitting up the agreement. Currently, UNFCCC negotiations operate under an interlinked decision-making process whereby 'nothing is agreed to until everything is agreed': the negotiations strive for a comprehensive and complete global package. To date, this approach has not succeeded in achieving US legal participation. In one proposal for a variable

geometry model, Bodansky (2012) suggests an alternative approach with some mandatory and legally binding core aspects while also allowing variation in the nature of the commitments made by individual states (e.g. economy-wide reductions or reductions in emissions intensity). However, it may be more effective to allow for variation in the inclusion of issues (issues as discussed within the negotiations, such as MRV and capacity building) rather than in the nature of commitments. This would be somewhat similar to the aforementioned Australian and New Zealand proposals for having optional provisions (which could be either legally or non-legally binding) linked by a single central treaty covering a set of agreed core legal elements. This approach could be expanded on by creating a collection of opt-out optional protocols, instead of provisions, on specific issues. This resonates with what Bodansky et al. (2004) highlights as the portfolio approach, where numerous actions are undertaken by different collections of like-minded actors, although this approach focuses primarily on technology and 'minilateralism'. Giving parties the ability to choose which negotiating areas they are bound by could allow the US to legally participate in individual protocols on issues that can be accepted through sole–executive agreements. As outlined in Section 2.2, sole–executive agreements are feasible in a range of areas.



## 4.2. Domestic options

### 4.2.1. Sole–executive agreements

The most obvious and important domestic measure is the use of sole–executive agreements. These are an important and feasible option that fits existing political circumstances. This approach has been explored in Section 2.2.

### 4.2.2. Section 115 of the Clean Air Act

The use of a little-known clause within the Clean Air Act (CAA) of the US EPA is one way forward for both US domestic action and international cooperation. Section 115 (S115) of the CAA covers international air pollution and stipulates that if there is sufficient evidence to suggest that 'pollutants emitted in the United States cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare in a foreign country' then the EPA can require US states to regulate the offending pollutants. The process can be initiated by the Secretary of State, without the consent of Congress or the Senate, but can only be applied in conditions of 'reciprocity', that is when the foreign countries in question have 'given the United States essentially the same rights with respect to the prevention or control of air pollution'. Chang (2010a) contends that this clause provides a clear and feasible legal path to quickly and directly introduce a carbon mitigation cap-and-trade system to be implemented by US states. S115 has recently received further attention, with a number of academics suggesting that it provides the legal basis for the US to enter into an international, legally binding agreement on mitigation (Schlanger, 2014).

However, there are a number of limitations to utilizing S115. First, it would only apply to emissions mitigation, and thus could not be used as the basis for US engagement with a broader multilateral deal. Second, the condition of reciprocity would be tedious and impossible to prove for all UNFCCC Member States. Previously, both the endangerment and reciprocity findings have been proven for Canada in relation to acid rain, but this required amendments to the Canadian Clean Air Act in 1980 in order to more closely mimic the statutory language of the US CAA and prove reciprocity (Chang, 2010a). Although this means it is not appropriate for a 'global package' climate agreement, S115 could be

used to allow the US to participate in a bilateral deal on mitigation with other major emitters who have taken (or are willing to take) equivalent domestic action and possess similar statutory language or are willing to adopt such language. As Purvis (2008, p. 33) observes, the CAA could provide the legal basis for both domestic emissions regulation and the linking of US carbon markets with others internationally. S115 of the CAA, like the other tools and approaches discussed here, relies upon the political willingness of the incumbent US administration to use it and risk domestic political backlash. Yet, given the need to appeal to the Executive and US states, S115 holds considerable promise as a way to facilitate both strong domestic action and legally binding international commitments without Senate or Congressional approval.

## 5. Models for US ratification



Based on the different potential provisions for managing US legal participation, shown in Table 1, two models of effective climate agreements with US legal engagement have been constructed. Table 2 presents the two models: (1) a pledge and review system with varied legal elements and participation, and (2) a variable geometry-based package termed 'Critical Mass Governance' (CMG). These scenarios can be seen to correspond to Bodansky's (2012) typology, with the first scenario acting as an altered pledge and review system and the second as an example of a multi-track agreement. There are two key distinctions between the different models. First, the modified pledge and review model relies on the use of non-binding pledges and commitments in order to allow for the use of sole-executive

**TABLE 1** Options to address US participation

| Measure | Likely state of US legal participation | Barriers to implementation |
|---|---|---|
| Variable geometry | Sole-executive agreements on issues where possible/ constitutional | Path dependency of the UNFCCC, risk of domestic political backlash when executive agreements are used |
| Non-legally binding nature | No ratification or executive agreement required | Political opposition from other Parties to the UNFCCC and civil society |
| Pledge and review | A sole-executive agreement should be possible depending upon agreement content, i.e. the absence of financial commitments and a focus on procedural elements and MRV | Political opposition, particularly on the basis of lack of ambition |
| CAA Section 115 | Implemented through existing legislation and sole-executive agreements | Risk of domestic political backlash against the Executive. Similar statutory language and mitigation is required in the corresponding state to prove reciprocity. This could require change in statutory language in the other major emitter. This could in turn require a potentially extensive domestic political process |
| Varied legality | Sole-executive agreement(s) | Political opposition, particularly on the basis of lack of ambition and coherence |

**TABLE 2** Models for addressing US ratification

| Likely form of US legal participation | Scenario | Measures involved | Bodansky typology |
|---|---|---|---|
| Legal participation through a single sole-executive agreement | Pledge and review with varied legality and participation | Pledge and review, with varied legal elements and participation through optional provisions | Formalization of Cancun Architecture with alterations in terms of legality and optional provisions |
| Legal participation through numerous sole executive agreements to different protocols under the UNFCCC and sole-executive agreements to amendments to other existing Article II treaties such as the Chicago Convention and Montreal Protocol | Critical Mass Governance | Variable geometry through sole-executive agreements to opt out protocols, voting, bilateral mitigation agreements through CAA S115, sole-executive agreements under Montreal Protocol and Chicago Convention | Modified multi-track approach |



agreements. By contrast, CMG uses S115 for legal engagement on targets and breaks the agreement down into numerous legal protocols, most of which could be accepted through sole-executive agreements, in order to maximize the number of issues that are covered in a legally binding manner. Second, CMG is a more holistic package approach that makes use of bilateral measures and agreements under other conventions (the Montreal Protocol and Chicago Convention). Overall, CMG can be seen as an extension of the first pledge and review model, with additions that make it both more comprehensive and effective as a multilateral approach.

### 5.1. Pledge and review with varied legality and participation

The most likely outcome of a 2015 agreement currently appears to be some form of pledge and review system with a legal core of institutional and procedural arrangements, and MRV. This would be accompanied by national schedules of non-legally binding NDCs. This could be accompanied by both the national schedules and the inclusion of a number of optional provisions. Depending upon the content of the provisions and whether they are seeking US participation, these could be legally binding or non-binding in nature. Such an agreement could be accepted by the US through a sole-executive agreement with opt-outs executed for any provisional elements that would push beyond the constitutional powers of the Executive and/or conflict with domestic US law. Other issues could be elaborated upon, or included, through accompanying or later-in-time politically binding COP decisions, as was done with the Marrakech accords in relation to the Kyoto Protocol. In essence, this is the architecture proposed by the Australian and New Zealand delegations. This model sacrifices treaty effectiveness, to a certain degree, in exchange for US legal participation. A lowest-common-denominator treaty with no binding targets and minimal legal elements is unlikely to be sufficiently effective and could lock in pledges and an institutional architecture that is not capable of meeting

the objective of the Convention. Despite this, it is a feasible scenario that could match the existing negotiating text[4] for the Paris negotiations, has existing Party support, and would allow for US legal engagement via a sole–executive agreement.

### 5.2. CMG, a multilateral and bilateral package approach

The CMG model relies on a form of variable geometry that would allow for US legal participation and leadership on a number of issues. It represents a modified hybrid between the model of variable geometry and the fragmented, incremental approach advocated by others (Falkner et al., 2010; Urpelainen, 2013). In this case there would be a central legal agreement that covers the institutional arrangements, procedural provisions, and core issues such as MRV. This would operate as the core of a hubs and spokes model. In this case the spokes would be a number of opt-out protocols on issues such as capacity building, sectorial approaches, and research and development. These opt-out protocols would make use of majority voting in order to allow for rapid progress and a dynamic nature. Voting has been shown to be a more effective and efficient decision-making process that is also superior to consensus in terms of building consensus amongst parties, due to the absence of veto powers (Biermann et al., 2010; Kemp, 2014; Low, 2001; McGann, 2004; Tijmes-Lhl, 2009). Thus, it could allow both for speedier and more progressive movement in these strands and, where necessary, prevent the use of US veto power. Although consensus is used as a default decision-making process in the UNFCCC, a new legal treaty under the Convention could stipulate new decision-making rules (Kemp, 2014). Voting rules for these opt-out protocols would be specified and established under the legal 'hub' agreement on institutional and procedural arrangements. The use of opt-out protocols is also critical, as empirical studies have shown that states are much more likely to stay in an opt-out treaty rather than pursue ratification of an opt-in treaty due to behavioural biases such as status quo bias (Galbraith, 2013).

The split of protocols would allow for the US to legally participate through sole–executive agreements on the different issues outlined in Section 2.2. Other protocols would exist on issues that the US could not legally engage with and would simply attempt to create a critical mass of action without the US. Outside of this UNFCCC agreement, the US could utilize a bilateral, or series of bilateral, deals through S115 to allow for domestic action and legally binding targets with major polluters that could prove reciprocity (as a hypothetical scenario this is shown as a bilateral deal with the EU in Figure 2). This would compensate for the lack of binding targets within the central UNFCCC agreement. Sole–executive agreements on HFC regulation through amendments to the Montreal Protocol[5] and reducing aviation emissions through the Chicago Convention could be part of a broader multilateral package. Overall, CMG is a multilateral package made up of three components: the UNFCCC hubs and spokes style agreement (see Figure 1); the use of S115 to allow for domestic action and a binding cap for the US and other major emitters (see Figure 2); and the use of presidential–executive agreements on amendments to the Montreal Protocol to reduce HFCs and to reduce aviation emissions through the Chicago Convention.

CMG would operate by the same rationale as the incremental proposals that encourage coalitions of the willing on individual issues. Thus, CMG is not just designed to allow for maximal US legal involvement, but also to create a generally effective and flexible structure.

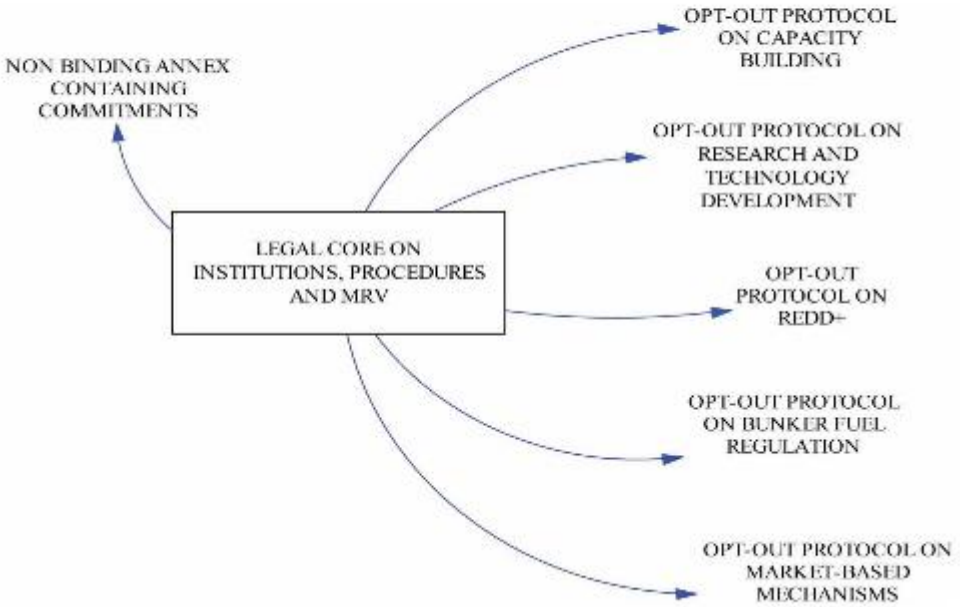


**FIGURE 1** UNFCCC component of CMG

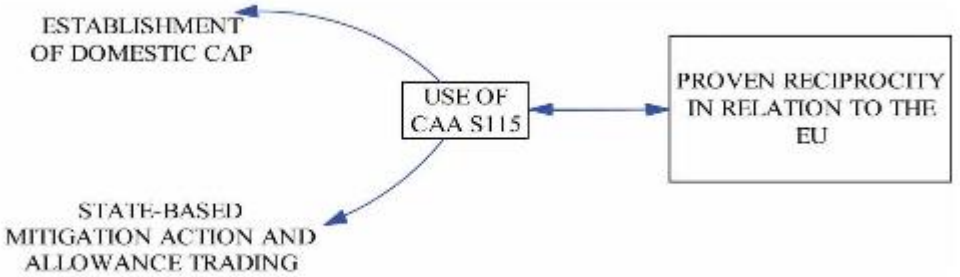


**FIGURE 2** CAA S115 component of CMG

The main limiting factor for this model is the political will of the US Executive, particularly given that such a move would likely engender reprisals from the Republican-dominated Congress and Senate, such as funding cuts to the EPA. Yet, this would fit the current situation of US politics, which is marked by an obstructionist, Republican-dominated Congress and Senate, coupled with a climate-active Presidential administration that is testing the extent of its executive powers. However, in the shorter term the Executive cannot simply skirt the Senate and/or Congress with political impunity (Krutz & Peake, 2009; Peake et al., 2012). As mentioned in Section 2.2, both a

future Executive and Congress have the ability to abolish a presidential–executive agreement domestically. However, that in itself would risk a political backlash, particularly if a large number of presidential-executive agreements were abolished, and in the longer term it is likely that burgeoning state-based action along with increased public pressure, heightening climate impacts, and rising oil prices will push the US to further engage internationally (Christoff, 2006).

A second key limitation is the path dependency of the UNFCCC. CMG is a significant departure from the existing practice of the UNFCCC and its previous protocols and decisions, which relied on interlinked, consensus decision making. However, changing decision-making patterns and negotiating practices are not uncommon. Moreover, CMG can be seen to be a more effective and extended version of the politically feasible first model of modified pledge and review. If the international community wants an effective climate treaty with US legal involvement, then some changes to the traditional approach are necessary.



## 6. Conclusion

The US ratification straitjacket is not necessarily a negative barrier: it is a neutral condition indicative of both US politics and the seriousness with which they take international commitments. The key is to design the international architecture to allow for the use of sole–executive agreements without undermining its effectiveness. CMG appears to provide an optimal model that could allow for sole–executive agreements on a number of important issues, while maintaining a flexible and effective overall structure. Importantly, it is a holistic approach that goes beyond the UNFCCC to incorporate complementary bilateral actions through S115 and actions under other international agreements. These findings suggest that a wider view should be taken of international agreements. If environmental agreements are to overcome the US ratification straitjacket then there needs to be consideration, not just of international architectures or domestic US politics and tools for legal engagement, but also how the two interact.

With a long-term view, and use of the right mechanisms, the US ratification straitjacket need not be a fatal hurdle to global climate policy. The tools exist to learn from Kyoto and deal with US legal participation. However, there are limits to what any instrument can accomplish, and most of the options outlined here depend significantly upon the political will of the Executive. But, given the improbability of Senate ratification in the near-term future, relying on the currently active Executive appears to be the only way forward in achieving US legal participation in an effective architecture. If the President does have the will to make use of these tools, then Paris could be the start of a brave new world for climate policy with the US, rather than a second Copenhagen.

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## Notes

1. S.RES.98, 105th Congress, 1st session (1997).
2. It should be noted that legality does not address the issue of enforcement or compliance. A country that is legally bound to certain targets could nonetheless break its commitments and withdraw unilaterally without any real penalty, if a credible enforcement structure does not exist (e.g. Canada withdrawing from the second commitment period of the Kyoto Protocol).
3. The New Zealand proposal has since been endorsed by the US climate envoy Todd Stern.
4. See the latest negotiating text of ADP Agenda Item 3: http://unfccc.int/resource/docs/2015/adp2/eng/01.pdf.
5. The US, along with Mexico and Canada, has already put forward a '2014 North American Amendment Proposal to Address HFCs under the Montreal Protocol'.

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## Foreword to Chapter VI: US-Proofing the Paris Climate Agreement

This paper explores how the Paris Climate Agreement, or alternative agreement, could effectively address a non-party US. It is complementary to Chapter V and covers the flipside of the US ratification conundrum. It explicitly addresses the thesis research questions by examining how a future climate treaty could, and how the Paris Climate Agreement would, function without US legal participation. The final model presented in this paper provides the foundation for the idea of 'exclusive CMG' outlined in the discussion (Chapter VII).

This article is similar to Chapter V but with a focus US non-participation. This is based on the scenario of a US withdrawal from the Paris Climate Agreement due to change in executive (or Congress). It also deviates from Chapter V by making more explicit use of causal loop analysis and systems thinking. This provides a greater connection to Chapters III and VII. The close links to Chapter V are natural given that these were originally part of a single paper that was later split in two based on anonymous peer-review feedback. Thus it draws upon similar empirical data and ideas as Chapter V, but with a number of important differences such as the focus on non-party measures.

This paper makes an important contribution to the thesis by explicitly addressing research question 2 and exploring how a climate agreement could address a recalcitrant, non-party US. Moreover, it provides an important and timely dimension to the thesis as it was updated and published after the Paris Climate Agreement. It examines how the agreement addressed the US ratification straitjacket and the implications of a possible US withdrawal in the future.

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# US-proofing the Paris Climate Agreement

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climate policy

# US-proofing the Paris Climate Agreement

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What can be done if a future US President withdraws from the Paris Climate Agreement? This is a critical question for an agreement which relies on universal participation for legitimacy. The US can and likely will ratify the Paris Agreement via a presidential-executive agreement. However, this could be easily reversed by a future President or an antagonistic Congress. A non-party US operating outside of the Paris climate architecture is a real threat, especially given Republican opposition to international climate policy. This article explores both what tools are available for addressing a non-party US in any climate agreement and what the Paris Agreement in particular can do. The Paris Agreement is extremely vulnerable to the withdrawal of the US, or any other major party. It possesses no non-party measures, although it can be amended to help avoid this Achilles heel. Through amendments to Article 6 a market link between subnational states in a renegade US and international carbon markets could be created. Ideally, a more semi-global approach with punitive carbon border tax adjustments could be taken to help US-proof an alternative climate agreement. The Paris Agreement will be fatally susceptible to a US dropout unless amendments to the treaty are made. Relying on the good will of a single president is short-sighted. Longer-term climate governance needs to take seriously the threat of non-parties, particularly if they are superpowers.

**Policy relevance**

This article explores how to craft an effective climate treaty without US ratification, including through reforms to the Paris Agreement. While the US is likely to be able to be able legally adopt the Paris Agreement through a presidential-executive agreement there is a distinct possibility of the US withdrawing and repealing such an agreement due to a change in president. This article suggests that the Paris Agreement is vulnerable to such an occurrence and thus the insights of this research are both timely and relevant to delegations and others involved with the UNFCCC. It will be of use to domestic US actors, as well as international negotiators and scholars in dealing with a non-party US and non-parties in general.

*Keywords:* climate policy frameworks; climate regime; multi-level governance; post-2012 architecture; UNFCCC; United States



## 1. Introduction

If any future climate treaty is to be legally binding, it must be designed to deal with the very real possibility of US non-ratification. A key question for the 2015 Paris Climate Agreement is whether it is equipped to deal with the US not legally adopting it, or withdrawing under a future president. That is, can the Paris Agreement handle a 'non-party' US? The participation and/or leadership of the US is seen by many as being crucial, if not necessary, for the success of any climate agreement (Grundig & Ward, 2015; Purvis & Stevenson, 2010). But the US is caught in a 'ratification straitjacket': international legal engagement on environmental issues is significantly constrained due to a combination of unique domestic institutions and the problematic federal politics (Kemp, 2015a). The recently established

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2015 Paris Climate Agreement under the United Nations Framework Convention on Climate Change (UNFCCC) has been designed to allow for the US to legally participate through a presidential-executive agreement. This would bypass congressional approval and not require ratification from the US Senate. However (as further explored in Section 2), there are numerous reasons to be prepared for the possibility of the US not legally adopting the Paris Climate Agreement or withdrawing under a future President. This is particularly true if a Republican rises to power in the coming decade. This would undermine the key achievement of the agreement: legitimacy through broad, if not universal, participation. It is therefore necessary for the world to consider how vulnerable the Paris Climate Agreement is to a non-party US and what reforms can be taken to address this potential weakness.

Despite the proliferation of literature on architectures for a 2015 agreement, the existing literature has not addressed the conundrum of the US ratification straitjacket and has rarely examined the management of non-parties in general. I (Kemp, 2015a) have examined how a climate agreement could remain effective and allow for US legal participation. But no-one has grappled with the other side of the equation: how a climate treaty could effectively operate without US legal participation. Given the existing political realities and Paris Agreement this is a significant gap with clear policy implications. I will address this void in existing literatures through pursuing three related research aims:

1. To provide an overview of the existing options that would allow for an effective climate treaty without US legal participation, or effective US participation in the absence of ratification.
2. To assess whether the existing Paris Climate Agreement can effectively manage a non-party US.
3. To provide recommended changes and alternatives to the Paris Climate Agreement that would better address a non-party US.

At this point, it is worthwhile to clarify a number of key terms. For the purposes of this article, an 'effective climate treaty' is any agreement which is likely to maintain sufficient ambition and give a reasonable chance of meeting the goals of the Paris Agreement (as enshrined in Article 2). 'Effective US participation' refers to the political and financial (not legal participation under international law) involvement of US actors within an international treaty that will lead to increased climate action and ambition within the US. Political feasibility in this case refers to institutional possibilities and the likelihood of acceptance by major powers.

I will proceed by first looking at the ability of the US to ratify the Paris Agreement and the likelihood that they will become a non-party. I will then provide a brief overview of climate policy in the US before examining how a climate agreement could cope with a non-party US, whether the Paris Agreement is US-proof, and finally how a climate agreement, including the Paris Agreement, could be designed to handle a non-party US.

## 2. Will the US become a non-party to the Paris Agreement?

The US has struggled to ratify international treaties, particularly environmental ones due to institutional and political barriers (Bodansky, 2015; Falkner, 2005; Kemp, 2015a; Schreurs, Selin, & VanDeveer, 2009). Article 2, section 2, clause 2 of the US constitution states that the president shall 'have the power, by and with the advice and consent of the Senate to make Treaties, provided two thirds of the Senators present

concur'. Acquiring this supermajority vote in the Senate has proved incredibly difficult. A deep-seated scepticism of UN multilateralism, particularly on environmental matters (Brunnee, 2008; Patrick, 2002) along with lobbying and partisan politics, has made widespread political agreement on climate policy almost impossible in the short term (Bang, Hovi, & Sprinz, 2012; Purvis & Stevenson, 2010). Interestingly many treaties tend to pass through the Senate with few hurdles. The problem with others, particularly environmental treaties, is that they centre on more politically controversial topics. The ratification structure is not automatically a problem: it is only a major impediment when political opposition uses the Senate processes to delay, stall, and stop ratification. This 'ratification straitjacket' (Kemp, 2015a) was a sincere concern prior to the Paris Agreement and shaped the end outcome.

Presidential-executive agreements are an alternative method of international legal engagement that have the same legal force as Senate treaty ratification once enacted (Bodansky, 2015; Peake, Krutz, & Hughes, 2012). In contrast to Senate ratification a presidential-executive agreement only needs the consent of the Executive (Krutz & Peake, 2009). Presidential-executive agreements have been enacted to numerous multilateral environmental agreements (MEAs) including several protocols to the 1979 Long-Range Transboundary Air Pollution Convention (LRTAP) and the more recent 2013 Minamata Convention on Mercury. There is a general scholarly consensus that the US could engage with an international climate treaty through the use of presidential-executive agreements as long as it lies within the scope of the President's foreign affairs mandate and existing legislation (Bodansky, 2015; Chang, 2010). This means that the content of the treaty could not include legally binding emissions reductions targets or financial commitments.

The US is capable of legally adopting the Paris Agreement through a presidential-executive agreement. The Paris Agreement does not include binding commitments on financing, while mitigation commitments are nationally determined and non-binding. Parties simply have a legal commitment to 'prepare, communicate and maintain successive nationally determined contributions that it intends to achieve'. The content (or lack thereof) of the Paris Agreement means that it can be adopted through a presidential-executive agreement by Obama and would likely withstand a judicial challenge. Indeed, the Paris Agreement was designed to allow for exactly this. This fits my prediction (Kemp, 2015a) that Paris would be constructed as a pledge and review agreement with varied legality in order to allow for a presidential-executive agreement.

While promising, presidential-executive agreements should not be considered as a panacea to the problem of US participation. Presidential-executive agreements could be abolished by a future President through an executive order or by Congress via a contradictory later-in-time statute. While the same can also be done for binding commitments, such international legal obligations generally involve a domestic ratification and legislative process which requires broad political support. A presidential-executive agreement would be done to bypass domestic political consensus. Any future Republican president is likely to repeal such an agreement, effectively making the US a non-party. Indeed, many Republicans have already signalled their opposition to a presidential-executive agreement to Paris. A 2015 proposed Senate Resolution by Republican representatives Mike Lee and Mike Kelly calls for President Obama to submit the Paris Agreement for the advice and consent of the Senate as an Article II treaty.[1] EU diplomats have already expressed concerns that a future Republican will pull the US out of the Paris Agreement (Neslen, 2016).

US legal participation through executive agreements is contingent upon strong political will by the President. The Obama administration has enacted a number of promising domestic measures (which

will be further discussed in Section 3.2) and has increased its rhetoric around addressing climate change. But it is questionable as to whether this will translate into the drastic act of enacting a sole-executive agreement on the international stage which could cause a political firestorm at home. The Clinton administration was similarly active prior to the Kyoto Protocol which it helped shape and design. However, the administration ultimately did not follow through with ratification. The threat of numerous reprisals by the Republican Party, including the withholding of funds for the Green Climate Fund (GCF) or domestic climate action programmes, could deter Obama from pursuing an executive agreement. Given this it is necessary to consider the real possibility and threat of the US not legally adopting, or adopting and later withdrawing from, the Paris Agreement. While domestic politics is the primary barrier here, domestic policy circumstances provide some key insights into how an international regime could effectively handle a non-party US.



## 3. The current state of US climate policy

### 3.1. The failure of federal climate policy

The most marked aspects of US climate policy are the lack of involvement in international legal instruments and absence of any central federal policy on mitigation. There has been a multitude of proposals for national emissions reductions schemes in the Senate and Congress, most of which have revolved around a cap and trade type architecture. This includes the McCain and Lieberman proposal at the 109th Senate session, and the Waxman Markey bill of 2010. Efforts have intensified as of late with six different carbon pricing proposals being put forward in the 113th Congress (2013–2014), five of which seek to establish a carbon tax (Ye, 2014). None of these proposals have been successful. It is indicative of both US climate politics, and the difficulty of crafting legislation in the US, that despite the sheer number of proposed bills the US still lacks a legislated national mitigation scheme. However, it should come as no surprise given that the US system is prone to gridlock (Bang, Froyn, Hovi, & Menz, 2007; Bang et al., 2012; Tjernshaugen, 2005) even when bipartisanship, including on issues such as energy security, exists (Bang, 2010).

In lieu of effective federal-level policy, the current executive has taken an increasingly proactive role. The Obama administration has made a number of promising advances forward such as the $3 billion US dollar pledge to the GCF, a bilateral climate arrangement with China (including cooperation on the phase-out of hydrochlorofluorocarbons, a potent greenhouse gas), and an intended nationally determined contribution (INDC) of reducing greenhouse gas emissions by 26–28% on 2005 levels by 2025.[2] In addition to these international actions, the Obama administration has also made extensive use of the Environmental Protection Agency (EPA) to enact a number of climate-related initiatives. These range from vehicle emissions standards through to the more recent Clean Energy Power Plan. The increasing activity of the executive on climate change has been matched by a multitude of ambitious initiatives by subnational US actors.

### 3.2. Subnational climate action in the US

In the absence of congressional climate action, there has been a blossoming of policies by states, regions, municipalities, and cities within the US. This includes such notable initiatives as the emissions trading system of the state of California (Schreurs, 2008). Many of the actions and goals of subnational

**Table 1.** A comparison of ambitious US city and state targets and the US INDC

| Actor | Jurisdiction | Interim emissions reductions target(s)[a] | Long-term emissions reductions target |
|---|---|---|---|
| US | Nation state | 26–28% below 2005 levels by 2025 (equivalent to − 14% to 19% on 1990 levels) | 83% below 2005 by 2050 (equivalent to approximately 80% below 1990 levels) |
| Austin | City | Make all City of Austin facilities, fleets, and operations carbon neutral by 2020 | Carbon neutral by 2050 |
| California | State | Reduce to 1990 levels by 2020. 40% below 1990 levels by 2030 | 80% below 1990 levels by 2050 |
| New York City | City | N/A | 80% on 2005 levels by 2050 |
| New York State | State | Reduce GHG emissions from the energy sector by 40% by 2030 based on 1990 levels | 80% on 1990 levels by 2050 |
| Seattle | City | Previously 7% below 1990 levels by 2012 | Carbon neutral by 2050 |

[a]Emission targets are in GHG emissions unless stated otherwise. All targets are based on data gathered from the Carbonn database, the NAZCA database and cross-referenced against existing official documentation (where available).



jurisdictions are significantly more ambitious than national-level policies and targets. Table 1 provides a comparison of some of the most ambitious targets of US subnational jurisdictions against the existing US INDC. Importantly, US state policies in the past have served as forerunners of and models for later federal legislation (Rabe, 2008; Rabe, Roman, & Dobelis, 2005; Selin & VanDeveer, 2011) by acting as both laboratories for innovation (Burtraw & Woerman, 2012, 2013) and political advocates for national action. An example of this is the vehicle emissions standards enacted by California which were later adopted by the EPA and Obama administration as federal-level policy in 2010. Subnational action on climate change often outpaces federal-level policy in laggard countries, and the US is no exception to this trend (Lachapelle & Paterson, 2013).

The rise of subnational and executive-led actions is a clear reaction to federal gridlock. It is an alternative policy pathway to bypass the divided Congress and Senate (Farber, 2014). Indeed, Rabe has characterized this blend of subnational and federal initiatives as 'contested federalism' (2011). This analysis is supported by the design of existing federal climate policy. The Clean Power Plan sets different emissions rate goals for different states and provides the states with considerable flexibility in how they choose to meet their targets. Similarly, the regulation of carbon dioxide under the EPA Clean Air Act relies heavily on state interpretation and implementation (Rabe, 2011, p. 505). Executive policy on climate change has come to rely on US states for inspiration and implementation in the age of contested federalism.

### 3.3. The lessons of 'contested federalism'

Current US climate policy largely consists of fragmented subnational actions accompanied by a number of executive measures, all done in the shadow of Congressional gridlock. This has important limitations. Executive actions taken by the White House rely upon the President's mandate and existing legislation. In contrast, federal action can create entirely new legislation, such as a binding cap on

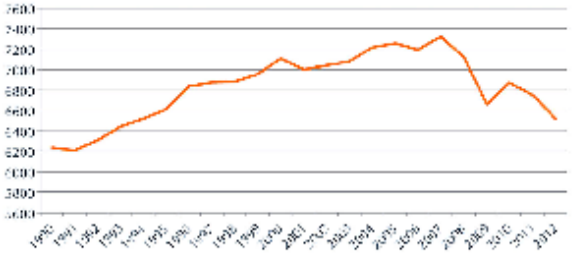

**Figure 1.** Trends in US GHG emissions, 1990–2012 (EPA, 2014)



emissions. Despite existing actions, the overall national emissions of the US have not experienced any substantial decline, as shown in Figure 1.

Contested federalism also provides unique opportunities. While ratification may be highly unlikely, linkages could still be established between subnational actions and a wider international architecture. The key in addressing a non-party US is to utilize tools that allow for the involvement, recognition, and financial links to progressive US actors.

## 4. Tools for managing a non-party US

This section provides an overview of the different options that can be used to help address US non-party status under a climate agreement. Section 5 then explicitly examines these tools in relation to the Paris Agreement to determine how robust or vulnerable the agreement is to a non-party US. The mechanisms discussed in this section are intended to coerce or incentivize eventual US legal reengagement and/or encourage mitigation activities within the US.

### 4.1. Non-party measures

Currently the Paris Climate Agreement has no non-party measures. There are no direct ways to handle a non-ratifying party or one that has withdrawn without amending the agreement. If such amendments are to occur, it is useful to understand what options are available.

#### 4.1.1. Penalties

Punitive provisions for non-parties can take numerous forms but share the common aim of penalizing non-parties and therefore preventing free-riding. They usually take the form of trade restrictions that levy imports on the basis of involving either carbon border tax adjustments (BTAs) or the surrendering of emissions permits (Aakre, 2014). There is clear successful legal precedent for such non-party measures and their application in other MEAs. Trade in ozone-depleting substances with non-parties was banned under paragraph 4, Article 4 of the Montreal Protocol. Such measures have legal precedent in numerous other MEAs. BTAs have been repeatedly discussed within the EU and US (Aakre, 2014) and

could potentially provide a way of managing any potential carbon leakage and addressing free rider concerns (Barker et al., 2007; Branger & Quirion, 2014; Purvis & Stevenson, 2010). The implementation of such measures is likely to be technically possible under WTO rules (Veel, 2009; Zhang, 2009) and a credible threat. While it would likely pose some costs due to the difficulty in assessing the carbon content of imports, monitoring and labelling systems are feasible (Ismer & Neuhoff, 2007; Pauwelyn, 2013). Existing literature suggests that cost and effectiveness of BTAs would largely depend on their particular design (van Asselt & Brewer, 2010). Whether parties would be willing to utilize BTAs, particularly against the US, is an entirely different matter. BTAs have never been implemented and have fallen off the political agenda of the EU (Kulovesi, 2014). Most importantly, Article 15.2 of the Paris Agreement states that the compliance mechanism of the agreement is to be 'non-adversarial and non-punitive'. BTAs and other punitive measures will not form any part of the future compliance mechanism and are highly unlikely to be part of any future non-party provisions. Punitive non-party measures, while theoretically useful, are currently not a feasible tool.



#### 4.1.2. Facilitative measures

Non-party measures need not be punitive by nature and instead can be much more facilitative and inclusive of non-parties. Haites, Yamin, and Höhne (2013) suggest a provision for non-party recognition where a country with equivalent measurement, reporting and verification (MRV) and financial commitments can make a request to the COP to be recognized under the treaty. If accepted they would be expected to meet their proposed targets and gain access to flexibility mechanisms and carbon markets under the agreement. The development and use of carbon markets would appear to be a key incentive for US participation given their insistence upon their inclusion within the Kyoto Protocol and continued advocacy for market-based mechanisms. However, such facilitative measures rely on the consent of the president. If a future president is the reason for withdrawal from the agreement, then they are unlikely to want to engage through such facilitative provisions. Accordingly, facilitative measures are unlikely to be useful in managing a non-party US.[3]

Different non-party provisions, both punitive and facilitative, could be combined for flexibility and maximum effectiveness. For example, mixing border tax adjustments with non-party recognition and incentives would encourage non-ratifying parties to adopt comparable measures and request recognition so as to avoid trade restrictions and make the most of potential commercial opportunities. A carrot and a stick together will be more effective than either alone. One example of this in practice would be the 2013 *Minamata Convention on Mercury* which under Article 6(b) prohibits the trade of mercury with non-parties unless they provide certification proving that they meet the provisions on Articles 10 and 11 on sound storage and the protection of human health and the environment. A similar arrangement with the measures outlined above could both allay competitiveness concerns for Parties under a treaty without the US and still allow for the US to effectively engage despite a non-party status.

### 4.2. Facilitating bottom-up US action

A multilateral agreement is inherently a legal contract between nation states. This excludes the direct legal involvement of subnational actors such as states, cities, and local governments. However, there are other ways of incorporating subnational actors into an agreement. These range from the

recognition of actions and mitigation measures by subnational and non-state actors through to direct financial connections.

#### 4.2.1. Subnational facilitation

One way to involve subnational actors is to employ an international framework for recognition and facilitation. Linking the multilateral UNFCCC regime to subnational and non-state actions could help all three to realize their potential (Betsill et al., 2015). Since this requires little to no legal or financial engagement or resource expenditure it is the easiest and most politically feasible way of engaging subnational actors within a non-ratifying US. Technically, registries already exist that officially and publicly record the actions of subnational and non-state actors. These include the *carbonn* climate registry and the Non-State Actor Zone for Climate Action (NAZCA), both of which have recorded the initiatives of US cities, states, and companies. However, simply recording actions is not enough to encourage policy diffusion and upscaling of best practice. Chan and Pauw (2014) advocate for a comprehensive 'global framework for climate action' that will have numerous functions including the mobilization of new or improved initiatives, recording initiatives into a publicly available register, and conducting a periodic review of the effectiveness of different initiatives. The aim of such a framework would be not only to recognize subnational initiatives, but also steer and orchestrate them towards greater ambition and effective implementation.

Yet, there is no guarantee that such a platform would be effective. It could be argued that there is already sufficient knowledge of subnational actions within the US, particularly through international networks such as Local Governments for Sustainability (ICLEI) and the C40. The use of benchmarking and periodic review, while useful, does not always ensure compliance or diffusion. Going beyond facilitation towards more tangible financial links is one way to more strongly embed and aid subnational US action in an international agreement.

#### 4.2.2. The subnational market link

While states in the US and subnational actors cannot directly ratify a multilateral agreement, they can still be involved by way of markets and financial transactions. A 'subnational link' could include both a project-based financing flexibility mechanism targeted towards subnational actors and access to international carbon markets for subnational actors. The former could be an expanded and improved CDM geared towards aiding subnational entities in meeting their commitments (LefÈvre, 2012). Directing financing channels and the leveraging of private finance through this mechanism could further accelerate subnational mitigation (Lefèvre & Wemaere, 2009). The latter measure could simply be an option to allow for subnational actors in non-parties to access international carbon markets by connecting their own carbon pricing schemes and directly trading certified permits on the international market. Unlike in current circumstances for parties using the Kyoto ETS, the permits would accrue to the state or implementing subnational actor, instead of the national government. This system could be used for parties as well as non-parties through the use of harmonized inventories.

One requirement would be that subnational entities within non-parties to the agreement meet MRV standards in order to maintain a robust market price as well as to ensure that their contributions to national targets are appropriately accounted for. Thus, a key starting point would be establishing

common MRV and accounting methodologies to allow for harmonized inventories between the multiple levels of governance (Corfee-Morlot et al., 2009; Hoornweg, Sugar, & Gomez, 2011). There are already tools for inventories that allow for the break-down of carbon drivers and emissions (Lefèvre & Wemaere, 2009), which could be widely and cost-effectively adopted (Hoornweg et al., 2011). A CDM-type financing mechanism is unlikely to be useful as climate financing is targeted towards developing countries. Multilateral financing for non-party subnational actors in developed countries (the US) would be politically rejected. Allowing subnational actors in non-parties to access and use international carbon markets and build other market-based linkages is the only feasible form of a subnational financial link.

Since states drive and pioneer federal-level policy, a subnational market link which empower states and assists state-level action could create feedback which drive the adoption of federal-level climate legislation, as depicted in Figure 2. The first reinforcing feedback loop (R1) visually depicts how upwards policy diffusion and political pressure from states drives US multilateral engagement, which in turn leads to further investment and financing towards the subnational link as international actors see the positive effects. The second virtuous cycle (R2) illustrates that as state actors gain from access to markets, financial resources, and policy diffusion they become institutionally enmeshed and demand more from the link.



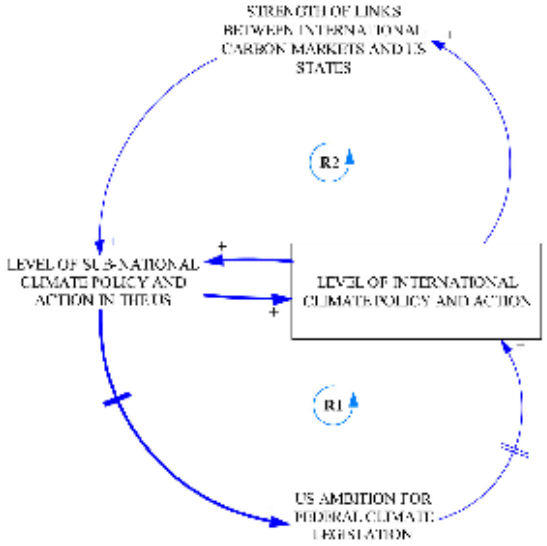


**Figure 2.** The subnational link and feedback to the federal level

## 5. Is Paris US-proof?

Given the existing options for addressing US non-party status is the current Paris Climate Agreement likely to be able to effectively cope if the US withdraws from the treaty or does not legally adopt it? Unfortunately for now the answer is no. None of the tools outlined in the previous section is mentioned in the Paris Agreement. As noted previously, the Paris Agreement is explicitly facilitative and non-punitive and provides no provisions relating to non-parties (nor does the UNFCCC).

While there are provisions for involving subnational actors under sections IV and V of the COP21 decision, these are weak and superficial. For example, paragraph 135 simply invites different non-state stakeholders to scale up existing actions and register these via the NAZCA platform. Article 6 of the agreement outlines mechanisms for cooperation, including market-based mechanisms. Under Article 6 market mechanisms are not directly mentioned, but instead referred to as 'internationally transferred mitigation outcomes'. Paragraph 3 stipulates that these internationally transferred mitigation outcomes will be used to meet nationally determined contributions (NDCs) under the agreement and 'shall be voluntary and authorized by participating Parties.' The direct reference to participating Parties and the linking of market mechanisms to achieving pledges under the agreement would preclude the involvement of non-parties and subnational actors within them. Paragraph 4(b) outlines that the aim of the sustainable development mechanism under the agreement is 'To incentivize and facilitate participation in the mitigation of greenhouse gas emissions by public and private entities authorized by a Party'. Article 6 currently only enables Parties with NDCs to participate in market-based and other mechanisms. Amendments to the agreement would be necessary to allow for the use of a subnational market link to a non-party US. Aside from Article 6, Article 28 specifies that withdrawal from the agreement can only take place 3 years after entry into force for that party. If the Paris Agreement enters into force just prior to a Republican president it could delay their intent to withdraw. But this would be short-lived, lasting less than one presidential term, and could be circumvented by a president simply withdrawing from the UNFCCC which would result in an automatic withdrawal from the Paris Agreement.

The Paris Climate Agreement cannot be considered US-proof: none of the tools to manage a non-party US have been enshrined into the text. The Paris Agreement is reliant on the will of the existing President and good intentions of future presidents. It should also be noted that the agreement only establishes a 'facilitative' and 'non-punitive' compliance mechanism under Article 15. If a future President was to abolish domestic executive measures such as the Clean Power Plan, it would likely lead to the US missing its proposed targets and damaging the legitimacy of the Paris Agreement. Even if a future Republican executive chooses to stay party to the Paris Agreement there is still no way of effectively handling intentional non-compliance. It is a scenario which could be just as damaging as a US withdrawal.

If the Paris Climate Agreement is to effectively deal with a non-party US then amendments to the agreement will be necessary. While the Paris Agreement can be amended through a three-quarters majority vote as per Article 22, such a move faces political obstacles. Parties have traditionally been unwilling to amend existing legal instruments for fear of 'reopening' agreements and allowing for a flood of new proposals. However, some amendments, such as the 2012 Doha amendments to the Kyoto Protocol, have been previously agreed to by consensus. Second, amendments are only binding upon those Parties which accept them. Non-universal adoption of amendments could lead

to a legally confusing scenario. However, this was a common practice under the Montreal Protocol with subsequent amendments often not incurring universal ratification. While the reform of the Paris Climate Agreement to allow for mechanisms to address a non-party US faces challenges, it is feasible.

## 6. Architectures for managing a non-party US

The suite of tools for addressing US non-party status can be combined to craft different approaches. This section will explore two broad models: (a) the existing pledge and review system of the Paris Agreement amended to allow for subnational market link and (b) a carbon budget inclusive of non-party subnational actors with more stringent non-party measures.



### 6.1. Amending the Paris Agreement

The existing pledge and review system of the Paris Agreement could be amended to increase its resilience to a non-party US. As noted, facilitative non-party measures would likely be useless and punitive measures appear highly unfeasible. The only feasible and effective option would be to establish a market link to subnational actors in non-parties. This would require amendments to Article 6 and the development of further rules under future COP decisions. This could allow for subnational states in the US to join carbon markets and efforts outside the US. This could encourage bottom-up action in the US, both helping to heighten climate action domestically in the US and aiding subnational states like California to lobby and pressure the federal government. While such a market link could help to functionally involve a non-party US, it is debatable how much it could help maintain the legitimacy of a Paris Agreement without federal-level US participation.

### 6.2. An alternative to the Paris Agreement

An alternative to the US-vulnerable Paris Agreement is the scenario of 'Exclusive Critical Mass Governance' (ECMG). This is a model whereby a small but powerful group of major emitters (most likely the EU and China) go ahead and forge their own semi-global agreement without US participation. It is similar to my previously proposed model of 'Critical Mass Governance' which was intended to allow for US legal participation in an effective climate treaty (Kemp, 2015a). This proposal could be thought of as 'Inclusive Critical Mass Governance' in contrast to the ECMG model outlined here, as both attempt to craft effective climate architectures, but one does so with US legal participation and the other without. Both rely on a plurilateral logic that an agreement can start narrow-and-deep and broaden in membership and deepen in substance over time (Kemp, 2015a).

In this case, a coalition of parties could forge ahead and create an ambitious top-down framework based upon a carbon budget model. Fears over carbon leakage have little to no empirical basis (Branger & Quirion, 2014) and any potential leakage could be addressed through punitive non-party measures such as BTAs. The agreement would also utilize the subnational market link in order to allow for greater cost-effectiveness by maximizing mitigation opportunities while maintaining ties with the US. In that case, the participating subnational entities would need to have both requisite MRV standards as well as take targets in line with their fair share under the carbon budget. Periodic

review via a framework for subnational actors could help ensure this and facilitate compliance. If the carbon budget was able to incorporate enough subnational actors from non-parties, it could develop a large degree of participation despite limitations in national actor numbers. Within this scenario the idea would be that the pressures of subnational action and trade restrictions would eventually push the US to ratify it. This approach has some resemblance to the 'climate club' proposal of Victor (2011) but differs in its use of a carbon budget, initial exclusion of the US, and use of non-party measures paired with a subnational financial link.

The implementation of ECMG in its purest form faces a number of potent political and technical obstacles. First and foremost, it would require strong leadership from China and/or the EU, neither of which currently appears willing to do so. China, in particular, has made it abundantly clear through official statements and submissions that it expects developed countries to take the lead in mitigation action. China, while capable, appears largely unwilling to take a leadership role before the US. Based on this, China would be unlikely to participate in any agreement that lacks US legal participation.

Yet the domestic actions of China often do not match its international rhetoric. The ambitious domestic policies of China have been driven by domestic co-benefits such as reducing air pollution, improving energy security, and gaining an economic advantage in the renewable energy industry (Teng & Jotzo, 2014). This string of strong domestic actions has intensified with China recently announcing the creation of national emissions trading scheme beginning in 2017 and the banning of new coal mines until 2019. Thus, it is not out of the question that China may take a strong leadership role based on perceived domestic benefits and choose to forge ahead without the US. The likelihood of this extending to approaches as drastic as trade measures appears highly unlikely.



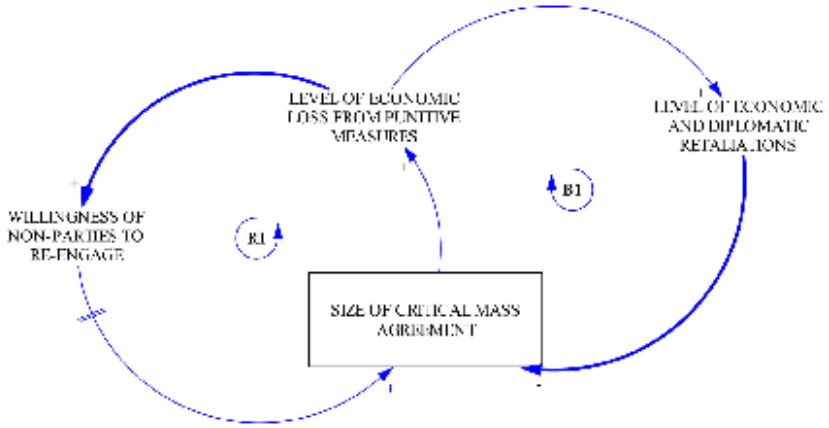


**Figure 3.** International feedback and US engagement

As shown in Figure 3, trade restrictions can encourage greater willingness to cooperate as the affected party wishes to alleviate economic losses. If the impacted party decides to reengage then a reinforcing feedback is created as the power of penalties increases with more countries joining the agreement (R1). However, trade measures would likely trigger diplomatic and economic retaliations. This tight balancing feedback (B1) deters such action, particularly by major developing countries such as China who have previously been unwilling to discuss trade restrictions under the UNFCCC (Aakre, 2014). Second, and most importantly, the Paris Agreement has already been established and the creation of a second international framework is now a forlorn hope. Third, the UNFCCC works by consensus and therefore decisions over entry into force requirements, non-party measures, and the broader architecture would need to be agreed to by all parties (Hovi, Skodvin, & Aakre, 2013). While there are legal opportunities for the UNFCCC to adopt voting, which could allow for such a plurilateral approach, these appear currently unfeasible (Kemp, 2015b). As Hovi et al. (2013) argue the only options would be for such a coalition and legal framework to be developed outside the auspices of the UNFCCC. While this approach seems unfeasible for now it could become the basis of a future deal between China and the EU outside of the UN. It could provide an effective way of marginalizing the US and addressing leakage concerns, whilst encouraging their longer-term reengagement. In any case, such ideal architectures are important to keep in mind as benchmarks for how an agreement could be designed to address a non-party US.



## 7. Conclusion

While the US is likely to ratify the Paris Agreement via a presidential-executive agreement, there is nonetheless a real threat of US non-ratification or withdrawal under a future president. Having safeguards in place to deal with such a problem is a wise, precautionary approach with few trade-offs. Yet currently the Paris Climate Agreement has no non-party measures, or ways of including subnational actors within non-parties. It is entirely vulnerable to US withdrawal and non-parties in general. A non-party US could lethally wound the Paris Agreement, yet it is completely unprepared for such an occurrence.

Amendments to Article 6 to allow for the involvement of subnational actors in non-parties is one feasible way forward to help US-proof the Paris Agreement. This is unlikely to be enough to drive reengagement by the US or save the legitimacy of the Paris Agreement. Truly effective management of a non-party US is likely to require the unfeasible strategy of punitive measures and a semi-global approach, as embodied in the Exclusive Critical Mass Governance model.

The Paris Climate Agreement has been shaped towards the preferences and circumstances of the US. Failure to consider the possibility of the US being a non-party in the future would be a fatal mistake. A mistake, like the Kyoto Protocol before it, could jeopardize the legitimacy and effectiveness of the agreement. The tools exist to help ensure that the Paris Agreement can operate without the US, although it may not be enough. The world may need to learn the lesson that relying on the good will of one president is short-sighted. Environmental agreements will only succeed in the long term if they take seriously the threat of non-parties, particularly if they are superpowers.

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## Notes

1. Concurrent Resolution, Senators Lee and Kelly, Senate Congressional Resolution to the 1st session of the 114th Congress, DAV15K66.
2. This equates to a cut of 12–19% below 1990 levels.
3. Unless it is the case that the Congress has abolished the executive agreement and the president remains enthusiastic to engage multilaterally.



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# Chapter VII: Discussion

This discussion chapter brings together the different insights explored in this thesis to propose two alternative governance models, directly addressing the central research questions outlined in Chapter I. Both models of CMG are plurilateral approaches to managing US participation in environmental multilateralism. Inclusive CMG uses institutions and plurilateral treaties that allow for the US to contribute to leadership where they can. Exclusive CMG employs treaties and institutions that are designed to operate by coalitions of the willing that preclude US participation initially. These two CMG models are derived from a theoretical perspective focusing on system dynamics and feedback analysis. A conceptual framework for analysing how a transition to these different forms of governance can be achieved is constructed. The implications of both the CMG theory and conceptual framework are explored and the feasibility of each of the CMG models occurring is investigated. The chapter concludes with a brief analysis of what the theory and framework mean for the framing debates on participation in Chapter I. A version of this chapter has been accepted for presentation as a conference paper at the 2015 ESG Canberra conference

## 7.1 Tying Together the Threads: A Choice between Two Governance Models for Addressing US Participation

A common thread throughout this thesis is that there is a fundamental choice for conducting environmental governance that addresses US participation: the system must either be constructed to allow US legal participation in the short term, or built to bypass it. This means that there are two different answers to the first research question on how

to address US participation whilst maintain regime effectiveness: the governance model must be clearly designed to function either with the US, or without it. The first can be thought of as ‘inclusive CMG’ and the second as ‘exclusive CMG’. In relation to the second question on how to enable such governance models, it is clear that the enabling reforms at treaty, institutional, and decision-making levels depends on the desired strategy. An effort to construct a system that operates effectively with the US has different reforms in comparison to one that attempts to work without the US. There are two separate answers for each research question: inclusive CMG addresses effective international environmental governance with the US and exclusive CMG governance without the US.

The first model is embodied in the UNEP Unknown scenario of Chapter III and the CMG model approach of Chapter V and has been termed inclusive CMG. For treaties, legal participation can be largely achieved through variable geometry, as argued in Chapter V and aided through the use of voting. For an institution like UNEP, it is either a matter of organisational reform to increase effectiveness without an alteration of form that would require ratification (UNEP Unknown) or waiting for US domestic circumstances to change (incremental upgrade).

The second model is built on the Critical Mass WSDO from Chapter III, combined with both layered voting and the multi-level carbon budget treaty structure of Chapter VI. In contrast to the previous option, it will be termed as exclusive CMG. The name denotes a strategy that does not openly attempt to allow for US legal participation and is prepared for its exclusion. These different reforms share a rationale and are also synergistic. A 2015 treaty operating under an exclusive CMG structure could easily engender a backlash by the US. Having an accompanying critical mass WEO would make the larger environmental regime more resilient to such a backlash, since the institution would

already not be reliant upon US funding. Combining the different reforms in this model constructs a more resilient approach by partially nullifying the possible negative feedback of US economic and political retaliatory measures. With this in mind, it is more appropriate to view the two different governance models as packages of connected institutional reforms enabling a specific multilateral approach, rather than simply two different sets of attitudes towards US participation.

This thesis has critiqued the existing modes of environmental multilateralism and, in doing so, has proposed that in order to address the issue of US ratification and participation there is a need for a paradigm shift. The shift is one away from global package deals based on consensual, interlinked negotiating and towards a more plurilateral method. Both are applicable to treaty design (the 2015 climate agreement) and high-level institutional reform (UNEP). This idea is an explicit and logical adaptation to a multipolar world that is not characterised by a clear hegemon.

Semi-globalism is possible because the world is no longer reliant upon a single dominant actor, and thus success depends on instigating a critical mass of action across a constellation of actors. An inclusive CMG approach is viable, since the more fragmented architecture can accommodate a variety of interests (Sugiyama and Sinton 2005) and therefore a greater diversity within coalitions of the willing, across different issues. A change in international norms and decision-making rules is central to allowing environmental multilateralism to make use of multipolarity and in turn better cope with the conundrum of US participation.

The next section will provide a theoretical underpinning to both of these models of governance and an argument as to why they both could, in light of precedent and theory, function effectively. The common thread of initially having non-universal participation in institutions and legal instruments that then grows in numbers and

effectiveness can be drawn together under one coherent theory: a theory of CMG.

## 7.2. A Theory and Analytical Framework of Critical Mass Governance

The best way to address US participation (and make use of multipolarity) is to enable and encourage treaties and institutions to operate initially with a 'critical mass' of countries that will expand over time. This could be done in a decentralised fashion on specific issues (inclusive CMG) or as a strictly semi-global endeavour (exclusive CMG). The concept of a critical mass in socio-dynamics refers to a threshold number of adopters that, when reached, results in a legitimate and self-perpetuating form of collective action (Ball 2004). Notions of critical mass and the critical state were first identified in physical systems, but have been found in numerous complex systems including human ones, leading some to speculate that they are 'ubiquitous' phenomena (Buchanan 2001). This critical mass dynamic appears to be applicable to the realm of international politics and environmental multilateralism.

While most current environmental treaties are working by a broad consensus style, historical precedents suggest that international cooperation often functions via a critical mass dynamic. The General Agreement on Tariffs and Trade at its inception was a plurilateral coalition that was born from the failure of the International Trade Organisation, which exemplified an attempt at the global deal approach (Urpelainen 2013). The original grouping of countries was a limited coalition of the willing which excluded many states but grew in both membership and power over time before

transforming into the World Trade Organization (WTO).[9] The UN itself, as well as the most successful example of an environmental regime, the Montreal Protocol, took a similar path of broadening membership over time (Hoffmann 2012; Brenton 2013). The Montreal Protocol made use of substantial amendments over time to drive an increase in membership and strengthening of substance. Yet these institutions were created in a time of US hegemony, and all of them had the support and directional leadership of the US from the outset. Nevertheless, it is likely that the notion of CMG is just as suited to the new geopolitical conditions. Oliver et al (1985) demonstrate that the likelihood of achieving a critical mass is contingent upon the heterogeneity of a group. In the case of a multipolar world, the wide distribution of power is an advantage that results in a greater range of possible geometries and coalitions of the willing that could achieve a critical mass. The applicability of a critical mass approach under modern political conditions is evident in the abundance of recent proposals based on critical mass ideas (Urpelainen 2013; Falkner et al. 2010; Sugiyama and Sinton 2005; Low 2001; Christoff 2006).

A number of critical mass-type proposals have been put forward, particularly for the climate regime, but they have lacked connections or theoretical underpinnings. These proposals include the idea of taking a 'building blocks' approach to the negotiations (Falkner et al. 2010) as well as aiming to have a 'big dream' or goal that is preceded by numerous small wins (Urpelainen 2013). The central idea in both proposals is that small agreements and victories can showcase the virtues of cooperative action and build political momentum. Similarly, Sugiyama and Sinton (2005) advocate for an 'orchestra of treaties' where groups of countries with similar interests work together through

[9] It should be noted that the WTO is relatively exclusive and requires parties to apply to join, rather than being able to simply adopt it. This has made the approach of steadily growing in membership over time a natural trend.

plurilateral treaties on specific issues such as zero emissions technology. The rationale is that key coalitions can demonstrate 'the technological and political feasibility of some climate policies' (Sugiyama and Sinton 2005: 66) and entice others to join, resulting in expanding participation over time. Christoff (2006) argued that the second commitment period of the Kyoto Protocol should focus on building climate coalitions of the willing and compliance amongst them, rather than trying to re-engage the US. The rationale is resonant with other proposals: coalitions of the willing can showcase the benefits of cooperation and lead to 'medium-term economic, social and ecological benefits' (Christoff 2006: 859).

Such critical mass ideas have been put forward not only for the climate regime, but for trade as well. Low (2001) has advocated for a form of 'critical mass decision-making' in the WTO, where smaller deals could be negotiated on the basis of majority voting. Low links the notion of critical mass dynamics with the use of voting, just as this thesis postulates that decision-making change can act as an enabler for CMG. However, there is a point of divergence with Low's idea, as he suggests that such critical mass deals should start by consensus. This is a provision that could prove problematic, as any state could simply veto the adoption of any critical mass deal that might threaten their interests. Low's analysis focuses only on decision-making in a single institutional context and, as with the other proposals, is not situated in a wider theoretical context. In this thesis, the integration of various CMG-based proposals with the insights into critical mass dynamics from international relations, sociology, constructivism and economics allows for the formulation of both a theoretical underpinning and conceptual framework for the idea of CMG.

### 7.2.2 Critical Literature: Exploring the Critical Mass Idea across Different Fields

The notion of critical mass change in political environments originated from the sociological study of collective action. Critical mass theory on collective action began in earnest with a series of articles by Oliver and Marwell during the 1980s (Oliver et al. 1985; Oliver and Marwell 1988; Marwell et al. 1988), culminating in a book on the subject in 1993 (Marwell and Oliver 1993). Their central thesis is that collective social action usually requires only a small number of highly interested and resourced actors to take initial actions and cover start-up costs before other less concerned or resourceful members join and widespread collective action is induced (Marwell and Oliver 1993; Oliver et al. 1985). This is especially true in the case where costs decrease with increased contributions (an accelerating production function), thus lowering the incentive to free-ride over time (Oliver et al. 1985: 547). Greater heterogeneity in the group (Marwell et al. 1988) and connectivity of actors (Oliver and Marwell 1988; Kim and Bearman 1997) increase the likelihood of the critical mass phenomenon occurring.

Others have built upon this theory and expanded its basis and application. Macy (1990) reformulates the theory as a learning model whereby cooperation is moulded by social sanctions and responses, thus providing a constructivist twist on the original model, which was based on rational actors. He found within the learning models that the same phenomenon occurs, but the key in creating the critical mass is not the potentially low economic returns on start-up actions, but overcoming initial social costs and stigma (Macy 1990: 809). Despite these advances, the theory has mainly been applied to communications studies or in a piecemeal fashion (Oliver and Marwell 2001).

The theory of the critical mass has not been applied in international relations or environmental politics. It provides clear economic and sociological underpinnings for a theory of CMG in the realm of international environmental politics. This is especially true

since the theory of collective action is not solely based on the domestic setting. The theory of the critical mass can reasonably be applied to state-based behaviour, which is logical given the existing notion of 'bandwagoning' within the field of international relations.

The idea of bandwagoning within international relations is particularly pertinent to the concept of CMG, since it is based on nation states. It is a concept that has a long history in international relations, with ideas of contagion and 'domino effects' permeating diplomatic practice for decades (Schweller 1994). Bandwagoning was originally used in studies of alliance formation affiliated with the neorealist school of thought. Waltz (1986) originally referred to the twin opposing behaviours of balancing and bandwagoning. The traditional conception was that states either come together to balance power against a greater threat, or ally with the greater threat in order to avoid conflict (Walt 1987; Schweller 1994). Schweller argues that bandwagoning had been misrepresented and that 'the aim of balancing is self-preservation and the protection of values already possessed, while the goal of bandwagoning is usually self-extension: to obtain values coveted' (1994: 74). Schweller puts forward a 'balance of interests' theory to explain the prominence of bandwagoning behaviour (1994: 100). This theory suggests that some states covet potential gain more than what they already possess and can be categorised according to these difference in desires.

Schweller uses a typology of different animals to categorise states. Lions are great powers that are satisfied with the status quo and want to protect it, while wolves are revisionist states – great powers that want to see a change in the international system. Jackals are weaker[10] states that prioritise the extension of their values over protecting

[10] 'Weaker' in this case means relative to great powers, not that these actors necessarily lack power in an absolute sense.

what they already possess, while lambs are weaker states that simply want to keep what they already have. Lambs and lions seek to maintain the status quo, while wolves and jackals desire change. Taking the case of World War II as an international example: the UK could be seen as a lion seeking to preserve the international order; Germany was a wolf that sought to change the status quo to its own ends through conquest; Italy and Japan were jackals who followed the lead of Germany; and states such as Australia or Belgium can be classified as lambs, whose predominant concern was maintaining their existing wealth and survival.

All four of these classes engage in bandwagoning behaviour, and on this basis Schweller constructs a range of different bandwagoning scenarios: a domino effect happens due to an external force being spread throughout geographically or socially close states; 'piling on' occurs when the outcome of a situation or war has already been determined and states wish to earn a share of the spoils; 'jackal bandwagoning' involves lesser powers who favour a status change following the leadership of a revisionist wolf; and 'wave of the future' bandwagoning occurs when states join a cause since they see it as an inevitable point of progress (1994: 92-99). All of these forms involve states acting out of a desire to profit. For Schweller, balancing and bandwagoning are driven by very different motives: the former is defensive in nature and the latter is fuelled by the desire to actively increase profit.

Scholars have used bandwagoning to explain numerous behaviours, including the efforts of the EU to create common defence and security policy (Cladi and Locatelli 2012, 2013) and the possible reaction of states to American unipolarity (Walt 2009). It has also developed a growing empirical basis. Sweeney and Fritz (2004) have demonstrated that, historically, great powers have been more likely to engage in bandwagoning rather than

balancing behaviour. Accordingly, bandwagoning, as a common dynamic amongst states, has been repeatedly observed, studied, and explained theoretically.

Bandwagoning is essentially the same as the critical mass phenomenon: once a certain threshold of power is reached, others will gravitate towards the expanding sphere of influence. While the theory of the critical mass justified this behaviour primarily on the basis of decreasing costs (socially or economically), bandwagoning explains it as an interest-based phenomenon driven either by security concerns (Walt's formulation) or the expectation of profit (Schweller's formulation). Like the theory of the critical mass, bandwagoning studies have overlooked the realm of environmental multilateralism and instead remained largely focused on conflict and security. On the few occasions when the idea of bandwagoning has been drawn upon within the field of environmental politics, it has been focused on how different issues can attach themselves to (bandwagon onto) the climate regime in order to create greater relevance and resources (Jinnah 2011; Conliffe 2011; Wapner 2011), or how the climate justice discourse could do the same, by bandwagoning onto the already established human rights regime (Nicholson and Chong 2011). This application is more of an example of strategic linking rather than an exploration of bandwagoning behaviour between nation state actors. Bandwagoning studies are not the only field of research from international relations that has drawn upon the critical mass phenomenon.

The idea of 'norm cascades' within international institutions is an example of an international relations theory that describes a critical mass dynamic and has been applied to environmental issues. Norms are generally defined as socially accepted forms of appropriate behaviour for actors (Finnemore and Sikkink 1998: 891; Katzenstein 1996). The notion of norm cascades revolves around explaining how norms form and spread (Sunstein 1996; Finnemore and Sikkink 1998). It relies upon the constructivist notion that

state interests are socialised and not predetermined; the interests of states are largely shaped by the cultural environment (Wendt 1992; Klotz 1995). In their theory of a norm life cycle, Finnemore and Sikkink (1998) posit that norms are created by norm entrepreneurs (norm emergence) and spread like a contagion (norm cascade). Once a critical mass of actors recognise the norm as appropriate, it is accepted as taken for granted behaviour and legitimised (internalisation). The rationale for the norm cascade process varies, but is likely 'a combination of pressure for conformity, desire to enhance international legitimation, and the desire of state leaders to enhance their self-esteem' (Finnemore and Sikkink 1998: 895). Norm cascades and dynamics are essentially critical mass phenomena. Harrison has applied the norm life cycle model to the idea of liberal peace, finding that 'liberal peace may begin to generate powerful socialisation effects once a critical mass of liberal democratic states has emerged in the international system' (2004: 521). The 'norm life cycle' has also been successfully applied to international environmental governance. Hoffmann (2012) employed the norm life cycle framework to explain the spread of the norm of universal participation in environmental treaties. This norm was established in the Montreal Protocol negotiations and then transmitted to the UNFCCC. Norm cascades rationalise the critical mass behaviour of norms as a phenomena driven by peer pressure.

Norm cascades, bandwagoning and the theory of the critical mass all examine critical mass behaviour amongst large groups of actors, and explain it on the basis of perceived political, social and economic costs and benefits. A second characteristic that unifies these disparate theories and previously mentioned critical mass proposals is a belief in state actions being driven by feedbacks. Critical mass behaviour is, at heart, a phenomenon of feedbacks.

### 7.2.3 CMG: A Theory and Analytical Framework of Feedbacks and an Application to Climate Change

The highlighted theories all rely on positive feedbacks that can create a critical mass dynamic. Schweller (1994) notes that while balancing behaviour is a form of negative feedback, bandwagoning is a positive feedback:

*'Bandwagoning dynamics move the system in the direction of change. Like a ball rolling down an incline, initial success generates further success, not greater resistance. In the language of systems theory, bandwagoning is a form of positive feedback' (1994: 92).*

Similarly, norm cascades can be seen as a positive feedback that amplifies change over time as the new norm spreads. A critical mass can create both a feeling of solidarity among a plurilateral group and political momentum for others to join. Indeed, Macy argues that solidarity is a consequence, but not an initial driver, of critical mass action (1990: 809). All of the critical mass proposals for the climate regime also rely on some notion of a positive feedback occurring: countries would see the virtues of cooperation and further action would ensue. All of the ideas from the different literature discussed here are examples of positive feedback: bandwagoning and previous critical mass proposals identify a political positive feedback, norm cascades an ethical one, and the theory of the critical mass an economic and social one.

The operation of these feedbacks relies on the perceptions of costs and benefits. As Davenport (2006) argues, 'A leader's willingness to lead depends on its expected costs and benefits from an effective agreement, including the costs to manipulate other states' preferences'. This view is, in turn, shaped by norms and issue framing (Wendt 1992; Freedman 2013). The cost-benefit calculation of the US and other states will rely upon underlying values and ideology, which in the case of the US is based on a belief in individualism and the free market (Davenport 2006). For climate change, and most other

environmental problems, issue framing is acting as a negative feedback. The traditional framing of environmental issues has stressed the risk of free-riding, compliance costs and leakage rather than the benefits of regulation and first-mover advantages. Traditionally, environmental problems have been framed as ‘prisoner’s dilemmas’, where due to the cost-benefit ratio and uncertainty about the behaviour of others, individual defection becomes the rational strategy but not the collective optimum outcome. This prisoner’s dilemma framing has helped prevent the formulation of a critical mass dynamic.

The prevalent framing of state action on environmental issues has been in terms of free-riding and high domestic costs. Many scholars have stressed the importance of wide participation in markets’ instruments and treaties due to two related fears: free-riding and leakage (Barrett 2003; Barrett and Stavins 2003; Aldy et al. 2003; Bodansky and Diringer 2014a). However, these fears lack a strong empirical foundation and are not grounded in observed reality: it is a normative fear based on expectations rather than a proven fact. Framing determines which issues on the agenda are recognised and what norms and actions are mobilised (Finnemore and Sikkink 1998). Concerns over free-riding are the main negative feedback against plurilateral or unilateral environmental regulation and the primary argument against the notion of CMG in general.

Free-riding is the concern that regulation will result in a loss of competitiveness for those who take strong actions. Free-rider non-acting states will not incur the cost of regulation yet will benefit from the collective actions of others. It is feared that this will undermine the intended environmental outcomes. For climate change, this is embodied in debates over carbon leakage. Yet the majority of studies of carbon leakage are ex-ante model-based simulations, have had mixed results and do little to support the claim that free-riding occurs in reality. In one of the few studies based on empirical observations, Reinaud (2008) found that the EU-ETS had not resulted in any noticeable leakage in the

cement, steel or aluminium industries. Similarly, the fourth assessment report of the IPCC (2007) concluded that carbon leakage resulting from the Kyoto Protocol was negligible in an economy-wide sense. Most ex-ante modelling studies have estimated leakage rates of 5–20%, while ex-post econometric studies have not observed any statistically significant rate of carbon leakage (Branger and Quirion 2014).

The argument for not acting because of the risk of free-riding is further undermined once positive externalities and spillovers such as technology and policy diffusion enter the discussion. Fullerton, Karney and Baylis (2011) argue that policies such as carbon taxes could even lead to positive forms of leakage that produce greater emissions reductions due to reactions by the market. Gerlagh and Kuik (2007) constructed an economic model to illustrate that with even moderate levels of international technology diffusion for renewable energy, carbon leakage becomes negative; the anticipated spread of new technologies is more powerful than the leakage of carbon between countries.

Spillover effects and positive leakages are less frequently discussed but perhaps are of greater importance. A substantial amount of literature and evidence, particularly on climate change, suggests that actions by one country can easily produce positive externalities and lead to the diffusion of policies and technology (Busch et al. 2005; Tews et al. 2003; Ovodenko and Keohane 2012). Progressive action by some could catalyse virtuous behaviour in others and thus more than compensate for any potential free-riding effects (Bosetti and De Cian 2013). As shown in Chapter VI, this is particularly true of the US, where subnational action is often inspired by policies and ideas from other countries. There may also be substantial first-mover advantages in developing technologies and establishing industries and policies prior to a global market shift. Leakage-mitigating actions, such as carbon border tax adjustments, could also be beneficial (Zhou et al. 2010). Overall, there is a great deal of evidence to support the

argument that positive leakage and spillovers will have a greater impact than leakage and losses in competitiveness. As Biermann and Dingwerth (2004: 7) note, a large amount of empirical evidence suggests that an environmental 'race to the top' thesis may very well be more compelling than the conventional wisdom of a race to the bottom. Free-riding, leakage and competitiveness, despite their dominance in the environmental multilateral discourse, constitute a shared framing rather than a real, empirically verified phenomenon. The concept of free-riding as a negative feedback against unilateral or plurilateral action is normative, not economic. As it is normative, it can be changed, particularly when enough positive feedbacks exist.

There are possible normative, political and economic positive feedbacks when it comes to multilateral state behaviour, although the strength and prevalence of these feedbacks will differ between issues. As CMG is a theory of feedbacks, a simple form of feedback analysis provides a suitable analytical framework. When approaching any international agreement, an analysis of the potential economic, political, institutional, normative and environmental feedbacks can be used to see whether these feedbacks are strong and tight enough to make a plurilateral approach viable. Table 1 summaries how these different considerations can be drawn into a single novel yet simple analytical framework for CMG. After each of the feedback areas has been examined, an informed estimation can be made as to whether the environmental problem is likely to be suited to a critical mass approach.

| Feedback | Agreement |
|---|---|
| **Environmental** | How immediate and visible are the environmental impacts? |
| **Economic**[11] | How strong are the negative feedbacks of free-riding and leakage? How strong are the potential positive spillovers and opportunities for policy and technology diffusion? Is this seen as a first-mover or free-rider issue? |
| **Political** | Is there the leadership of a lion and/or wolf? How do the other actors approach this issue? |
| **Institutional** | How does the institutional structure enable or constrain plurilateral approaches? |

Table 7.2: The CMG Analytical Framework

For climate change, all of the necessary positive feedbacks to create more widely spread mitigation appear to exist. There are observed economic feedbacks in terms of diffusion, lowering renewable energy prices and first-mover advantages, and normative feedbacks have already been observed (Hoffmann 2012). The central issue is not how the positive feedbacks allow action to accelerate, but how to create the initial critical mass. Considering the large inequality in emissions and capacities (group heterogeneity) and

[11] Note that normative feedbacks are partially reflected in the economic evaluation, since the perception of costs and benefits is largely a matter of framing and norms. The idea of norm cascades has been omitted for now due to the difficulty in analysing this for different regimes in a comparable manner.

close connectivity of actors through the UNFCCC, it appears that the climate regime has many of the characteristics that encourage the creation of critical mass action (Centola 2013). The current lack of movement on climate mitigation demonstrates that the negative feedbacks are currently dominant and have prevented the creation of a critical mass dynamic. The dominance of the free-riding framing and related concerns can be seen both in domestic debates on climate policy (such as resistance to cap-and-trade regulation or the Byrd–Hagel Resolution in the US) and in behaviour such as conditional international targets.[12] This framing is driving balancing behaviour between the major powers. It is a political negative feedback fuelled by a perceived economic one of free-riding and high costs. Arguably, once the critical mass dynamic begins, belief in the free-rider framing will be diminished as desirable positive feedbacks emerge. The next step is to explore how this initial resistance can be overcome, allowing positive feedbacks and the critical mass dynamic to develop. The conceptual framework outlined in the next section attempts to do this.

[12] One example of this would be the Australian 2020 emissions reductions targets, which offer a higher conditional target if the requirement of strong, coordinated global action is met.

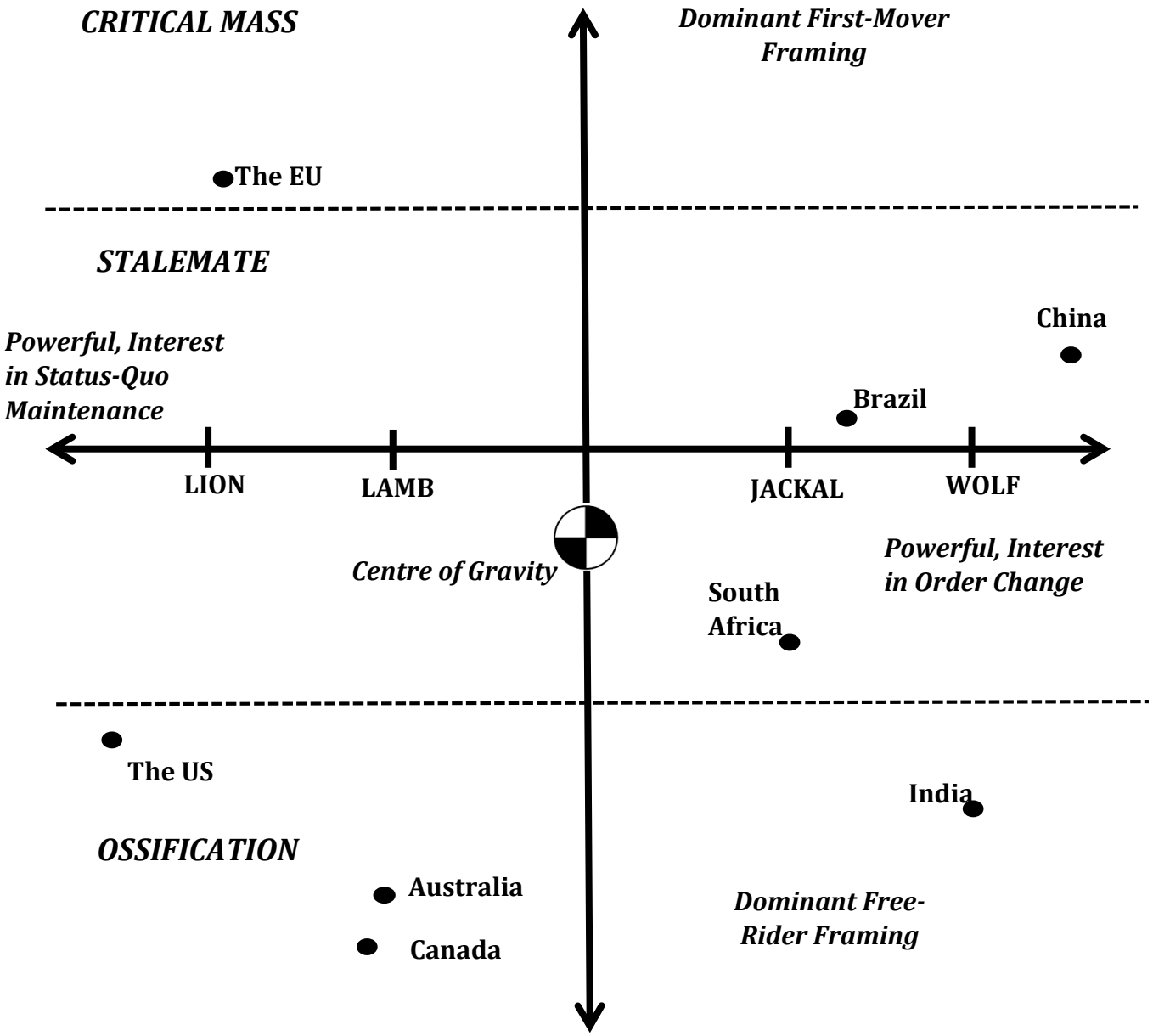


*Fig 7.1: A Conceptual Framework for CMG*

## 7.3 A Conceptual and Analytical Framework for CMG

The conceptual framework for CMG presented in Figure 7.1 illustrates the interplay between state interests, power and the dominant normative framing of particular countries. It depicts how these factors lead to different group dynamics in terms of a

stalemate, ossification of the regime (Depledge 2006) or critical mass action. The framework is a combination of Schweller's (1994) balance of interests and power categorisation of states (x-axis), and the normative framing of climate action (y-axis). It should be noted that the 'first-mover' framing in this case denotes not only a perception of first-mover advantages but also the broader domestic benefits of environmental regulation. This example of the conceptual framework is specifically applied to the major powers in the climate regime; state placement would need to be reconfigured for application to a different issue.

The categorisation of states is based on both their general geopolitical interests and specific interests in relation to climate change mitigation. The US and EU are both western powers that have helped mould and want to maintain the current neoliberal international order; thus, they are placed to the far left of the x-axis. China and the other major emerging economies (South Africa, Brazil and India) have a much clearer interest in changing this broad international order and are placed on the opposite end of the axis. Ranking by power is then used to categorise countries into Schweller's animal system. Data from the Composite Index of National Capability (CINC) from the Correlates of War database has been used to rank countries in terms of their power.[13] China, due to its high ranking in the CINC system, is classified as a wolf, and the US and EU as lions. The remaining BRICs are designated as jackals and less powerful developed countries as lambs.

Placement on the y-axis has been determined based on both the strength of national mitigation efforts and country positions on the climate regime. Mitigation efforts were judged by the latest analysis from Climate Action Tracker of intended nationally

[13] See- http://cow.dss.ucdavis.edu/data-sets/national-material-capabilities

determined contributions (INDCs) and national policies.[14] Country positions on the climate regime have been assessed through analysing their national and group submissions to the UNFCCC, specifically under Workstream I of the ADP on the structure of the 2015 agreement. Both of these assessments, as well as the assessment of power, are imperfect and relatively subjective judgements. The subjective and qualitative nature of this framework is a necessary one, given that the judgement of country efforts and power will always be a contest and by nature rely on subjective judgement. Effort, power and positions on international architecture cannot be clearly quantitatively expressed, but they can be accurately ranked by the mix of qualitative and quantitative measures outlined above.

The position of the US is one that is quite clear regardless of the more subjective judgements inherent in the framework. The US is a lion, the strongest great power of the developed world. It is ranked second on the CINC and has a strong vested interest in maintaining the existing geopolitical order, which it crafted and benefits from. It values the protection of interests over self-extension and therefore lies towards the far left of the x-axis. It has been hesitant to take strong domestic action on climate change (its intentional NDC is significantly lower than the EU when based on a 1990 baseline), particularly due to concerns over loss of competitiveness, thus placing it lower on the y-axis in the position of a moderate to strong free-rider framing.

China is a revisionist wolf with an interest in challenging the political status quo, and has a dominant first-mover framing by a small margin. The remaining BRICs are jackals with a mixture of free-rider (India) and first-mover (Brazil) framings. The EU is close to being a lion, as it has an interest in maintaining the status quo to some degree,

[14] See- http://climateactiontracker.org/

but also has less structural power than the US. It does have the strongest first-mover framing of the different great powers due to its stronger domestic mitigation efforts. Australia and Canada are lambs that do not have a great deal of power and have primarily a defensive interest in a business-as-usual political order and an extreme free-riding framing.[15] This conceptual framework provides an overview of the current geopolitical state of play in the climate regime. It illustrates the relative likelihood of different nation states engaging in bandwagoning and balancing behaviour.

The conceptual framework is distinguished by three different zones of structural behaviour. The upper third is the zone of critical mass movement, the middle is a stalemate where there is little regression or progression, and the bottom third is a zone of ossification where commitments and trust are likely to degrade over time. The centre of gravity reflects the midpoint of the current positions of the different major powers, and indicates the overall behavioural dynamic of the system at any given time. International climate policy is currently in a stalemate, characterised by a moderately dominant free-rider framing. This centre of gravity idea is borrowed from Purvis and Stevenson (2010: 17) who apply a similar emissions-weighted centre of gravity concept to their visual depiction of national negotiating positions on climate regime structure.

Congruent with Grundig and Ward's (2015) work on structural leadership, for a critical mass dynamic to occur the structural power of actors in the critical mass zone would have to be higher than those within the ossification area. The structural power of the leaders must trump the laggards, the position of leader or laggard being determined

[15] This is evident in the general regression of these countries in terms of climate mitigation efforts. For Australia, this includes the acts of the Abbott government in abolishing the Australian carbon tax. For Canada, this includes actions such as overshooting their first commitment period target under the Kyoto Protocol and subsequently dropping out of the Kyoto Protocol second commitment period.

by state's normative views on the problem: are they concerned about free-riding and competitiveness, or do they pursue mitigation on the basis of domestic benefits and self-interest in achieving first-mover advantages? In this conceptual framework (and as argued in this thesis), the US has an important role as a lion but does not have a veto over international action, nor is it necessary for the formulation of a critical mass. Given the placement of powers within this framework, there appear to be two main forms of CMG, both requiring a shift in norms by key states but differing in terms of the grouping and movement of actors.

### 7.3.2 Bandwagoning Critical Mass:

A bandwagoning critical mass occurs when one or two of the great powers take sufficient action to catalyse a semi-global alliance. The framework thus becomes unbalanced with a number of countries in the critical mass zone, while others remain significantly lower on the y-axis for a period. This transition is in line with the model of exclusive CMG. Given that the US has its ratification straitjacket and a dominant free-rider framing, it is not capable of demonstrating such drastic leadership. Leadership would fall to either the possible lion of the EU or the wolf that is China. If led by China, this is most similar to Schweller's notion of jackal bandwagoning (1994: 93), whereby the actions of a powerful revisionist state (a wolf), or a coalition, attract the wider support of opportunistic jackals looking to profit and to enhance their placement in the international order. Mitigation efforts are seen as a way of competing economically through first-mover advantages and politically and normatively pressuring others or, perhaps more likely, for domestic benefits. A bandwagoning critical mass led by the EU would more likely be a form of 'wave of the future' (Schweller 1994: 96), whereby states align with those undertaking progressive measures, since they see the shift as an inevitable transition to decarbonisation. Jackal bandwagoning occurs with Chinese leadership due to their close ties with other BRICs and ability to frame mitigation as a

geopolitical opportunity. European leadership generates a wave of the future dynamic as they are more likely to guard the existing geopolitical order and thus not appeal to the profit motive of the jackals. They also lack the political power of China and are more likely to rely on economic feedbacks to catalyse critical mass action. Arguably, this has already occurred to some extent. Extensive solar feed-in tariffs by Germany and other EU members since 2007 have drastically lowered the global price of solar photovoltaics, leading to widespread adoption globally, particularly in China. Whether led by the EU or China, or both, the bandwagoning effect is driven by the allure of political and economic advantage.

#### 7.3.3 Balanced Critical Mass:

A balanced critical mass refers to a transition that is not driven by a revisionist state, or even a status quo lion, but a gradual movement of all states towards a critical mass approach, hence the notion of 'balance'. This scenario is congruent with the governance model of inclusive CMG, as the US is not left behind but gradually moves with the other states along the spectrum. In this case, the geopolitical order is not threatened; the change is driven by the experience of different countries taking action on separate issues, and not by a revisionist power. The gradual recognition of the virtues of mitigation and cooperation leads to a shift in the normative framing and general movement of most countries upwards on the y-axis. Once the norm cascade is complete, enough countries have entered the critical mass zone to generate effective action.

## 7.4 Political Implications

A key insight from the conceptual framework in Figure 7.1 (borrowed from Schweller's work) is that for a critical mass dynamic to occur within the climate regime, the leadership of either a wolf or a lion is needed. The US, China or potentially the EU will need to be part of the initial critical mass of active countries for it to be successful.

All of these countries face large domestic obstacles to forging ahead on climate change. This is particularly true for the US and China. The conundrum of the two true great powers is summarised by former German environment minister Norbert Röttgen who lamented in the aftermath of Copenhagen that 'America is willing but unable; China is able but not willing' (Purvis and Stevenson 2010: 15). The focus of this thesis has been institutional reforms that can enable CMG – environmental governance that addresses US participation – but it is still worthwhile to briefly analyse the political situation of each of these key countries. This section will detail the barriers to and drivers for each of these great powers providing leadership on climate change.

### 7.4.2 The EU:

The EU is the most likely powerful international actor to attempt to provide leadership through concerted semi-global coalitions. As a bloc, they are a great power with a distinct self-image as a 'green leader', as well as vested economic interests in terms of renewable energy and green technologies (Eckersley 2004: 102). Moreover, their recent climate and energy packages represent the most progressive targets by any developed country. The package commits the EU to reductions in greenhouse gas emissions of at least 40% on 1990 levels by 2030 and near carbon neutrality by 2050. However, it is questionable whether the EU has the necessary structural power, or social capital, to catalyse a critical mass. The EU has previously utilised coalitions within the climate negotiations to some positive effect. For example, they aligned with both Alliance of Small Island States and the least-developed countries at COP17 to oppose India and others in creating the ADP and ensuring that the 2015 agreement would include an 'outcome with legal force' (Bodansky and Diringer 2014b). But their alliances have often been short lived and have not been able to compare with the influence wielded by the US-

led Umbrella Group (the US, New Zealand, Canada, Australia, Norway, Japan, the Russian Federation, Ukraine and Kazakhstan) or the China-led like-minded developing countries (e.g. China, India, Venezuela, Nicaragua, Saudi Arabia, the Philippines and Bolivia). As seen by the events of the Copenhagen climate summit, where it was effectively side-lined in the final negotiation of the Copenhagen Accord (Dimitrov 2010; Purvis and Stevenson 2010), the EU may simply lack the power to lead a critical mass. In any case, domestic targets may not be enough unless they are backed with other measures such as the threat of carbon border tax adjustments, a provision that has been discussed but not implemented by the EU.

### 7.4.3 China:

China has both the motivation and capability to provide leadership when it comes to environmental transformations, but it also suffers from a number of constraints. China has some of the most progressive renewable energy and carbon mitigation policies of any developing country. It already has put in place seven different regional and provincial carbon markets and has made plans for implementing a national cap-and-trade system (Jotzo and Löschel 2014). China has now announced that this national emissions trading scheme will come into place in 2017, making it the largest carbon market in the world. A bilateral deal in 2014 has also committed them to peak their national emissions by 2030 (Fact Sheet: U.S.-China Joint Announcement on Climate Change and Clean Energy Cooperation 2014), although they are likely to peak their emissions well before then (Kemp 2015: 16). The rationale for this domestic decarbonisation is complex, but is primarily driven by the pursuit of co-benefits such as alleviating air pollution, increasing productivity and gaining first-mover advantages in the renewable energy sector (Teng and Jotzo 2014).

China has a clear interest in domestic political stability, an issue that is tested by the twin concerns of economic growth and air pollution. Both of these can be addressed to some extent through decarbonisation. However, China's positions in the climate negotiations have been less productive. It has consistently opposed taking any legally binding international targets (Bodansky and Diringer 2014b) and routinely refused stronger measures on the reporting, monitoring and verification of emissions. Stalley (2013) argues that China's foreign policy on climate change is dictated by principles and norms, particularly a belief in equity and historical responsibility, rather than a rational desire to challenge the US or take a leadership role internationally. The gulf between Chinese domestic and international actions is striking, and may not be bridged in the near future. Chinese leadership is distinctly unlikely unless this gap is traversed and China accelerates its domestic mitigation measures.

#### 7.4.4 The US:

The US is likely to stay firmly within its ratification straitjacket for the foreseeable future, but in the longer term a different role is not implausible. There is the possibility of reactive engagement; i.e., renewed activity both domestically and internationally in order to compete with policy movement by the EU and/or China. Many have forecast a revival in US domestic climate policies and eventual re-engagement with the climate regime (Selin and VanDeveer 2007; Selin and VanDeveer 2011; Christoff 2006). These predictions have largely not come to fruition since the problems of the US are structural in nature. Despite changes in the approaches of different presidents, US environmental foreign policy has been characterised more by consistency than fluctuation (Patton 1990).

That being said, the Obama administration has put into place a number of significant policies, including recent regulations of state electricity generators and automobile standards. This has been coupled with a commitment to reduce US emissions

by 26–28% by 2025 on 2005 levels (Fact Sheet: U.S.-China Joint Announcement on Climate Change and Clean Energy Cooperation 2014). However, this translates to only a 12–19% reduction when using a 1990 baseline and there is no mention of how these targets will be met. It also appears that Obama is reaching the ceiling of actions he can take without Congressional or Senate approval. The 2014 US pledge to the Green Climate Fund and fulfilment of commitments under the bilateral agreement with China will require Congressional approval of funds for the former or policies for the latter. This appears unlikely, given the Republican majority in the House of Representatives and Senate in late 2014. Given the nature of the ratification straitjacket, and the US political system in general, true directional leadership cannot occur until Congress support a proactive executive. Bilateral agreements with China can at least act as a powerful discursive tool in the interim. The excuse that the major powers are not taking mitigation action now appears less credible, and undermines arguments about free-riding and competitiveness concerns. Despite these steps forward, the US appears to be incapable of taking the role of a leading lion for a critical mass.

There are a number of rational reasons why the US should pursue a leadership role when it comes to global environmental problems, particularly climate change. Naturally, the management of global ecological crises would help to minimise the economic costs and security implications associated with the impacts of climate change. However, there are also lesser-known benefits in terms of geopolitics. Ikenberry (2008) argues it is now an inevitability that China will outgrow the US in terms of hard power, but the US can maintain some form of ascendency, and a stable international order, by enmeshing China and others into the international liberal framework it has created. That framework is one built on democratic multilateralism and transparent international institutions, ideas that the US has significantly undermined. The US has consistently

refused to institutionally enmesh itself with the multilateral forums they have built (Terhalle and Depledge 2013), a trend that is particularly true of environmental institutions (Brunnee 2008). There is no sign of this significantly changing, hence the focus of this thesis. It is a long road to US ratification, and a much longer one to US environmental leadership.

None of the existing lions or wolves of the international order appear likely to lead a critical mass within environmental regimes: China, for now, is unwilling; the US is incapable; and the EU may simply lack the necessary power. The most likely catalyst for mobilising a critical mass would be an alliance between China and the EU, as it would help allay initial fears over leakage and free-riding. Joint leadership between the two could be enabled through a compromise based on consumption-based accounting (which is very much in the interests of China) and strong mitigation action coupled with common border tax adjustments (which is in the interests of, and has been used as a threat by, the EU). This is similar to the compromise to break the climate deadlock put forward by Grasso and Timmons (2014), who suggest a deal based on consumption accounting and equitable mitigation distribution struck under the minilateral Major Economies Forum. As outlined in Chapter VI, this may very well need to take place outside the UNFCCC, given the consensus requirement. However, it would preferably still take place under some multilateral institution with an underpinning in international law, in order to bolster confidence and legitimacy. Given the challenges faced by each great power, a form of shared leadership is a probable basis for building critical mass. Since the domestic will of any single great power is currently insufficient to create a critical mass, alternative paths for creating change are desirable. The clearest way of allowing for critical mass action, and creating normative change, is through institutional reform.

## 7.5 Institutional Implications

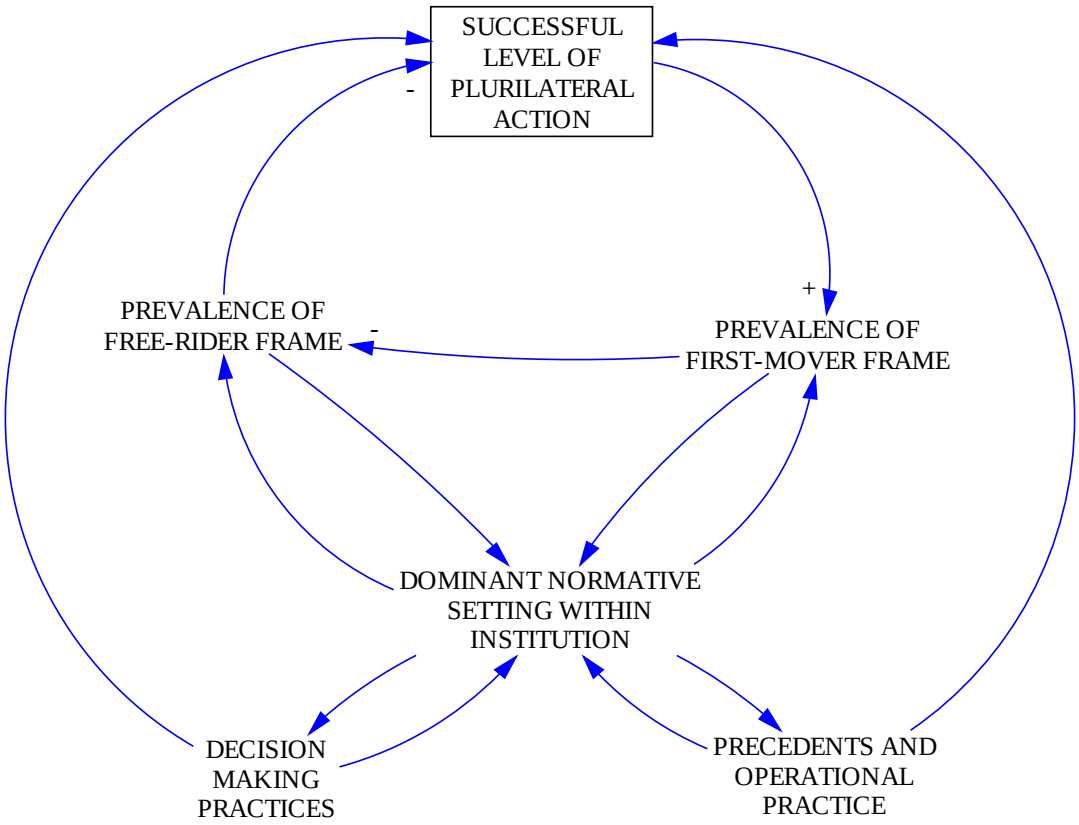


**Figure 7.2: Institutional Enabling of CMG**

The reform of international environmental institutions is one way to help spur a shift towards CMG that does not rely upon significant political change within major states. States do not act or formulate their interests within a domestic vacuum. Instead, their actions and interests are shaped by, and shape, their interactions with others, particularly through international institutions (Wendt 1992; Finnemore and Sikkink 1998). This thesis has concentrated upon how to feasibly address US participation through reforms at different institutional levels of multilateralism. Institutions play important roles in shaping the normative context that states operate within, as well as determining what actions and by whom are considered legitimate and legal. Accordingly, international institutions are key in creating the normative and legal conditions to both allow for and encourage CMG to occur. The feedbacks outlined earlier are of little use if

critical mass action is not possible or legitimate under existing multilateral practices. As illustrated in Figure 7.2, the precedents and practice of treaties and decision-making affect both existing norms and the possibility of plurilateral action occurring. These are the institutional elements that are addressed through Chapters III, IV, V and VI, highlighting a number of important institutional reforms that can both allow for and drive CMG. By creating legal instruments and institutions that are functional without US membership, and implementing voting-based decision-making, the normative settings of multilateralism can change and semi-global environmental action can be legitimately encouraged.

Another important aspect shown within Figure 7.2 is the tension between the institutional changes needed to enable CMG and the existing institutional status quo. There is a zero sum game between the prevalence of a 'free-rider' and 'first-mover' framing, with an increase in the former decreasing the latter and vice versa. Both feed back to the likelihood of successful plurilateral action, with the first-mover framing increasing it and the free-rider decreasing it. These three variables – critical mass action and the two contrasting normative framings – exist in tension. Critical mass action generally will not occur within institutional settings based on a free-rider framing, as the two are mutually exclusive. Instead, a first-mover framing creates the institutional arrangements that allow for critical mass action to occur. Currently, the free-rider framing is clearly dominant and is reinforced through the dominant institutional setting that is based upon universal, global package deals and consensus decision-making. The decision-making, treaty design and institutional reforms put forward in this thesis provide one possible blueprint of how change in the bottom two variables could create the necessary feedbacks to change both the dominant normative and institutional setting and allow for CMG to emerge.

## 7.6 Feeding Back to Participation

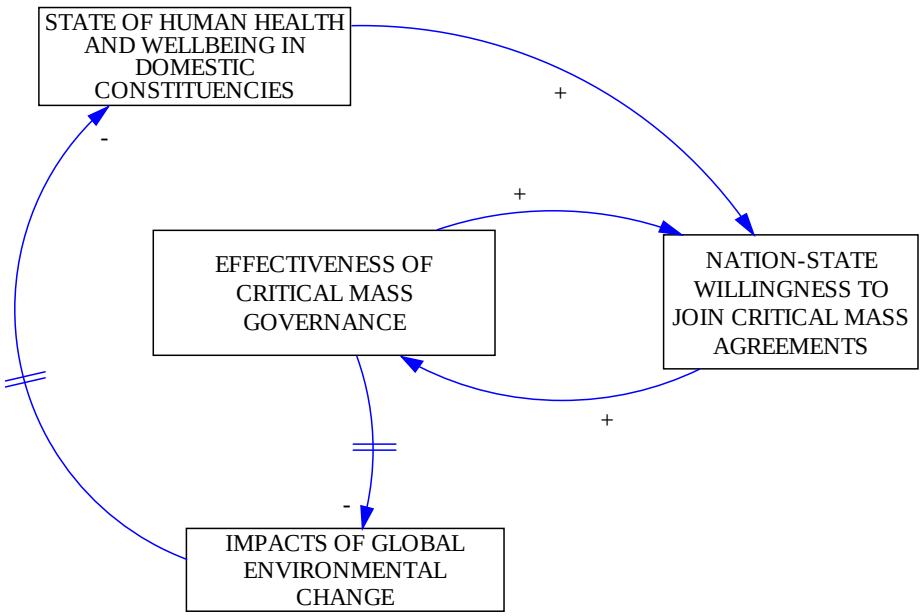


**Figure 7.3: Participation within Critical Mass Governance Arrangements**

A central notion of CMG is that participation should not be prioritised in international governance arrangements, at least in the short term. Participation, not substance, is the most flexible and dynamic variable within international arrangements. It is much easier for a country (or group of countries) to ratify an agreement in the future than to attempt to negotiate a new agreement or attempt to modify the constitution and rules of an existing instrument. Moreover, increased participation within MEAs is highly likely if not inevitable. This argument is based upon the feedbacks that exist between environmental impacts, domestic responses and the need for international cooperation, as shown in Figure 7.3. If an agreement is not effective, then the impacts of the unalleviated environmental problem will become more salient over time. As the environmental condition worsens and begins to affect the health and well-being of domestic constituencies, they are likely to exert political pressure for mitigation (or conservation)

actions and to vote for administrations that promise effective environmental action. For states that are not democratic, it would likely occur through civil disobedience and social unrest until the government takes action. Such action will likely involve multilateral engagement. Thus the original number of parties is likely to grow, purely due to the feedback that worsening environmental conditions exert upon domestic political systems. One could argue that countries that were unhappy with the original provisions may feel slighted and are unlikely to subsequently ratify it in the future. However, this would assume no change in administration over time and that a country would place perceived fairness above domestic pressures, both of which are unlikely.

The actions of most states actors, including the US, are largely determined by domestic concerns and factors above all else, and their perception of costs and benefits are largely shaped by domestic actors (Falkner 2005; Davenport 2006). There is of course the distinct risk that such environmental feedbacks occur too late. By the time the environmental impacts are truly felt, tipping points have already been crossed. This is a legitimate argument, but is impossible to address in any conclusive manner without first knowing where tipping points and irreversible non-linear thresholds lie. This is largely unknown for the climate and most other environmental systems. Accordingly, waiting for environmental feedbacks to manifest is a risky strategy, but may be necessary if other feedbacks are not sufficient to catalyse action.

As highlighted in sections 7.2 and 7.3 (and in Chapter VI in relation to the US and subnational actors), there are numerous positive feedbacks in terms of norms, directional leadership and positive forms of leakage, which are likely to draw in more states and actors over time. Thus, if the critical mass is effective it will snowball over time, and if it is not effective it will still grow over time due to environmental feedbacks being translated into domestic political pressure. Political, normative and economic

feedbacks are all capable of driving increasing participation, even for the US. Christoff (2006) observes that 'ecological blow-back' from climate impacts alongside increasingly volatile oil prices are two trends that could raise public consciousness about climate change within the US, and drive re-engagement with the UNFCCC: 'As public opinion swings towards support for early action, some of the political, economic and social impediments to it may also begin to dissolve' (Christoff 2006: 850). Participation should be seen as a dynamic variable and, as evident in the literature, the desire for initial universal participation is not necessarily logical or effective (Hoffmann 2012). Not only does the initial constellation of actors not need to be universal, but it does not necessarily need to include the US. Importantly, these different feedbacks all influence states who are not part of the initial critical mass and help to enmesh them. Technological and economic feedbacks are particularly adept at this. As noted previously, the forerunners of climate policy have lowered the cost of renewable energies and helped spread low-carbon technologies, both of which have encouraged action within traditionally laggard states. Accordingly, the actions of a critical mass can help facilitate domestic environmental action within the US. Multilateral action without the US can still be beneficial to the US domestically. This analysis has a number of important implications for both of the framing debates on participation put forward in Chapter I.

For the first framing debate of minilateralism vs. multilateralism (introduced in Chapter I), this thesis has provided a clear critique of minilateralism. But this is not to say that a simplification of numbers and movement away from universal participation is not useful or desirable. A reduction in party numbers and complexity can be a positive tool, but not if it continues to tie progress to the US, and other recalcitrant states, through consensus. The simplification of numbers should come not by limiting the focus to major polluters, but instead by concentrating on building powerful 'coalitions of the willing' as

Christoff (2006) previously recommended for the Kyoto Protocol. Indeed, minilateralism is a broad umbrella approach that incorporates the coalition of the willing style of 'climate clubs'(Falkner 2015a; Das 2015). As Falkner notes, 'Clubs will be at their most effective when they are constructed as "coalitions of the willing"' (2015b: 13). The theory, framework and models of CMG would further challenge the notion of minilateralism by contending that for any club to succeed in generating significant widespread action, the enabling feedbacks need to be in place and the leadership of a great power (either a wolf or a lion) is needed. The critical mass club would also need to be central to a legal regime, rather than a small part of it, or outside of it entirely. A norm cascade is unlikely to occur and bandwagoning and diffusion effects will be stifled if a minilateral club is not highly visible or legitimate. Minilateralism by a coalition of the willing can work, but it must abide by these important conditions if it is to create a critical mass dynamic.

For the second framing debate of treaty design (introduced in Chapter I and explored in Chapters V and VI), this thesis suggests that narrow-but-deep agreements are preferable as long as they involve a great power and enable the appropriate feedbacks over time. While this may not always be possible, it would appear that in most cases a narrow-but-deep agreement is preferable to a broad-but-shallow arrangement. In the case of climate change, where strong positive feedbacks exist, the narrow-but-deep approach is preferable. This lies in stark contrast to the 'applicable to all' pledge and review approach that the negotiations are currently moving towards. The debate should be less about which configuration is more likely to succeed, and more about what details and conditions are needed to enable the feedbacks and framing that allow for narrow-but-deep agreements to succeed over time.

A third and important consideration is whether the theory and framework of CMG, and this thesis in general, can be applied to recalcitrant states other than the US.

The short answer is yes, although there are some caveats. The focus on the US has been due to both its unique ratification straitjacket conditions and the generally perceived need for US leadership on environmental issues. However, as this thesis has claimed, the world is quickly moving towards multipolarity, and the requirement of US leadership, or consent, is declining. Some findings of this thesis are only applicable to the US. For example, structuring an agreement to allow for the use of presidential-executive agreement is an architectural reform that is specifically targeted towards the legal circumstances of the US. Splitting up a treaty to allow for presidential agreements may allow for more buy-in from others, but is generally less useful for other laggard states. However, the arguments on designing treaties for non-parties in Chapter VI, and the theory and framework of CMG, are applicable to other states aside from the US. A critical mass agreement that triggers the right feedbacks can just as effectively enmesh a non-ratifying China, as it can the US. Thus, the model of inclusive CMG is only really relevant for the US, but exclusive CMG is appropriate for essentially any other non-cooperating actor(s). As long as the key requirements for a critical mass are met (leadership by a wolf or lion, strong substance enabling the necessary feedbacks), then a non-cooperating state, whether it is the US, China, India or Australia, will eventually be enmeshed into the agreement. While this approach is most likely to be useful for the US, given that historically they are the key laggard in environmental regimes, it is not confined to them.

## 7.7 Limits and Lessons: A Brief Application to the Ozone, Biodiversity and Climate Regimes

CMG as a model for multilateralism has some important limitations, especially when applied beyond the realm of environmental governance. First, the idea of participation being the most easily modified variable is only relevant for issues that have

environmental impacts. As illustrated in Figure 7.3, the delayed impacts of global environmental change are a crucial feedback that drives pressure from domestic constituencies for those outside the critical mass to re-engage with a regime. While increased detrimental biophysical and economic impacts from anthropogenic climate change are a certainty, the same cannot be said of trade or security regulations.

There are also potential limitations when using the CMG framework in relation to some environmental issues beyond climate change. Climate change has a strong and salient economic component, while many other environmental issues do not. Domestic action leading to positive spillovers and trade-related measures being used to penalise laggard states are feasible responses in the climate change context. The same logic is unlikely to apply to environmental issues, which are innately more conservation based, with less of a direct economic dimension. For example, strong action by a coalition of states on domestic biodiversity conservation is less likely to have any strong, tangible spillovers in terms of technology or policies. It would be unlikely for states to implement trade-related measures since there are no direct leakage concerns related to biodiversity. The logic on which CMG relies is largely economic and it is therefore most applicable to issues with a strong economic dimension such as climate change or ozone depletion. This is not to say that the idea cannot be applied to other areas; however, the extension of the concept must be done carefully and in a manner that takes into account the particularities and context of each governance issue.

Both the conceptual and analytical frameworks can be used as an approximate guide to explain the success and failures of the critical mass approach. I will briefly apply these frameworks to the Montreal Protocol for ozone-depleting substance, the CBD and Kyoto Protocol as example case studies.

The Montreal Protocol has all of the necessary feedbacks to allow for a successful critical mass approach. The ozone negotiations had the directional leadership of the US (a lion) which viewed international regulation largely as a first-mover matter, primarily due to the interests of powerful American firms such as Dupont industries (Gareau 2010; Sunstein 2007; Maxwell and Briscoe 1997). This led to political feedbacks, as shown by the significant expansion of the regime's regulations and participants between the Montreal Protocol in 1987 and the 1990 London Amendments. The increased action during the Montreal Protocol and subsequent London Amendments were also driven by the discovery of the ozone hole (Hoffmann 2012; Maxwell and Briscoe 1997), a clear example of the aforementioned environmental feedback at play. The development and spread of cost-effective chlorofluorocarbon replacements from the US to European industries (Maxwell and Briscoe 1997) is an example of technology diffusion and economic feedbacks. The ozone regime had all of the necessary feedbacks functioning and a balanced critical mass led by a lion. Importantly, it was also institutionally enabled through the use of three-quarters majority voting under the Montreal Protocol and an expanding norm and practice of semi-globalism. The use of substantial amendments to encourage the participation of new countries and strengthen the ambition of the agreement, as well as trade sanctions for ozone-depleting substances on non-parties to the agreement, provided clear institutional mechanisms to allow for an expanding and evolving agreement.

The Montreal Protocol in particular has some important lessons for this thesis. First, an exclusive CMG approach is feasible, but it has only occurred with a leading US. Whether such an approach could or will succeed without the US is much more difficult to say. It is particularly challenging given that Montreal occurred in a time of US hegemony, prior to the emergence of a more multipolar world. Second, Montreal did not

just succeed due to the political feedback triggered by US leadership. The Montreal Protocol would likely not have snowballed and succeeded had it not been for the concern caused by the ozone hole, the discovery of a cost-effective replacement or institutional features such as voting and non-party measures. Indeed, US leadership was driven by the environmental and economic feedbacks. In turn, the enabling institutional environment was likely an outcome of strong US leadership in designing the protocol. Montreal demonstrates that exclusive CMG is possible, but only when political leadership and the other necessary feedback mechanisms are in place. This could well happen with a leader other than the US, but thus far has not for a similar global environmental problem.

In contrast, the CBD has lacked the characteristics and feedbacks necessary for successful critical mass action. The US has not ratified the Convention and neither the EU nor China have taken any strong directional leadership role. As the Convention centres on a conservation issue, it has generally been a free-rider game between developing and developed countries. The economic feedbacks are decidedly weak as the CBD is largely dependent upon funding flows and less upon profitable technology and policy innovations. While biodiversity conservation makes economic sense, the benefits are largely hidden and longer term (Balmford et al. 2002). Biodiversity offsetting mechanisms have become widespread, but are still relatively heterogeneous (Lapeyre et al. 2015) and do not offer the same kind of market potential and profit incentive as the market for chlorofluorocarbon replacements or renewable energy. Many of the environmental feedbacks of biodiversity loss are less salient than those due to climate change, because they are less visible and longer term in nature. Most ecosystems work by complex, non-linear dynamics that are not easily envisioned or translated to policy makers and the public (Wallington et al. 2005). The CBD has lacked the leadership of a wolf or lion and has been trapped within a free-rider framing. Institutionally, this has been

reinforced through the use of default consensus decision-making and a related insistence upon universal membership in legal instruments.

The Kyoto Protocol is not a clear case of success or failure, but an example of how semi-globalism can both fall short and trigger important feedbacks. Politically, Kyoto did not have the clear leadership of a lion. It did have the leadership of the EU, but whether the EU can be categorised as a lion is debatable. Moreover, the leadership of the EU, as discussed earlier, cannot be considered as directional. Their targets have always been on the lower bounds of scientific suggestions for mitigation. Furthermore, the US (rather than Europe) was the main shaper of the protocol. The compliance regime, flexibility mechanisms and accounting rules were primarily based on US interests and design. As mentioned earlier in this chapter, climate change does have the potential for strong economic feedbacks; however, the Kyoto Protocol lacked the necessary ambition to drive these feedbacks. Interestingly, the main cause of plummeting solar and renewable energy prices has been the actions of a few under Kyoto, primarily European countries such as Germany. Moreover, the world has seen the spread of policies such as emissions trading, which were legitimised under Kyoto. Kyoto lacked any clear institutional structures to allow for the graduation of developing countries to take on targets of their own, or to expand and strengthen the agreement such as through non-party measures. While the environmental feedbacks of climate change are more salient than biodiversity, they are still longer term in nature and not always easily distinguishable. Accordingly, the Kyoto Protocol presents an example of a semi-global agreement, but not of exclusive CMG. It lacked the substance, ambition and institutional provisions to constitute strong critical mass action. It was an agreement based on appealing to the US, rather than showcasing EU leadership. However, the moderate leadership shown by the EU and some other developed countries has had some positive impact in terms of lowering the costs of

renewable energy and encouraging policy diffusion and subnational action. The Kyoto Protocol is an example of both the promise of CMG and the risks of a semi-global approach that lacks ambition.

These three case studies are summarised through the CMG analytical framework in Table 7.2. The success of the Montreal Protocol was contingent on tight, strong environmental and economic feedbacks combined with the leadership of a lion and an appropriate institutional infrastructure. In contrast, the biodiversity does not possess strong feedbacks or the leadership of a lion or wolf and has institutional provisions that make a fully plurilateral approach difficult. The Kyoto Protocol had some success due to moderate economic and political feedbacks, but was hampered by a lack of institutional enablers and weak environmental feedbacks; it ultimately required stronger leadership.

**Table 7.3: A CMG Analysis of the Montreal Protocol and Convention on Biological Diversity and Kyoto Protocol**

| Feedback | Montreal Protocol on Ozone Depletion | Convention on Biological Diversity | Kyoto Protocol |
|---|---|---|---|
| Environmental | *Strong:* visible and salient environmental impacts on a relatively short time scale. | *Weak:* diffuse and long-term environmental impacts. | *Weak:* diffuse and long-term environmental impacts. |
| Economic | *Strong:* cost-effective replacements supported by industry. Largely | *Weak:* conservation is not easily profited from. Some degree of policy diffusion in | *Moderate:* expensive replacements developed by |

| | | | |
|---|---|---|---|
| | seen as a first-mover issue by some key actors. | terms of initiatives such as biodiversity offsets. Strong free-rider framing. | infant industries. Rapid development and decrease in cost due to the actions of Europe and others. |
| **Political** | *Strong*: directional leadership by a lion (US) due to first-mover framing and industry support. Support of the EU (secondary lion) via bandwagoning. | *Weak:* no leadership by a wolf, lion or collection of actors. | *Moderate:* Some degree of leadership by the EU, but a lack of directional leadership in domestic action or agreement design. |
| **Institutional** | *Strong:* majority voting decision-making and easily amended form. Narrow-but-deep initial treaty arrangement. | *Weak:* default consensus decision-making. Broad-but-shallow treaty arrangements. | *Weak:* agreement based on a consensus process that led to numerous concessions, including for |

| | | | |
|---|---|---|---|
| | | | non-ratifying countries such as the US. |
| **Verdict** | Ozone depletion is applicable to a CMG approach. The leadership of a lion (the US) coupled with strong, tight economic and environmental feedbacks makes a plurilateral approach both effective and likely to grow over time. The leadership of the US combined with an enabling institution arrangements (majority voting and non-party punitive provisions) made such an approach | Biodiversity loss is unlikely to be addressed through a CMG approach. Weak and delayed environmental and economic feedbacks combined with the lack of a leading lion or wolf means that a plurilateral approach is unlikely to gather members or gain in strength over time. Consensus decision-making creates a procedural hurdle to such an approach in any case. | Climate change can be addressed through an exclusive CMG approach; however, the Kyoto Protocol does not constitute such an approach. Stronger leadership by the EU and an agreement with much stronger substance could have resulted in greater success. |

| | | | |
|---|---|---|---|
| | procedurally possible and legitimate. | | |

The conceptual framework and feedback analysis provided in this chapter illustrates one way of explaining why the critical mass approach has, and has not, worked in the past. In turn, this provides a useful tool for deciding when the critical mass approach could work in the future. Crucially, it demonstrates the importance of institutional features and hence the significance of the reforms proposed throughout this thesis.

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# Chapter VIII: Conclusion: The Middle Path to Multilateralism?

The Anthropocene is characterised by significant environmental changes and challenges. These coincide with great geopolitical shifts. In order for institutions to manage the former, they must adapt to and make use of the latter. The world must find innovative ways to manage environmental problems in the absence of leadership from the former US hegemon and make use of multipolarity. This thesis has addressed the question of how US ratification and/or participation in international environmental governance can be addressed at the level of international institutions, decision-making and operational legal instruments. Fundamentally, this is a question of how environmental governance and institutional architecture at different levels can address the problem of US participation and ratification. This is reflected in the two research questions posed in Chapter I:

1. *How US ratification and participation be effectively enabled within an effective international architecture for environmental governance?*

2. *How can effective environmental governance without the US (or other recalcitrant states) be enabled through major international institutions, decision-making processes, and operational treaties?*

In answer to the first research question, US participation and ratification can be addressed through one of two governance models. The inclusive CMG model is a governance model that allows for US participation through presidential-executive agreements or bodies that do not require ratification (e.g. UNEP Unknown). The exclusive CMG model uses treaties and institutions that operate in a distinct semi-global manner that excludes the US, at least, initially. Both make use of voting and

plurilateralism and are designed to address US participation, one through encouraging it and the other through circumventing it. The first would require a balanced transition, while the second would require a bandwagoning dynamic led by either a wolf (China) or Lion (perhaps the EU). Both of these models necessitate a movement away from the current multilateral practice of universal participation and interlinked, consensus-based decision-making.

Exploring the second research question has resulted in the proposal that a movement towards either inclusive or exclusive CMG can be institutionally enabled through switching to voting for decision-making and designing treaties and institutions that make use of numerous tools that address US participation. Chapter III examined this issue through the attempted reform of the major international institution of UNEP. It found that a WEO either needs to accommodate the interests of the BRICs to allow for critical mass membership without the US, or change its function to avoid the pitfall of US non-ratification while becoming more organisationally effective.

Chapter IV analysed decision-making reform through the lens of the climate regime, concluding that the introduction of a form of layered voting is preferable, but has limited feasibility. The greatest potential lies in implementing voting through future treaties and bodies. In the context of the climate regime, this naturally led to a focus on the 2015 climate treaty. Chapters V and VI explored the different ways of creating an effective 2015 climate treaty with or without US legal participation. .

Overall, as proposed in Chapter VII, there can likely be effective international environmental governance without US ratification or even participation. The key is to make use of positive feedbacks and institutional structures to enable a critical mass dynamic. By reforming decision-making and treaty design, effective semi-global

governance structures can be developed that are effective and allow for US participation without depending on it.

Both the inclusive CMG and exclusive CMG models rely upon reform to fit the new geopolitical order, but they differ in political feasibility. Exclusive CMG would require a significant change in policy towards environmental leadership by both China and the EU. In the context of history, the existing literature and the current political zeitgeist, inclusive CMG would appears to be the more feasible way of addressing US ratification. The use of smart voting systems such as layered voting, critical mass treaties and a UNEP focused on implementation rather than a treaty-based WEO would be the key enablers for this to occur. A more nuanced approach that attempts to allow for the US to contribute to the structural leadership of pushers is likely to be more feasible than the radical notion of a group simply moving forward without the US at all.

Overall, both models of CMG rely on the theory of CMG. The theory of CMG is the notion that progressive environmental actions can create economic, political and normative feedbacks that cause them to spread and increase cooperation over time. For such a critical mass dynamic to take place, the leadership of a great power, positive feedbacks and enabling institutional features such as smart voting systems are required. CMG is both a theory and framework underlying this thesis and can be differentiated into the inclusive and exclusive governance models that are suggested as models for managing US participation in international environmental governance.

## 8.1 Thesis and Theory: Contributions to the Framing Debates

This thesis has made a number of contributions both to the existing body of literature as well as the two framing debates outlined in the introductory chapter. The

analysis presented here is the most detailed investigation of the issue of US ratification and participation in international environmental governance to date, addressing a fundamental lacuna in the literature. The theory of CMG provides a novel theoretical framing that encompasses a number of bodies of literature. It also provides a basis and justification for existing critical mass-type proposals in environmental governance. Alongside the conceptual framework for CMG, a new way of viewing the dynamics of international cooperation is established, which provides some explanatory power for the success and failure of previous treaties and lessons in terms of when a plurilateral approach is likely to work. The notion of CMG is a novel theory and framework that intimately links to, and attempts to partially answer, two of the most important debates within environmental governance literature.

The theory and models of CMG both challenge and complement the notion of minilateralism. This thesis suggests that the core problem of environmental multilateralism is the current overall aim to reach universal, global package deals. The problem is the paradigm and geopolitics, not the participant numbers. The answer is not found in limiting agreement to a consensus amongst major polluters. This is particularly true since it would simply tie outcomes to the US once again. A form of minilateralism based on progressive coalitions of the willing is needed. But in contrast to most minilateral proposals, CMG relies on identifying and enabling positive international feedbacks, not addressing the free-rider problem through selective club goods. Moreover, in order to facilitate the necessary political and normative feedbacks, the minilateral club must reach a critical mass through the participation of a great power. It must also be the legal centrefold of any regime architecture, rather than a number of fragmented outside initiatives. Minilateral coalitions will only work in the long term if they are led by a wolf

or lion and operate by a clear legal framework that can give a critical mass visibility and legitimacy.

For the second framing debate, substance versus participation in treaties, participation is the most dynamic variable and is likely to increase over time due to feedbacks inherent in some environmental issues, particularly climate change. Accordingly, substance should be prioritised over participation in environmental agreements as long as the initial membership includes a wolf (China) or lion (the US, or possibly the EU). Plurilateralism is preferable, provided the necessary feedbacks and leadership exist.

## 8.2 Contributions to Methodology

Methodologically, this thesis presents a unique application of systems thinking principles (through the use of influence diagrams, systems archetypes and causal loop analysis) to issues in international relations. While this has previously been done for issues such as health and ecosystem services, the use of such a systems thinking-based framework is less prevalent in international relations, particularly in the field of international environmental governance. This approach provides a common thread amongst the various case studies in this research. Systems thinking applied through these methods is, as demonstrated, a beneficial way of framing research in international politics, by creating a visual expression of complex relationships, allowing for the investigation of underlying mechanisms such as feedback loops and leverage points, and aiding in the creation of scenarios and models. The theory of CMG presented in Chapter VII is essentially a theory of feedbacks: it explains the successes and failures of plurilateral environmental efforts on the basis of negative and positive feedbacks. This illustrates that

there is a role for systems thinking in studies of global governance and politics. Systems thinking and its related concepts can provide a useful lens for both analysing international institutions and suggesting policy-relevant interventions.

## 8.3 Contributions to Policy

The policy implications of this thesis are manifold:

- For the climate negotiations, a new approach is needed to achieve an outcome that is effective, is legally binding and operates with or without US legal participation. This new approach would require policy makers and diplomats to move towards a more decentralised approach that uses numerous connected opt-out protocols that are designed to grow in participation over time.
- Whether it is implemented through the UNFCCC or the 2015 climate agreement, policy makers should consider a switch away from consensus towards layered majority voting.
- A movement away from needing global approval and universal participation could be the most effective way of pursuing multilateralism in the future.

While this research does present some interesting and useful findings, it nonetheless has a number of important limitations that should be noted. First, the analysis and empirical data are largely constrained to the climate regime (with the sole exception of the first case study on UNEP). While the implications for other MEAs and regimes have been highlighted, there is a need for empirical studies of these cases before the idea of CMG (particularly through an operational treaty) can be extended to them. As noted in Chapter VII, each environmental issue has specific characteristics, and many of the feedbacks present in the issue of climate mitigation (e.g. positive spillovers) may not be present in other environmental problems. Thus, the findings of this thesis are only directly

applicable to the climate regime. Second, the analysis across the thesis has primarily focused on a state-centric perspective of international politics and institutional reform. This analytical concentration has meant that the important role of non-state actors in reforming multilateralism, including civil society, subnational entities and corporate entities, has been largely omitted. Third, more analysis is needed in the interconnections between environmental governance and other regimes, as this is a key factor that will determine what steps countries are willing to take without the US. The economic and military strength of the US means that diplomatic snubs in relation to the environment could lead to retaliations in the WTO, the UN Security Council or other international fora. Multilateralism must be seen as an interconnected system – only then can the political feasibility of governance without the US be discerned.

A number of important findings and ideas discussed in this thesis could provide the basis for future research in relation to environmental multilateralism. Areas of future research have been highlighted at the end of Chapters III, IV, V, VI and VII. Further research on the CMG conceptual framework and theory would be particularly useful. First and foremost, the framework should be applied to the initial case study of UNEP, to further analyse the feasibility and probability of a critical mass WEO occurring. It would also be interesting and useful to explore the potential use of sole-executive agreements in relation to constructing a WEO, and, if it is legally possible, why this has not been pursued. A more in-depth application of the framework to the CBD, and other regimes, would be particularly useful to further discern why plurilateral efforts fail and succeed. Further empirical analysis of the effect of positive spillovers and feedbacks from unilateral actions would also be useful. If, as the vast majority empirical findings suggest, leakage and competitiveness concerns are largely unfounded, it would provide a strong

economic foundation for the CMG approach and undermine the preoccupation of environmental multilateralism with free-riding and competitiveness.

Competing theories and discourses about participation in environmental multilateralism mark current academic and diplomatic discourse. This indicates an intellectual effort to deal with the diffusion of power internationally and the loss of US leadership. This research suggests that fitting environmental multilateralism to the geopolitical order means going beyond these existing debates and instead focusing on the dynamics of feedbacks. As long as one of the great powers is initially involved and the necessary feedbacks exist, a critical mass dynamic can evolve. This is what the theory of CMG embodies. Meeting the challenges of the Anthropocene is unlikely to require a universal global effort right from the initial stages. Staying within our planetary boundaries does not likely require the leadership of the US, but action by a critical mass.

# Chapter IX: Epilogue

## 9.1 Reflections on the Paris Climate Agreement

The Paris Climate Agreement was adopted by consensus on the 12th of December 2015, shortly after the submission of this thesis. The agreement has since been signed by 175 countries. It has been heralded by many as a diplomatic success and a watershed moment for the climate regime. It is by nature a broad-but-shallow agreement that is intended to allow for US legal participation, and therefore has important implications for this thesis. This epilogue will briefly analyse the Paris Climate Agreement and reflect on its implications for the thesis and CMG framework.

The Paris Climate Agreement runs contrary to the recommendations of this thesis and yet also fits the predictions put forward in Chapter V. This thesis, particularly in Chapter VII, recommended that the climate regime would be best served by a form of exclusive CMG without US leadership, or an inclusive CMG model whereby an agreement allows for US ratification but with a split structure that allows for fast progress via voting. In either case, plurilateralism is key. Instead, the Paris Agreement seeks universal participation and US involvement at the expense of structure and substance. It is a pledge and review agreement with a long-term goal of limiting global average temperature rise to well below 2°C. Submitted INDCs are not legally binding upon countries. However, the agreement as a whole is a legal treaty with obligations for countries to submit, maintain and update their NDCs. NDCs are to be updated on a five-yearly basis, with a corresponding global stocktake of emissions trajectories. Each NDC must be more ambitious than the previously submitted one. There are no non-party or enforcement measures: financial commitments and the compliance mechanism are intended to be facilitative and non-punitive. The agreement has been clearly shaped to

allow for US legal participation through a presidential-executive agreement. The lack of binding financial or mitigation commitments means that the agreement can be legally adopted by the executive without the consent of the US Congress. This matches the scenario of 'Pledge and Review with Varied Legality and Participation' presented in Chapter V. However, the agreement lacks opt-out clauses, further sacrificing substance for uniform and (intended) universal participation. The theory of CMG would suggest that trading substance and structure in exchange for broad participation and US involvement is a mistake.

In the eyes of the CMG framework, the Paris Climate Agreement is unlikely to meet its own lofty ambitions. The agreement appears both vulnerable to a non-party US and incapable of triggering the feedbacks necessary to limit a temperature rise well below 2°C. As Chapter VI discusses in depth, the Paris Agreement has no real way of managing a non-party US or any other recalcitrant state. A US withdrawal could undermine the single greatest advantage of the agreement: its legitimacy through broad participation. Even with continued US involvement, the agreement looks set to fail in the long term.

Current country pledges, if met, equate to a rise of 2.7–3.5°C. The agreement relies on two unproven ways of creating economic and political feedback to increase ambition over time. The first feedback process is that of peer pressure. The underlying assumption is that the 'name and shame' process of pledging and reviewing will diplomatically pressure countries into heightening their ambition over time. Such an idea lacks empirical support or a strong precedent. Moreover, the notion that countries would change their policies based on a global stocktake and non-punitive compliance mechanism seems tentative at best. The second feedback mechanism is a market and policy 'signal'. This is the idea that the establishment of agreed long-term goals provides regulatory certainty for a deep shift in investment patterns and policy structures. Once

again, the empirical evidence for the strength of such simple goal-setting exercises is lacking. Long-term goals appear to be unlikely to possess such power if short-term actions do not lend them credibility. Based on the perspective provided by the CMG analytical framework, the Paris Agreement does not appear to have the features necessary to trigger deep economic and political feedbacks. From the perspective provided from this thesis, the agreement simply places too much faith in the short-term support of a single US president.

## 9.2 The Implications of Paris for the Thesis and CMG Framework

The Paris Climate Agreement has a number of important implications for this thesis. First it confirms the hypothesis of this thesis in that US participation and leadership are central to the success or failure of international environmental governance. Indeed, the central factor moulding the outcomes of the Paris Agreement, which will be the heart of the climate regime for decades to come, was the desire for US legal involvement. Further, the predictions and analysis of this thesis appear to have been at least in part accurate, with Chapter V largely predicting the shape, substance and rationale of the Paris Climate Agreement. Second, it is quite clear that while the US may no longer be a hegemon, the world is not ready to move on without them. For now, exclusive CMG is simply not politically feasible. Moreover, the value placed on broad participation appears to have grown. The primary point of praise for Paris was its universal adoption and the all-encompassing nature of the NDC process. This also makes inclusive CMG unfeasible, at least in the short time. The world appears to be heading in exactly the opposite direction that this thesis would suggest. This by no means undermines the findings or ideas of this thesis; however, it does signify that CMG is not part of the current zeitgeist. Instead, the political and public appetite for consensus and broad participation appears to have

become legitimised. Currently it is difficult to analyse the implications of the Paris Agreement for the CMG framework and theory. Whether it proves or refutes the explanatory and predictive power of the CMG framework remains to be seen. As suggested by the analysis in this epilogue and Chapter VI, the Paris Agreement is weak in strength and vulnerable to a US withdrawal. The world may have to pay a price to learn that US participation comes at a high cost. Perhaps it will be the cost of the 2°C goal.

While it appears that a CMG treaty will not be central to the climate regime, there is nonetheless room for plurilateral agreements in the future. Climate clubs for linking domestic policies, including formally connecting emissions trading schemes, will likely emerge in a bottom-up world of climate governance. Moreover, depending on the fate of the Paris Agreement, the desire for a semi-global approach may rekindle. This could occur within or outside the climate regime. A US withdrawal, or simple failure of the pledge and review system, could be enough to delegitimise universalism and the appeal of US involvement. CMG may still hold important lessons for multilateralism in the Anthropocene, but they are lessons that the world appears not yet to have learned.

# Appendix I: Interviewee List

This appendix provides a list of interviewees. The list of interviewees is detail the origins and backgrounds of each interviewee, but maintains anonymity, as this was the selected and agreed mode of communication with interviewees due to the sensitive nature of diplomatic information. Negotiators are described only by developed/developing country status, as listing the country or region could jeopardise their identity. Others (NGOs, academic, civil service officials) are described by their region.

## Chapter III: Interviewees

| Interviewee | Details (profession, origin) |
|---|---|
| Interviewee A | Academic, Asia-Pacific. |
| Interviewee B | Academic, Europe. |
| Interviewee C | Academic (formerly UNEP), North America. |
| Interviewee D | Academic (formerly UNEP), North America. |
| Interviewee E | High-level UNEP official, Europe. |
| Interviewee F | High-level UNEP official, Europe (stationed in Nairobi). |
| Interviewee G | Negotiator, developed country. |
| Interviewee H | Negotiator, developed country. |
| Interviewee I | Negotiator, developing country. |
| Interviewee J | Negotiator, developed country. |
| Interviewee K | NGO, North America. |
| Interviewee L | Youth representative, Europe. |

## Chapter IV Interviewees

| Interviewee | Details (profession, origin) |
|---|---|
| Interviewee A | Academic, North America. |
| Interviewee B | Academic (formerly UNFCCC Secretariat), Europe. |
| Interviewee C | Academic, Asia-Pacific. |
| Interviewee D | Negotiator, developed country. |
| Interviewee E | Negotiator, developed country. |
| Interviewee F | Negotiator, developing country. |
| Interviewee G | Negotiator, developing country. |
| Interviewee H | Negotiator, developing country. |
| Interviewee I | NGO (formerly UNFCCC Secretariat), Europe. |
| Interviewee J | Former high-level UNFCCC Secretariat member, Europe. |
| Interviewee K | High-level UNFCCC Secretariat member, Africa. |
| Interviewee L | High-level UNFCCC Secretariat member, North America. |
| Interviewee M | NGO representative, Europe. |

## Interviewees Chapters V and VI

Please note that these interviews were not directly used as data, but served as a way to provide context and orientations for these papers.

| Interviewee | Details (profession, origin) |
|---|---|
| Interviewee A | Academic, North America. |
| Interviewee B | Academic, North America. |

| | |
|---|---|
| Interviewee C | Academic, Asia-Pacific. |
| Interviewee D | Academic, Europe. |
| Interviewee E | Negotiator, developed country. |
| Interviewee F | Negotiator, developed country. |
| Interviewee G | Negotiator, developed country. |
| Interviewee H | Negotiator, developing country. |
| Interviewee I | Negotiator developing country. |

## Appendix II: A Supplementary Paper

This appendix contains a published discussion paper, a modified version of Chapter IV that was published as a peer-reviewed discussion paper with the Free University of Berlin. This version is expanded and makes greater use of causal loop analysis.

Freie Universität Berlin

Forschungszentrum für Umweltpolitik

Environmental Policy Research Centre

# Framework for the Future

## The Possibility of Majority Voting within the United Nations Framework Convention on Climate Change (UNFCCC)

Luke Kemp

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# Framework for the Future: The Possibility of Majority Voting within the United Nations Framework Convention on Climate Change (UNFCCC)

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## Abstract

The United Nations Framework Convention on Climate Change (UNFCCC) is struggling in its attempts to address the threat of anthropogenic climate change and create an effective post-Kyoto international climate agreement. One substantial part of the problem is consensus decision making within the Convention, which effectively gives every party a veto over the process. Majority voting is one potential alternative which is already being discussed within the UNFCCC. A comparative analysis of consensus and majority voting suggests that majority voting is superior in terms of both efficiency and effectiveness since it is a better consensus-builder, a speedier decision making process and provides opportunities for a semi-global approach to international climate policy. The objective in this paper is to investigate how majority voting could be implemented in the UNFCCC and to consider politically feasible and effective approaches to voting arrangements for the Convention. Implementing majority voting in the Convention faces legal, political and institutional obstacles. While it has growing support from some states, others remain staunchly opposed, with concerns over voting on financial matters being particularly sensitive. A type of Layered Majority Voting with larger majorities for financial and substantial matters is considered to be the optimal approach in balancing political feasibility and effectiveness. A weighted voting system differentiated on the basis of mitigation commitments, vulnerability and population (Common but Differentiated Voting) is proposed as an ideal approach. Despite these possibilities a change in decision making will likely require a crisis to catalyse the necessary political will and break the current path dependency that has been built around consensus.

## Contents

# 1 Introduction

The United Nations Framework Convention on Climate Change (UNFCCC- the Convention) is the cornerstone of the international climate regime. Despite its central role and importance, the Convention has struggled to achieve any lasting or effective agreement towards its aim of avoiding dangerous anthropogenic climate change through meaningful international mitigation of greenhouse gases. Consensus decision making has been identified as one of the key reasons for these shortcomings as it sacrifices effectiveness in favour of legitimacy (Biermann and Gupta, 2011, Schroeder et al., 2012). Consensus itself has no clear legal definition under the Convention. It is generally employed as 'negative consensus' or 'unanimity', i.e. the absence of a stated objection implies agreement (LRI, 2011a). Accordingly, consensus as practiced in the UNFCCC is simply the absence of a veto (Bodansky, 2009). The UNFCCC currently uses consensus as a default rule since the proposed official rules of procedure were blocked by Saudi Arabia in 1991 at the last Intergovernmental Negotiating Committee directly before the first Conference of the Parties (COP- the annual negotiating forum for parties to the Convention) (Michaelowa and Luomi, 2012). 'Draft Rule 42' which specifies options for majority voting, was used as the basis for this action to allow Saudi Arabia to maintain a veto, or at least the threat of one, within the ongoing negotiations (Depledge, 2008). The Convention has now been operating for 20 years in a legal vacuum for decision making. In the absence of specific rules on decision making there has been a general understanding amongst parties that consensus is needed for the adoption of substantive decisions (Yamin and Depledge, 2004).[1] This situation is increasingly hindering progress in the current negotiations.

The recent history of the UNFCCC is one scattered with diplomatic failures in decision making. The Copenhagen Accord could not be adopted by consensus and was widely seen as a failure in terms of both process and outcomes (Bodansky, 2010). COP16 in Mexico in 2010 achieved an agreement mainly through the skilful diplomacy of the Mexican chairs and their liberal interpretation of consensus with agreement being declared despite the protests of Bolivia. At COP18 agreement was achieved at the expense of Russia, whose objections were ignored at the final plenary session (Stowe, 2012). The attainment of this false consensus has proven costly. Russia in 2013 blocked the progress of the Subsidiary Body for Implementation (SBI) for a full two weeks at the Subsidiary Bodies meeting in Bonn (Kemp, 2013). They did so by vetoing the adoption of the official agenda, demanding the addition of an item discussing decision making and procedural matters. While the embarrassment of COP18 was clearly a motive, Russia made some valid points and has reignit-

[1] There are a small number of exceptions that can be put to a vote. These include procedural matters such as appealing against a point of order or putting forward a proposal or an amendment to a proposal. Amendments to the Convention can also be taken by a three-quarters majority vote, an issue which will be discussed later under section 4.1.

ed the interest in decision making change in the UNFCCC. Business-as-usual-decision making in the UNFCCC clearly needs to be reconsidered if progress is to be made.

One concept that has been presented as a pathway forward for the Convention is the idea of using majority voting. Mexico and Papua New Guinea have recently proposed a move towards majority voting through amendments to articles 7 and 18 of the Convention (UNFCCC)[2]. This proposal was tabled in 2011 and has since been discussed as an agenda item at both COP17 (as a formal contact group) and COP18 (as informal consultations and bilaterals). These discussions have not been successful thus far and consensus is still employed within the negotiations. Despite the importance of this issue and the attention it is receiving within the UNFCCC there has been no sustained analysis of how majority voting could be implemented into the UNFCCC or other multilateral environmental agreements (MEAs) within the academic literature.

Voting and decision making rules are crucial leverage points for the design and reform of international environmental institutions. Voting arrangements are key to determining who legitimately controls an institution and its outcomes (Koremenos et al., 2001). Yet many other MEAs are affected by the same lack of official rules of procedure. The Convention on Biological Diversity, the Stockholm Convention and the Rotterdam Convention all currently operate with 'interim' rules and consensus processes due to disputes over voting (Young, 2002, UNEP, 2012). Future arrangements within the UNFCCC could influence decision making in these MEAs as well as in newly created environmental bodies. Many scholars (Biermann, 2000, Olsen and Elder, 2012, Esty and Ivanova, 2001) have advocated for a form of qualified majority voting or weighted voting to be employed within a proposed future World Environment Organisation (WEO). Voting within the UNFCCC is not just of importance to the Convention, but will likely have ramifications for the wider realm of environmental governance. This research will explore the issue of voting in the UNFCCC through the following questions:

1. *Drawing upon other case studies of consensus and voting arrangements used internationally, is majority voting likely to be more efficient or effective than consensus?*
2. *What are the institutional barriers to and opportunities in changing decision making processes, particularly towards voting procedures, in the UNFCCC?*
3. *How can majority voting be implemented within the UNFCCC? What is the most politically feasible approach to voting arrangements for the Convention? What could be an ideal form of voting, regardless of current political circumstances?*

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[2] This proposal, and most proposed voting arrangements, use voting as a last resort when all efforts to reach consensus have failed.

## 2 Approach

In the first of four stages of analysis I conduct a comparative review of consensus and voting. I then provide a legal, political and institutional examination of the barriers and opportunities for a change from consensus to voting were before discussing a number of different voting scenarios. I will focus on output legitimacy, rather than the 'input' legitimacy, by examining decision making systems based on their ability to allow the Convention to meet its core objective of avoiding the dangerous impacts of anthropogenic climate change. The reason for this is both for analytical clarity (issues of legitimacy have been thoroughly explored elsewhere in the literature e.g. (Stevenson and Dryzek, 2012)) and simply because the legitimacy of the UNFCCC is more likely to be undermined by a lack of results rather than procedural injustices (Vihma, 2011: 7).

Data were collected through 13 semi-structured interviews with key informed individuals, as well as observations from negotiations and lobbying. My analysis draws upon Historical Institutionalism and Systems Thinking to create a hybrid methodology. I make use of the concept of "Path Dependency" from Historical Institutionalism to help explain decision making change and inertia within the UNFCCC. Path dependency is a concept which suggests that the trajectories of institutions are largely determined by crucial foundational choices which then constrain future change and often reinforce the existing institutional model (Thelen, 1999). Systems thinking and influence diagrams are used to depict the overall system of institutional barriers and opportunities for change in decision making and to generate possible scenarios for future change based upon these variables. Influence diagrams are visual representations of interacting variables within a system produced from blending and analysing interviewee worldviews. Within the diagrams arrows show the flow of influence between different variables, where variables are issues or changeable system aspects (Proust and Newell, 2010). Polarities display how one variable affects the rate of change in another variable. Accordingly a '+' indicates an increase in the rate of change in the next variable. Influence diagrams allow for the identification of important complex system features such as feedback loops and leverage points.

## 3 Comparative Analysis: Consensus and Majority Voting

Before an analysis of voting can be worthwhile it is logical to first shot that voting is preferable to consensus in achieving output legitimacy. This section combines interview data and existing literature to provide a comparative analysis of consensus and majority voting.

### 3.1 Efficiency: Building Consensus in the Shadow of a Vote

The idea that voting is more efficient and quicker than consensus in reaching outcomes is relatively uncontroversial. The basic reasoning is that 193 countries, all with vetoes, addressing a controversial and complex global problem, does not equal a successful agreement, let alone a great deal of speed or efficiency (Vihma, 2011). Similar sentiments have

been expressed in regards to the practice of consensus with the World Trade Organisation (WTO) (Pauwelyn, 2005, Tijmes-Lhl, 2009, Low, 2001). Former WTO director-general Pascal Lamy has branded the practice of consensus as "medieval" and stated that "there is no way to structure and steer discussions amongst 146 members in a manner conducive to consensus.... The decision making need(s) to be revamped" (Denny et al., 2003). Even within the Council of the European Union, where voting is allowed, the qualified majority voting threshold of 74% has been criticised by scholars as too high, making it less effective efficient and unfairly biased towards the status quo, particularly with the enlargement of the EU and increasing diversity of membership (Baldwin et al., 2001, Leech, 2002). The EU itself recognised the problems of consensus within a large and diverse group and attempted to accompany it's expansion in membership with an expansion in voting to areas previously covered by consensus through the Treaty of Nice (Baldwin et al., 2001) In political science the tendency for unanimous decision making to be restricted by the least enthusiastic party has been dubbed the "Law of the Least Ambitious Program" (Hovi and Sprinz, 2006: 28). In simpler terms it is renowned for producing 'lowest-common denominator' outcomes and serving the interests of the least ambitious party. Biermann et al. (2010) highlight that political science has shown majority voting to be a speedier more efficient process than consensus, namely because a stalemate cannot be maintained by an individual or small number of parties.

One lesser acknowledged benefit of voting is that it can act as a consensus builder. Voting often acts as a deterrent to blocking, a kind of 'nuclear threat' that encourages compromise. In consensus decision making the objecting party can simply maintain a veto until its demands are met. There is little incentive to compromise, leading to consensus often being "the best decision rule least likely to produce consensual behaviour" (McGann, 2004: 14). Voting switches the emphasis away from minority blockers and gives greater leverage to the majority. The threat of a vote often forces the least ambitious to become more accommodating.

Many international institutions with majority voting have never had to use it. Both the Montreal Protocol and Global Environmental Facility (GEF) are notable examples of environmental agreements which have majority voting but have passed all decisions by consensus (UNEP, 2007, del Castillo, 2009). Hovi and Sprinz observe that out of a large sample size of international institutions the majority (79%) practice consensus, but only a minority (47%) actually have it codified into their rules (2006: 35). It is a recurring phenomenon for international bodies with formal voting procedures to practice consensus (Lockwood Payton, 2010), as the EU has regularly done (Heisenberg, 2005). The Council of European Council has a well-known 'culture of consensus' (Heisenberg, 2005: 82): explicit voting is rarely done in the council (Mattila and Lane, 2001, Mattila, 2004, Heisenberg, 2005, Baldwin et al., 2001) and when it does occur it is usually only due to the dissent of a single party (Mattila, 2009). Unsurprisingly, countries generally prefer to avoid conflict and reach consensual agreement rather than resort to a vote. The shadow of a vote hanging over-

head, like a procedural Sword of Damocles, provides a condition that is more conductive to consensus outcomes than consensus is.

### 3.2 Effectiveness: Critical Mass Governance

Voting should lead to either more progressive or no worse agreements than consensus would. While voting is more efficient, the issue of whether it leads to substantially different results than consensus is more difficult to ascertain (Lockwood Payton, 2010). Consensus and voting may lead to the same results simply at different rates. Arguably transferring power from blockers to the majority and enhancing consensus-building could lead to progressive decisions where deadlock would otherwise exist. Some interviewees expressed concerns that if a country was outvoted on certain issues it would simply refuse to abide by the decision or to implement it. It should be noted that institutions generally have mechanisms in place to ensure that this does not occur. The EU, for example, has a collection of incentives and penalties designed to encourage states to stay within the Union even when they are on the losing end of an important vote. Similarly the Convention could leverage access to carbon markets or adaptation and mitigation finances to encourage state compliance with voting outcomes. However, the possibility that some states would either drop out of the Convention or a treaty due to objections over substance is not necessarily a negative one. While some may view it as a potential weakness, a semi-global approach could prove to be ultimately more effective in achieving the aims of the Convention.

Voting could produce more progressive outcomes by allowing for decision making and implementation by a semi-global, critical mass of countries. Such a form of 'Critical Mass Governance' (CMG) could take one of three different forms within the UNFCCC: 1. The entire regime operates by a critical mass of countries, while those who are unwilling to work by voting drop out of the regime (this will be analysed later); 2. A treaty could work by a critical mass whereby a large segment of countries create a semi-global agreement that is not watered down to appeal to the participation of recalcitrant states, or; 3. Voting is used within specific issues under a treaty (or within separate protocols) in order to unblock individual negotiating tracts and have particular issues move forward by a critical mass. The creation of a critical mass agreement which avoids the issue of appealing to the US and other states with domestic constraints or problematic positions could be possible and preferable. This is important to consider since the desire to appease certain parties has led to a history of watered-down agreements. An example of this is the participation of the US, which is one the most controversial and important topics for global climate policy. As the largest developed country emitter, and an economic superpower, the US is in a key position to take a leadership role on addressing climate change. Unfortunately, instead they have undermined the climate regime on numerous occasions, including signing the Kyoto Protocol and subsequently not ratifying it (Depledge, 2005). While many other countries have done similar acts, the actions of the US, in light of its size and power, have proven to be particularly destructive to the regime. Underpinning these actions are a number of both domestic political and institutional hurdles. Firstly, the US has a unique constitution

whereby international treaties must pass a two thirds majority vote in the senate and have the same legal status as federal law once ratified (Skodvin and Andresen, 2009). This means that ratification is a very serious issue and one third of the senate (34 senators) can block any such move. Additionally, US politics is rather antagonistic; climate change is politically polarised within the US and combined with lobbying, vested interests and increased partisanship the issue has become politically toxic (Bang et al., 2012). It is unlikely that the US will be able to ratify any progressive binding multilateral climate treaty unless a substantial political shift occurs or there are changes to the US Constitution. The second would be highly unlikely to happen in the near future. This tension underpins to current movement of negotiations towards a non-binding 'pledge and review' model for the 2015 climate agreement. Accordingly, a "deep, but narrow" climate agreement with strong substance and commitments with limited membership that expands over time could be preferable to a "broad, but shallow" agreement (Aldy et al., 2003). One interview respondent alluded to this prospect in mentioning a concept from the film Field of Dreams in that you could "build it (an effective architecture) and they will come."[3] In practice this would be the second form of CMG. A majority of parties would create their own protocol without seeking to appeal to the interests of parties such as the US which could undermine the substance of the agreement and still not be capable of ratifying it.

Similar ideas have been put forward under other international institutions. Low has advocated for a form Critical Mass Decision Making within the WTO, suggesting that a subset of parties could push a progressive agenda ahead on particular issues and create a better differentiation of commitments while maintaining the coherence of the multilateral system (Low, 2001). Low further suggests using a form of consensus at the inception of an agreement, and letting the critical mass dictate terms from there. This is close to the third form of CMG where voting would be applied in order to unblock specific issues. For example, a 2015 agreement could consist of numerous optional opt-out protocols where a smaller number of progressive parties could work by voting to advance particular issues (e.g. REDD+, market based mechanisms or building pre-2020 mitigation ambition) and build trust and momentum for the wider regime. Parties who refuse to yield to the outcomes of voting on these issues could simply 'opt-out' of that protocol. Contrary to Low, I would suggest that the creation of these critical mass tracts would be better instigated by a voting system rather than consensus, otherwise particular states could simply block the adoption of a certain protocol that is undesirable to them. This is a logical and promising approach since on individual topics there is often only one, or a small handful of countries, blocking progress. For example India and Saudi Arabia prevented action on hydroflurocarbons (HFCs) and 'black carbon' recently at COP19, but the main opposition against attempts to regulate aviation and bunker fuels has come from Singapore. Given this differentiation of in-

[3] Interview with a developed country academic 07-12-12.

terests between blockers, it makes more sense to use voting to exclude particular parties from certain topics rather than from an entire regime or treaty. This would presumably make this the most politically feasible, and perhaps effective, form of CMG. Free-riding and leakage could be potential problems for both of these forms of CMG within the climate negotiations, but could reasonably be addressed through incentives and/or measures against non-parties. Moreover, leakage concerns will decline as participation grows and there are also positive leakage and spill-over effects such technology development and diffusion from climate policy leaders. This new idea of CMG enabled by and working through voting has received no exploration within existing literature on the UNFCCC or MEAs thus far. This is due to both its radical nature and the existing political realities of consensus, yet it nonetheless warrants further attention.

The outcome of a critical mass agreement is doubtful since voting usually acts as a consensus-builder. Parties are more likely to stay under the Convention or join a new agreement rather than dropping out or refusing to participate, but such an occurrence isn't necessarily a negative one. Voting could leave the door open to a world of semi-globalism, while still maintaining the option of US participation in the future. Timmons and Roberts observe that: "For two decades now, the US has been the bull in the china shop of climate negotiations - repeatedly smashing any small progress that was being deliberately arranged" (2011: 779). It would be fundamentally misguided to continue to tie international decision making to the destructive bull of climate negotiations.

# 4 Legal Aspects: Implementation

There are primarily two ways of adopting majority voting into the UNFCCC. Firstly the Convention could be amended to allow for voting. Secondly, the Rules of Procedure with a resolved Draft Rule 42 could be officially adopted by the COP. The rules of procedure would need to be adopted by consensus according to article 7.2(k) of the Convention. This is perhaps why Papua New Guinea and Mexico have opted to attempt inducing change through the first path, i.e. amending the Convention itself.

## 4.1 Amendments to the Convention

Superficially, the implementation of majority voting through amending the Convention has promise, but upon closer inspection it possesses tremendous legal difficulties. Under Article 15.3 the Convention can be changed through a three quarters majority vote: *"If all efforts at consensus have been exhausted, and no agreement reached, the amendment shall as a last resort be adopted by a three-fourths majority vote of the Parties present and voting at the meeting"*. At first glance it appears that majority voting could be adopted via a majority vote. Yet progress is not so simple. Article 15.4 of the Convention stipulates that changes to the Convention are only binding upon those parties who have accepted and ratified it. In other words, amendments only apply to those who voted for it and ratify the amendments thereafter. Thus, majority voting could be introduced via a three quarters

majority vote, but the dissent of a few parties could result in an interesting situation for the Convention: the majority of parties working by voting while others operate under consensus. Parties functioning under different decision making rules could ultimately be counter-productive by requiring dual COP decisions, and engender confusion in already overly complex institution (LRI, 2011b). Such a situation is likely to occur since ratification is often a long process and gives all states time to either reject, or indefinitely abstain from, the ratification process. On the other hand, this could be a useful and simple pathway to enable the first form of CMG. The critical mass (which would need to be at least three-quarters of parties) in this case would simply be those countries that are willing to work by voting and ratify the amendments to the Convention. However, this form of CMG would likely be inferior to the other two forms since the critical mass is defined by those who are willing to work by voting rather than those necessarily seeking environmentally effective outcomes (although there would probably be some overlap between the two categories as most of the parties supporting voting are also the generally regarded as more progressive states by nature, but this is not guaranteed). Another important point is that empirical studies have shown that states are much more likely to ratify and stay within an 'opt-out' protocols rather than ratify and join an 'opt-in' protocol (Galbraith, 2012). Amendments to the convention can be seen as a kind of 'opt-in' scenario as parties will need to vote for and ratify the amendments. However if majority voting was instead implemented through adopting rules of procedure it would be more of a 'opt-out' scenario requiring parties to intentionally leave the Convention, suggesting that more parties would stay within the framework.

### 4.2 Rules of Procedure

Majority voting through the adoption of the rules of procedure, while requiring consensus, does not need ratification, making it an attractive path for implementation. The rules of procedure with a resolved Draft Rule 42 could be officially adopted by the COP, although that would require consensus agreement. There is a possibility that a blocker would veto such a measure, as Saudi Arabia did to the original rules of procedure. However, there is a loophole since consensus is a flexible concept which has no official legal definition within the UNFCCC or internationally. As recent experiences in COP16 and COP18 show, consensus technically can be achieved despite opposition. There is a political avenue for a strong COP president to promote adoption of the rules of procedure.

An important point is that the adoption of the rules of procedure, unlike amendments to the Convention, does not require ratification. The only way to veto their adoption would be to maintain a formal objection after the decision has been made and follow through with a legal process to dispute the ruling of consensus (Schwarte C. et al., 2011). Countries who have been overruled to achieve consensus previously, such as Bolivia or Russia, have not taken such action. Bolivia threatened to take legal action through the ICJ but has thus far failed to do so (Schwarte C. et al., 2011). Russia, despite its most recent actions, also not followed through to procedurally dispute the consensus ruling. This suggests that the

political nature and long legal process of questioning a consensus decision deters parties from doing so. Perhaps another reason is that it is difficult to imagine how exactly a legal decision could be executed. Article 14.2 of the Convention stipulates that dispute settlement between parties can occur through negotiation, other peaceful means or submission of the dispute to the ICJ. However, the compulsory jurisdiction of the ICJ only occurs when both parties have agreed to submit to its decision. To complicate matters further it is unclear who the disputer would take legal action against; the host nation and chair, or the entire COP? The chair is seen simply as a facilitator of the will of the parties and not a party representative; and taking a case against the entire COP is difficult as it require all parties to the Convention to submit to the jurisdiction of the ICJ. Furthermore, if a party did maintain a formal objection it is unclear what the outcome would be since consensus is not officially defined within the UNFCCC or the UN. It is difficult to dispute consensus if there is no official definition. The only two current international legal instruments to define consensus so far are the United Nations Convention on the Law of the Sea (UNCLOS) under article 161.7(e) and the Dispute Settlement Standing (DSU) of the WTO under Annex II of the WTO agreement (UNFCCC, 2011a). If parties were overruled to pass the rules of procedure there is a high probability that they would not follow through with any threatened challenge and the decision would stand; even if they did take legal action it is unlikely to be successful in repealing the rules of procedure through the ICJ.

Overall, given the problem of ratification, the adoption of the rules of procedure provides a legally and politically feasible option to introduce voting into the UNFCCC. This is a legal opportunity, but the shift towards majority voting is still largely contingent upon underlying political and institutional dynamics.

## 5 Political Dynamics

No agreement exists on the current voting proposal. Bodansky and Rajamani (2013) note that the COP is currently split over the choice between consensus and voting, with no clear solution to the deadlock in sight. The general divide is between supporters such as the Alliance of Independent Latin American and Caribbean States (AILAC), the Environmental Integrity Group (EIG) and the EU against vehement opponents such as Saudi Arabia and Bolivia. Others such as the US, India and China have remained tight-lipped. However, these "stonewall responses" (Vihma, 2011: 7) could be an indication of rejection (Vihma and Kulovesi, 2012). They simply don't need to outwardly take a position since Saudi Arabia is already dedicated to blocking any progress on the issue. The politics of this are complex and reasons vary for both the rejection and support of this proposal:

**Table 1: Group Positions towards Voting**

| Negotiating Group | Stance |
|---|---|
| *AILAC* | The AILAC grouping is one of the strongest proponents of the majority voting proposal. Member states such as Colombia and Costa Rica vocally supported the proposal during discussions at COP17 (ENB, 01/12/2011) and have since then maintained this sympathy. In the most recent talks on voting Colombia called for the adoption of rules of procedure as a "key matter for transparency" and noted that "it's clear that consensus is not always possible"[4]. |
| *ALBA* | ALBA has been opposed to the majority voting proposal. The reasons for this are quite clear: ALBA members such as Bolivia have been amongst the foremost users of the veto (although their intentions may have been noble at times) and Bolivia may still have negative memories of COP16. Other members of ALBA showed a willingness to agree to rules of procedure, as long as draft rule 42 specifies some form of consensus.[5] |
| *AOSIS* | AOSIS has not yet discussed the majority voting proposal as a bloc or consequently developed a common position on this.[6] The current chairmanship of AOSIS is supportive of the idea of majority voting.[7] |
| *BASIC* | Most of the BASIC bloc such as China and India has refused to take a public stance on this issue, which suggests that they oppose the notion (Vihma, 2011). In the most recent negotiations both China and India stated that consensus has worked very well in many cases and that the focus should be on improving implementation, not decision making.[8] However, it is unclear whether this constitutes direct opposition to voting or was part of their wider strategy of pushing for greater access to financing and 'means of implementation' under most discussions and agenda items at COP19. |

[4] Personal observation of contact group on voting agenda item under COP at COP19 18-11-13.

[5] Interaction with an ALBA negotiator 03-06-13.

[6] Interaction with AOSIS Chair Ambassador Marlene Inemwin Moses at a public seminar 19-02-13.

[7] Ibid

[8] Personal observation of contact group on voting agenda item under COP at COP19 18-11-13.

| | |
|---|---|
| *The EU* | The EU has been supportive of the majority voting proposal (ENB, 13/12/2011). During interviews and interactions many EU respondents mentioned that while they supported the principle of majority voting they would prefer some form of weighted voting in comparison to the traditional 'one country - one vote' system. |
| *The LDCs* | The majority voting proposal has not yet been discussed officially by the LDCs. Some were open to the idea and suggested that the bloc would be likely to support it given their frustration with the current system and desire for a speedier process.[9] |
| *Umbrella Group* | Some states such as the US and Canada have refused to take a clear public stance, which suggests that they have concerns. In the most recent discussions on voting Canada questioned the problem of ratification and asked "how would voting rules operate", while the US observed that for now time and effort would be better spent formulating the 2015 agreement rather than engaging in a debate on decision making.[10] Other countries in the bloc expressed concerns that G77 could easily unify and outvote developed countries on matters of finance.[11] |

The political dynamics behind the majority voting proposal are important to determine both the optimal design of a voting system and the general political feasibility of such a shift in procedure. Yet country positions are fluid and can change over time (Downie, 2012), and therefore so can the political feasibility of a proposal. This can be seen in the current voting proposal with a number of countries, even Saudi Arabia, becoming more open to discussion around the issue since the blockage of the Subsidiaries Bodies meeting in 2013[12]. Indeed, at COP19 Saudi Arabia, while opposing voting for most matters, declared that "the one area when we can talk about voting is when we talk about financing"[13]. While this is naturally part of Saudi national interest as part of the G-77, and confirms the suspicion of the Umbrella Group, it nevertheless suggests an evolution of their position over time.

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[9] Interaction with an East African delegate 04-06-13

[10] Personal observation of contact group on voting agenda item under COP at COP19 18-11-13

[11] Interaction with an Umbrella Group delegate 06-06-12

[12] Interaction with a Pacific Island Delegate 14-06-13.

[13] Personal observation of contact group on voting agenda item under COP at COP19 18-11-13 .

## 6 Institutional Barriers and Drivers for Change

Institutional dimensions such as discourses, rules and information flows shape how countries engage with the issue of decision making change. There are two distinct types of institutional forces at play: barriers that reinforce the status quo; and drivers that create momentum for the transformation of decision making processes. Both of these will be explored in order to identify leverage points for creating change in the UNFCCC.

### 6.1 Barriers

*Pandora's Box*: Some respondents suggested there is a concern amongst parties that amending the Convention would be similar to opening "Pandora's box"[14], as amendments could set a precedent for ongoing change to the principles and annexes of the Convention. This view is understandable given that there is a concurrent proposal by Russia to amend the annexes of the Convention. Major developing countries strongly oppose the notion of revisiting the annexes since it would likely result in a change to their status and responsibilities. Such anxiety was evident at COP18 in the final draft text of the Ad-hoc Working Group on Long-Term Cooperative Action which specified that the process of reviewing the temperature goal of the Convention "is not a review of the Convention itself" (UNFCCC, 2012). A recurrent aspect of ADP negotiations has been the assertion by some parties that they will not reopen or reinterpret the Convention.[15] Fears over re-opening the Convention mitigate against the adoption of majority voting through amendments, although not for the adoption of rules of procedure.

*Consensus as a Norm*: There was a common perception amongst interviewees that consensus is a UN norm, more so than voting. This is partially true. Consensus is perhaps the best reflection of the legal principle of sovereignty which the UN is built upon. But voting in no ways violates the principle of sovereignty, since as with any form of international law parties can make reservations to outcomes or decisions taken by a vote. In fact, a large number of international bodies use majority voting, including the EU, ILO, WTO, Montreal Protocol, GEF and the highest decision making body of the UN, the UN General Assembly.

*Financial Matters*: Concerns over voting on financial issues appears to be a political blockade for both developing and developed parties. Many developed countries have a fear that "they could be overridden by the G-77 on budgetary and financial matters"[16] in a situation of voting and accordingly "want to maintain their veto over financial matters"[17]. This issue

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[14] Interaction with a Western European Delegate 03-12-12

[15] Interview with an Eastern European Delegate 12-06-13. Furthermore please refer to any of the recent Earth Negotiations Bulletins coverage of the recent ADP negotiations to see highlights of this central, yet repetitive conflict.

[16] Interview with a high level secretariat member 12-06-13.

[17] Interview with a senior UNFCCC secretariat advisor 12-06-13.

has a long history, with the US threatening to veto the original rules of procedure due to this concern.[18] Clearly making voting on financial matters more nuanced than a simple majority where the G77 could band together and overpower donor countries is required in order to make voting politically palatable for developed countries. However there is then the possibility that the G77 may dislike the idea of developed countries having a veto over financial matters.[19] Yet opposition to voting on this basis would seem somewhat nonsensical given that it would still be an improvement over the current predicament where every state grouping has a veto.

*Veto Attraction and Institutional Memory*: Over time parties have grown to enjoy their veto power and may forget the problems that consensus previously caused. As one interviewee bluntly stated "the parties now like what they have, they have a veto"[20]. A veto ensures that parties will be taken seriously, regardless of economic or geopolitical significance.[21] It also guarantees that states have a greater degree of individual control over the outcome of negotiations.

A related problem is that of the collective memory of the UNFCCC in relation to the history and success of consensus decision making. Some interviewees saw consensus decision making as having been quite successful prior to recent setbacks, sentiments that were also expressed by Saudi Arabia and India during COP19. This overlooks the history of the Convention, including its inception. As one interviewee noted, the Convention itself was adopted over the protests of a number of countries who still had their plaques raised to speak[22] and "it's something we have conveniently forgotten"[23]. The UNFCCC was adopted without consensus in 1992. Negotiations at COP6 at The Hague in 2000 collapsed due to an inability to reach consensus. The history of negotiations in relation to decision making is not an entirely successful one, but there appears to be some failure in the institutional memory of the Convention.

*Consensus as a Process*: Consensus as a process inherently favours the status quo and handicaps attempts at transformation. The will of the many to change can be thwarted by one conservative voice. This can be seen in the section on legal implementation. If consensus had not been required to adopt the original rules of procedure then this current conundrum would not exist.

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18 Interview with a former high level secretariat member 14-05-13.

19 Interview with a senior UNFCCC secretariat advisor 12-06-13.

20 Interview with a senior UNFCCC secretariat advisor 12-06-13.

21 Interview with a senior UNFCCC secretariat advisor 12-06-13.

22 Interview with a former high level secretariat member who attended this session 14-05-13.

23 Interview with a high level secretariat member 12-06-13.

*Voting as a Double-Edged Sword:* One legitimate appeal raised against voting was that consensus and the use of a veto can also be used to block environmentally ineffective decisions. Arguably the blocking of the adoption of the Copenhagen Accord at COP15 by Tuvalu and a number of ALBA and African countries constitutes at one incident when a veto was used to block an unambitious outcome. This is a fair criticism and a risk that must accompany any resort to a voting system, although based on the history of negotiations it appears likely that in most cases the majority will be pushing for progressive rather than regressive outcomes. Importantly, in such predicaments is it better to have no decision rather than a suboptimal one?

*Misconceptions on Voting*: A recurrent idea amongst interviewees was that voting was a "divisive" process that could easily create wedges in an already overly politicised and antagonistic arena. However, as previously noted this is rarely the case and voting tends to act as more of a consensus builder, although there are exceptions. One interviewee noted that the International Whaling Commission (IWC) tends to rely upon frequent voting rounds and has devolved into a continuous "numbers game".[24] While this is true, issues and economics consequences are different between the UNFCCC and IWC. Moreover there is already a heavily ingrained practice of seeking consensus and valuing universalism within the Convention. It is not likely that parties would fall into a numbers game if voting was introduced to the UNFCCC.

*Path Dependency*: Path dependency is a meta-barrier that encompasses most of the other blockades to decision making change. The numerous barriers to change have developed into a self-perpetuating culture and institutional practice. Parties have grown to appreciate their veto and have developed misconceptions on voting to further justify the status quo. All the barriers contribute to a form of path dependency that has locked in the current institutional state. Yet when the rules of procedure were first discussed in 1992, the vast majority of parties supported the notion of voting. It was only Saudi Arabia, and the US due to concerns over financial matters, who threatened to stop the adoption of voting arrangements[25]; and eventually it was solely Saudi Arabia who eventually blocked their adoption. Over time much of the Convention has established discourses and reasons to cement consensus into place; one respondent referenced this by claiming that "because of our practice we have now created an institutional law of consensus".[26] Path dependency can be broken as there are numerous precedents of international organisations evolving heir rules over time; for example The International Standards Organisation switched from consensus to majority voting, as has the EU in a number of policy areas (Maggi and Morelli,

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[24] Interview with a former secretariat member and academic 09-07-13.

[25] Interview with a former high level secretariat member who attended this session 14-05-13.

[26] Interview with a legal expert and civil society member 14-06-13.

2003, Pauwelyn, 2005). The question then becomes what can drive a change in decision making processes away from the current institutional trajectory.

### 6.2 Drivers for Change

*Political Crises*: The most important factor in breaking path dependency in the UNFCCC is crisis. Political failures have a catalysing effect upon the negotiations. The most recent example is Russia blocking the SBI. Not only did Russia put decision making reform back into the international dialogue, but it also explicitly showcased the failures of the current system, in which countries could block the progress of an entire negotiating channel over the apparently trivial matter of an agenda item. Tuvalu highlighted the "supreme irony" of Russia's actions by describing it as "crashing the car to prove the seatbelts don't work"[27]. When veto rights are abused it undermines faith in consensus and creates an impetus to change. One interviewee stated "I would characterise what has just happened (the SBI blockage), despite being painful, as an opportunity"[28]. Crisis helps to deconstruct the status quo and in doing so provides the space to develop new institutional structures. In the context of majority voting, political failure can delegitimise existing decision making practices and create political momentum for change.

*Attractiveness of Majority Voting*: Majority voting, despite some reservations, was seen to be a more efficient and speedy decision making process in contrast to consensus by most interviewees. This positive perception could be further enhanced through the provision of further information. Highlighting successful previous applications of voting and delivering information on the implementation and consequences of voting could also help to make new arrangements more familiar, build trust and dispel misconceptions. This is important since, as one respondent put it, most would "rather stick with a known quantity than something completely different[29]." Another way of making parties more at ease with voting would be to highlight voting procedures used within related bodies and implement it into new ones. One respondent noted that this more 'bottom-up approach' could be extremely useful since it largely avoids the more difficult conversation on rules of procedure while aiding the work of other bodies under the Convention[30]. The Global Environmental Facility (GEF) already makes use of double qualified majority voting and the Green Climate Fund is currently debating the use of voting measures within the Board.

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[27] Personal observation at the final SBI plenary 14-06-13.

[28] Interview with a senior UNFCCC secretariat member 12-06-13.

[29] Interview with a US academic 05-12-12.

[30] Interaction with a developing country respondent 05-12-12.

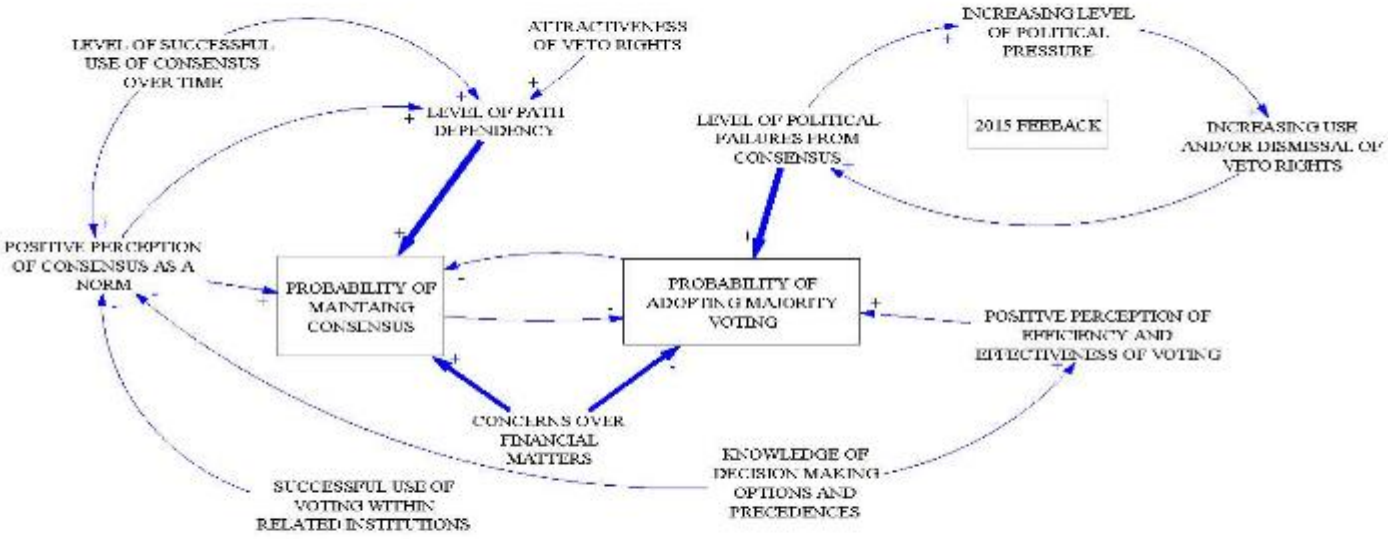


**Figure 1: Institutional Dimensions of Decision Making Change in the UNFCCC**[31]

From the interaction of the institutional aspects of decision making change in the UNFCCC (Figure 1), a number of leverage points in driving change can be identified. Firstly, path dependency is the central impediment to decision making change with political crisis as the only driver with equivalent power. Importantly there is a positive feedback loop presently working to heighten the probability of political failure. As the 2015 deadline approaches there is an increasing level of political tension and many controversial issues that have previously been avoided, such as loss and damages or response measures, are coming to the fore. While consensus was most recently reached on these issues at COP19, the outcomes are tenuous and focus mainly on developing processes and frameworks, while loss and damages has a revision at COP22 enshrined as part of the compromise agreement. These issues are not entirely resolved. Buchanan (Buchanan, 2001) refers to the 'critical state', a state in non-equilibrium dynamic systems in which increasing interconnectedness leads to a tendency for sudden and tumultuous changes. The critical state has been repeatedly proved to reoccur in physical systems, but Buchanan goes one step further and propose that this state is ubiquitous in complex systems. I would suggest that consensus within the UNFCCC could be encouraging the Convention to be self-organise into a critical state. The re-emergence of unresolved issues has led to an increasing reliance upon veto rights and a responsive suppression of dissent, as occurred at COP16 and COP18. This strains relations between parties while the fundamental negotiating issues often remain unresolved. Unfortunately the 2015 agreement includes almost all of the significant issues

[31] Polarities display how one variable affects the rate of change in another variable. Accordingly a '+' indicates an increase in the rate of change in the next variable.

of the negotiations and there is a practice of not agreeing to anything until everything is agreed. This interconnectedness makes the use of a veto more likely and the consequences of that use more severe. History has embedded path dependency, but new and future dynamics are degrading it by increasing possibility of a political crisis. The provision of information on decision making can challenge existing institutional norms and legitimise new processes, yet this is a necessary but not sufficient condition to induce change and political crisis is ultimately needed.

## 7 Scenarios

Based upon the preceding analysis of the legal, political and institutional dynamics within the UNFCCC there are six main scenarios for decision making change in the Convention. These scenarios, together with the legal pathways towards them, are depicted in Figure 2. One of these scenarios (*Dual Institutions*) follows from implementation via amendments to the Convention, while the remaining scenarios are based upon adopting rules of procedure.

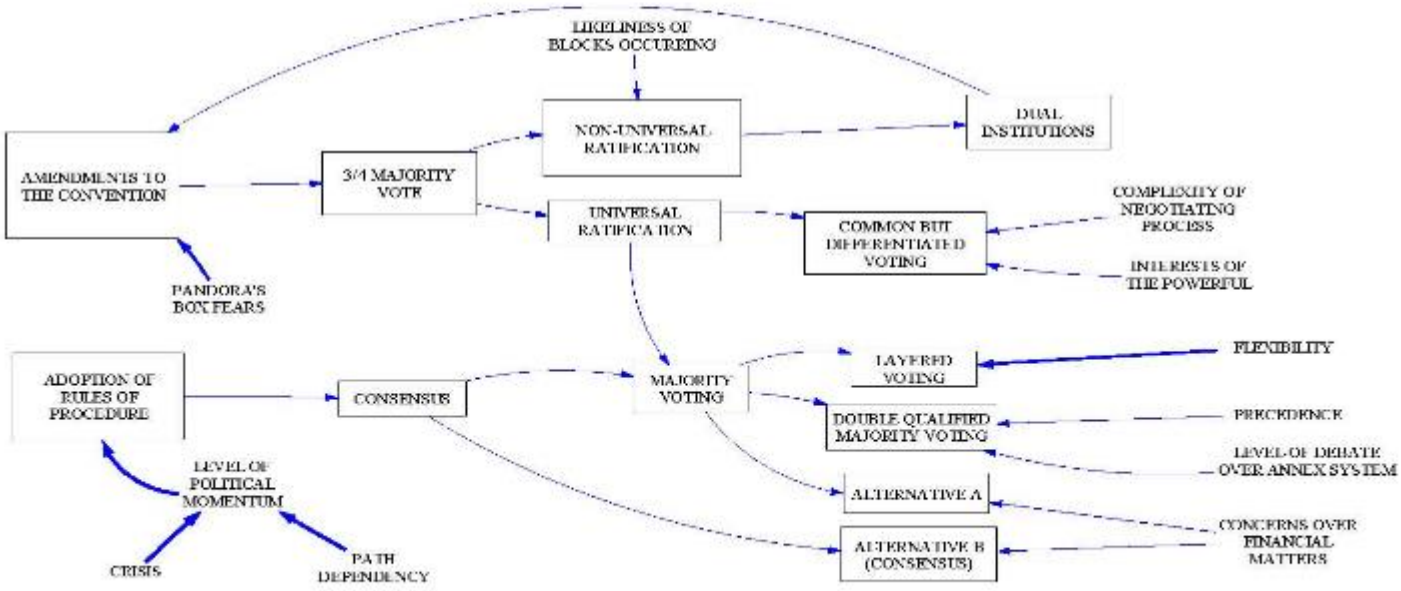


**Figure 2: Scenarios for the Implementation of Voting Systems into the UNFCCC**

*Dual Institutions*: The least likely and perhaps least productive outcome of introducing majority voting would be amendments to the Convention without universal ratification. As noted previously this would lead to a split regime, in which dual institutions with different rules would require different COP decisions. Due to worries over this possibility, along with the "Pandora's box" fear, this scenario is the least likely to occur.

*Alternative A:* This scenario would see the adoption of rules of procedure according to Alternative A of Draft Rule 42.1 (see Appendix I). The adoption of the original Alternative A, is posited as a scenario since adopting the original Alternative A language is likely to be the quickest, and perhaps least controversial method, for any chair to adopt a rules of procedure which specifies majority voting. Since this scenario does not specify a larger majority for financial matters it is unlikely to occur.

*Alternative B*: This scenario would see the adoption of rules of procedure according to the current Alternative B of Draft Rule 42.1. This would simply be the official adoption and endorsement of consensus within the UNFCCC. This is improbable since parties are unlikely to invest the necessary political will of adopting rules of procedure in order to maintain the status quo; and the current wording actually has a lower (two-thirds) qualification for financial matters.

*Double qualified Majority Voting*: This scenario would involve the adoption of an amended Draft Rule 42 with a double qualification upon financial, or substantial matters, or both. The Montreal Protocol uses an innovative voting system whereby two qualifications need to be met for an affirmative vote: a simple majority of both developing and developed member parties (UNEP, 2007). This system allayed the fears of developed countries that the G-77 would unify and utilise its superior numbers to control outcomes. A double qualified majority voting system could be effective in persuading developed countries who have voiced this fear. However, as one interviewee noted, such a system would have to work in the context of the current annexes within the UNFCCC, which are contested and may make the idea politically unpalatable[32].

*Layered Voting*: This scenario involves adopting an amended version of Draft Rule 42 which stipulates a higher majority for matters of finance and the adoption of protocols. Layered Voting is the assignment of varying qualifications to different voting matters based on political concerns. The benefit is that it allows for more controversial or important matters to have more stringent voting qualifications placed upon them. Countries will not walk away from the Convention due to a dispute over a procedural matter such as the election of a chair, while more sensitive matters, such as financing measures, could be given a higher voting threshold. Voting issues can be separated along four main lines: procedural, substantial and financial matters, and the adoption of legal instruments. I suggest changes to Draft Rule 42 that would lead to the following system of Layered Voting:

- Procedural issues shall require a simple majority vote[33].

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[32] Interview with an academic and former UNFCCC secretariat member 21-04-13.

[33] While some procedural matters are defined in the draft rules of procedure, there are numerous ambiguities. Where ambiguity exists the distinction between procedural and substantial and left to the discretion of the chair as per rule 42.3 of the draft rules of procedure. This in itself is an often arbitrary and questionable practice that could use revision; however it lies beyond the scope of this paper.

- Matters of substance shall require a three-quarters majority vote.
- The adoption of protocols or legal instruments shall require a three quarters majority vote covering over 50% of current emissions regulated under the UNFCCC. It should be noted that the conditions for entry into force for any protocol would still need to be specified under that particular instrument as per Article 17(3) of the Convention.
- Financial matters shall operate by a double qualified majority vote requiring a simple majority of all parties present and voting, and a simple majority of all financial contributions (this could avoid the issue of using the politically poisonous annex system while preventing the G77 from having a decisive voting quota). Alternatively financial matters could be decided through a 90% super-majority for greater simplicity.

Layered Voting is an ideal approach and provides for unique voting arrangements. It provides a pragmatic and effective way of introducing majority voting into the UNFCCC through a flexible design that can be suited to the political context to address specific concerns and maximise political feasibility. Other MEAs which work on consensus (CBD, Stockholm Convention etc.) by default could adopt a Layered Voting model since the distinction between voting issues holds true across all MEAs.

Layered Voting is a flexible option and could be modified to suit less ambitious conditions. Some interviewees claimed that the greatest potential for voting is just for unblocking procedural matters. This would be a significant step forward as it would help to avoid predicaments such as the recent Russian blockage of the SBI. In a situation of low political appetite for change then an alternative version of Layered Voting could be a two thirds majority vote for procedural matters, 90% threshold for substantial matters, and consensus (or consensus minus one or two) for the adoption of legal instruments and decisions related to finance.

Layered Voting provides a pragmatic and effective way of introducing majority voting into the UNFCCC through a flexible design that can be suited to the political context to address specific concerns and maximise political feasibility. Other MEAs which work on consensus (CBD, Stockholm Convention etc.) by default could adopt a Layered Voting model since these MEAs have the same distinction between voting issues.

*Common but Differentiated Voting (CBDV)*: CBDV is proposed as an ideal, but not feasible voting system, and as such has less connection with the examined barriers and opportunities. It is presented as a scenario here to provide an informative example of how voting could be structured in conditions free of strong political constraints and what the resulting distribution of voting power could look like. It could provide lessons or a possible model for the decision making of future environmental agreements and bodies. This voting system would operate in line with the principle of 'common but differentiated responsibilities' under Article 3.1 of the Convention. Drawing upon this principle I have developed a system of voting which gives every country a right to vote, but differentiates their voting power

on the basis of the three criteria of population, mitigation and vulnerability. The weighting on vulnerability provides input legitimacy to the system by giving voice and power to those who are most impacted by climate change and accordingly the decisions of the COP. The issue of procedural legitimacy by including most vulnerable must be addressed as it has been a reoccurring objection to other alternative proposed forms of decision making, such as minilateralism (Eckersley, 2012). This form of weighting would also be in accordance with Article 3.2 of the convention which states the need to fully consider the "special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change". One clear problem with this criterion is that there are still methodological disputes on how technically measure vulnerability. An example of this could include whether to measure vulnerability simply by projected impacts attributable to climate change, or additionally by including the capacity of the state to adapt to the impacts. In my presented example (Table 2) data for vulnerability is based upon the 2010 dataset for the Global Vulnerability Index created by David Wheeler of the Centre for Global Development (Wheeler, 2011). It draws upon climate vulnerability data that has been adjusted to account for income and regulation (indicators of adaptive capacity).

The second criteria of population would more fully embody the principle of democracy than the current one-country one-vote system, which is more representative of the legal norm of sovereignty (Schwartzberg, 2003). Moreover, it better reflects geopolitical realities by giving greater weighting, and appealing to, the rising economic powerhouses of the BASIC group. Population would have to be tied to a common baseline in order to avoid a perverse incentive for increasing population in order to expand voting power. Population figures were taken from the World Bank 2012 data set (WB, 2013).

The third criteria of weighting on the basis of mitigation targets provides an incentive for developed countries to increase their mitigation commitments and for developing countries to take on their own, thus helping create the conditions for a 'race to the top'. This is similar to the logic of weighting votes based on financial contributions in the International Monetary Fund (IMF) and World Bank. Weighting mitigation efforts both encourages and rewards leadership. Since most countries have not put forward clear mitigation targets for the 2015 climate agreement, the Climate Change Performance Index (CCPI), created by German Watch, has been used to measure the mitigation performance. The CCPI measures the mitigation efforts of 58 individual countries who account for over 90% of global emissions (Germanwatch, 2014). The CCPI ranks countries by an index of which 80% is assessed by objective measurements of emissions trends and levels, and 20% by policy assessment from international experts. The remaining countries that are not covered by the CCPI account for an insignificant amount of emissions individually and therefore their scores have been moderated to a common low score (0.01 by the CCPI scoring system).

Table 2 provides an example of how the distribution of votes under a CBDV system would look. As noted previously, there are clear constraints and problems in measuring and quan-

tifying both mitigation performance and vulnerability, and accordingly this example is an imperfect attempt using the best current available data and measurements. If any such system were to truly be implemented within the convention, it would likely require the secretariat to undertake specific measurements of both vulnerability and mitigation agreed to by the parties.

The example below has modified the weighting of votes so that while population and mitigation are of equal weighting, vulnerability counts for less towards a country's overall voting power. As shown in Table 3 the votes are weighted so that the end voting score is comprised by 43.3% for mitigation, 43.3% for population and 13.3% for vulnerability. The rationale for this is both logical and geopolitical. Firstly, in a five or six degree world the impacts of climate change are severe enough to constitute a global systemic threat, and thus state-based evaluations are less relevant in the long-term. Secondly, the most vulnerable countries are also generally those who are least significant in terms of emissions, and thus their buy-in for political agreements is somewhat less important. These weighting modifiers balance legitimacy against ensuring that power still largely rests with those who are most needed to ensure effective global mitigation.

**Table 2: CBDV Bloc Voting Entitlements**

| Blocs | Weighted Vote |
|---|---|
| EU | 25.298% |
| The Umbrella Group | 9.467% |
| AOSIS | 1.979% |
| BASIC | 20.678% |
| EIG | 2.817% |
| LDCs | 16.562% |
| AILAC | 0.859% |
| ALBA | 0.698% |
| G-77 | 49.052% |

**Table 3: Modifier for Vote Weighting Criteria**

| Weighting Modifiers | |
|---|---|
| Population | 1.3 |
| Vulnerability | 0.4 |
| Mitigation | 1.3 |

**Table 4: CBDV Voting Party Entitlements**

P= Population
V= Vulnerability
M= Mitigation
OVP= Overall Voting Power
Individual member party scores are depicted as a % of the overall total. The table is ranked from largest to smallest in terms of the end voting score.

| Member Party | P | V | M | OVP (%) |
|---|---|---|---|---|
| China | 19.31% | 0.69% | 1.58% | 9.14% |
| India | 17.68% | 1.05% | 1.72% | 8.55% |
| United States of America | 4.49% | 0.00% | 1.59% | 2.63% |
| Indonesia | 3.53% | 0.16% | 1.69% | 2.28% |
| Brazil | 2.84% | 0.02% | 1.67% | 1.96% |
| Mexico | 1.73% | 0.04% | 1.85% | 1.55% |
| Russian Federation | 2.05% | 0.01% | 1.31% | 1.46% |
| Japan | 1.82% | 0.01% | 1.42% | 1.41% |
| Germany | 1.17% | 0.00% | 1.86% | 1.31% |
| United Kingdom of Great Britain and Northern Ireland | 0.90% | 0.00% | 2.09% | 1.30% |
| France | 0.94% | 0.00% | 1.98% | 1.27% |
| Egypt | 1.15% | -0.06% | 1.77% | 1.26% |
| Italy | 0.87% | 0.00% | 1.89% | 1.20% |
| Pakistan | 2.56% | 0.45% | 0.03% | 1.18% |
| Thailand | 0.95% | 0.12% | 1.64% | 1.14% |
| Nigeria | 2.41% | 0.31% | 0.03% | 1.10% |
| Spain | 0.66% | 0.00% | 1.81% | 1.07% |
| Bangladesh | 2.21% | 1.55% | 0.03% | 1.18% |
| Turkey | 1.06% | 0.03% | 1.40% | 1.07% |
| Morocco | 0.47% | 0.21% | 1.92% | 1.06% |
| South Africa | 0.73% | 0.06% | 1.62% | 1.03% |
| Denmark | 0.08% | 0.00% | 2.26% | 1.01% |
| Ukraine | 0.65% | 0.02% | 1.68% | 1.01% |
| Iran (Islamic Republic of) | 1.09% | 0.15% | 1.14% | 0.99% |
| Romania | 0.30% | 0.01% | 1.92% | 0.96% |
| Portugal | 0.15% | 0.01% | 2.06% | 0.96% |
| Argentina | 0.59% | 0.01% | 1.61% | 0.95% |
| Somalia | 0.15% | 14.14% | 0.03% | 1.96% |
| Sweden | 0.14% | 0.00% | 2.05% | 0.95% |
| Poland | 0.55% | 0.01% | 1.58% | 0.93% |
| Switzerland | 0.11% | 0.00% | 1.99% | 0.91% |
| Belgium | 0.16% | 0.00% | 1.94% | 0.91% |
| Hungary | 0.14% | 0.00% | 1.96% | 0.91% |
| Algeria | 0.55% | 0.15% | 1.50% | 0.91% |
| Ireland | 0.07% | 0.00% | 1.95% | 0.88% |
| Malta | 0.01% | 0.00% | 1.99% | 0.86% |
| Slovakia | 0.08% | 0.01% | 1.90% | 0.86% |

| | | | | |
|---|---|---|---|---|
| Iceland | 0.00% | 0.00% | 1.95% | 0.85% |
| Netherlands | 0.24% | 0.00% | 1.71% | 0.85% |
| Lithuania | 0.04% | 0.01% | 1.83% | 0.81% |
| Norway | 0.07% | 0.00% | 1.78% | 0.80% |
| Austria | 0.12% | 0.00% | 1.72% | 0.80% |
| Malaysia | 0.42% | 0.03% | 1.41% | 0.80% |
| Belarus | 0.14% | 0.03% | 1.70% | 0.80% |
| Luxembourg | 0.01% | 0.00% | 1.81% | 0.79% |
| Slovenia | 0.03% | 0.01% | 1.78% | 0.78% |
| Democratic People's Republic of Korea | 0.35% | 0.33% | 1.40% | 0.80% |
| Latvia | 0.03% | 0.01% | 1.77% | 0.78% |
| Finland | 0.08% | 0.00% | 1.70% | 0.77% |
| Czech Republic | 0.15% | 0.00% | 1.62% | 0.77% |
| Bulgaria | 0.10% | 0.01% | 1.65% | 0.76% |
| Cyprus | 0.02% | 0.00% | 1.73% | 0.76% |
| Canada | 0.50% | 0.00% | 1.21% | 0.74% |
| Greece | 0.16% | 0.01% | 1.55% | 0.74% |
| Ethiopia | 1.31% | 2.40% | 0.03% | 0.90% |
| New Zealand | 0.06% | 0.00% | 1.61% | 0.72% |
| Croatia | 0.06% | 0.01% | 1.59% | 0.72% |
| Myanmar | 0.75% | 5.64% | 0.03% | 1.09% |
| Singapore | 0.08% | 0.00% | 1.51% | 0.69% |
| Australia | 0.32% | 0.00% | 1.25% | 0.68% |
| Philippines | 1.38% | 0.27% | 0.03% | 0.65% |
| Estonia | 0.02% | 0.01% | 1.37% | 0.60% |
| Vietnam | 1.27% | 0.52% | 0.03% | 0.63% |
| Kazakhstan | 0.24% | -0.03% | 1.13% | 0.59% |
| Democratic Republic of the Congo | 0.94% | 2.14% | 0.03% | 0.71% |
| Saudi Arabia | 0.40% | 0.01% | 0.76% | 0.50% |
| Burundi | 0.14% | 5.83% | 0.03% | 0.85% |
| United Republic of Tanzania | 0.68% | 0.80% | 0.03% | 0.42% |
| Sudan | 0.53% | 1.71% | 0.03% | 0.47% |
| Afghanistan | 0.43% | 2.10% | 0.03% | 0.48% |
| Republic of Korea | 0.72% | 0.00% | 0.03% | 0.32% |
| Colombia | 0.68% | 0.06% | 0.03% | 0.32% |
| Kenya | 0.62% | 0.19% | 0.03% | 0.31% |
| Uganda | 0.52% | 0.67% | 0.03% | 0.33% |
| Zimbabwe | 0.20% | 2.88% | 0.03% | 0.48% |
| Eritrea | 0.09% | 3.38% | 0.03% | 0.50% |
| Central African Republic | 0.06% | 3.51% | 0.03% | 0.51% |
| Iraq | 0.47% | 0.38% | 0.03% | 0.27% |
| Niger | 0.25% | 1.86% | 0.03% | 0.37% |
| Nepal | 0.39% | 0.71% | 0.03% | 0.28% |
| Mozambique | 0.36% | 0.88% | 0.03% | 0.29% |
| Uzbekistan | 0.43% | 0.33% | 0.03% | 0.24% |
| Malawi | 0.23% | 1.62% | 0.03% | 0.33% |

| | | | | |
|---|---|---|---|---|
| Madagascar | 0.32% | 0.96% | 0.03% | 0.28% |
| Guinea-Bissau | 0.02% | 2.98% | 0.03% | 0.42% |
| Liberia | 0.06% | 2.73% | 0.03% | 0.40% |
| Peru | 0.43% | 0.06% | 0.03% | 0.21% |
| Venezuela (Bolivarian Republic of) | 0.43% | 0.03% | 0.03% | 0.20% |
| Rwanda | 0.16% | 1.81% | 0.03% | 0.33% |
| Yemen | 0.34% | 0.51% | 0.03% | 0.23% |
| Ghana | 0.36% | 0.20% | 0.03% | 0.20% |
| Chad | 0.18% | 1.27% | 0.03% | 0.26% |
| Syrian Arab Republic | 0.32% | 0.27% | 0.03% | 0.19% |
| Mali | 0.21% | 0.94% | 0.03% | 0.23% |
| Cameroon | 0.31% | 0.23% | 0.03% | 0.18% |
| Guinea | 0.16% | 1.24% | 0.03% | 0.25% |
| Burkina Faso | 0.24% | 0.72% | 0.03% | 0.21% |
| Angola | 0.30% | 0.22% | 0.03% | 0.17% |
| Sri Lanka | 0.29% | 0.27% | 0.03% | 0.18% |
| Zambia | 0.20% | 0.88% | 0.03% | 0.22% |
| Côte d'Ivoire | 0.28% | 0.29% | 0.03% | 0.17% |
| Sierra Leone | 0.09% | 1.60% | 0.03% | 0.26% |
| Senegal | 0.20% | 0.81% | 0.03% | 0.21% |
| Cambodia | 0.21% | 0.67% | 0.03% | 0.19% |
| Togo | 0.09% | 1.44% | 0.03% | 0.25% |
| Haiti | 0.15% | 0.99% | 0.03% | 0.21% |
| Chile | 0.25% | 0.01% | 0.03% | 0.12% |
| Cuba | 0.16% | 0.59% | 0.03% | 0.16% |
| Benin | 0.14% | 0.71% | 0.03% | 0.17% |
| Ecuador | 0.22% | 0.14% | 0.03% | 0.13% |
| Guatemala | 0.22% | 0.13% | 0.03% | 0.12% |
| Kiribati | 0.00% | 1.42% | 0.03% | 0.20% |
| Bolivia | 0.15% | 0.36% | 0.03% | 0.13% |
| Lao People's Democratic Republic | 0.10% | 0.67% | 0.03% | 0.14% |
| Comoros | 0.01% | 1.26% | 0.03% | 0.19% |
| Papua New Guinea | 0.10% | 0.58% | 0.03% | 0.14% |
| Lesotho | 0.03% | 0.99% | 0.03% | 0.16% |
| Tunisia | 0.15% | 0.09% | 0.03% | 0.09% |
| Dominican Republic | 0.15% | 0.12% | 0.03% | 0.09% |
| Congo | 0.06% | 0.60% | 0.03% | 0.12% |
| Honduras | 0.11% | 0.23% | 0.03% | 0.09% |
| Mauritania | 0.05% | 0.62% | 0.03% | 0.12% |
| Tajikistan | 0.11% | 0.19% | 0.03% | 0.09% |
| Azerbaijan | 0.13% | 0.05% | 0.03% | 0.08% |
| United Arab Emirates | 0.13% | 0.01% | 0.03% | 0.07% |
| Paraguay | 0.10% | 0.25% | 0.03% | 0.09% |
| Solomon Islands | 0.01% | 0.78% | 0.03% | 0.12% |
| Nicaragua | 0.09% | 0.22% | 0.03% | 0.08% |
| Israel | 0.11% | 0.00% | 0.03% | 0.06% |

| | | | | |
|---|---|---|---|---|
| Serbia | 0.10% | 0.03% | 0.03% | 0.06% |
| Timor-Leste | 0.02% | 0.63% | 0.03% | 0.10% |
| Turkmenistan | 0.07% | 0.23% | 0.03% | 0.08% |
| Gambia | 0.03% | 0.55% | 0.03% | 0.10% |
| El Salvador | 0.09% | 0.07% | 0.03% | 0.06% |
| Jordan | 0.09% | 0.05% | 0.03% | 0.06% |
| Libya | 0.09% | 0.07% | 0.03% | 0.06% |
| Tuvalu | 0.00% | 0.67% | 0.03% | 0.10% |
| Kyrgyzstan | 0.08% | 0.09% | 0.03% | 0.06% |
| Djibouti | 0.01% | 0.46% | 0.03% | 0.08% |
| Micronesia (Federated States of) | 0.00% | 0.53% | 0.03% | 0.08% |
| Vanuatu | 0.00% | 0.51% | 0.03% | 0.08% |
| Costa Rica | 0.07% | 0.05% | 0.03% | 0.05% |
| Namibia | 0.03% | 0.27% | 0.03% | 0.06% |
| Swaziland | 0.02% | 0.37% | 0.03% | 0.07% |
| Tonga | 0.00% | 0.48% | 0.03% | 0.08% |
| Georgia | 0.06% | 0.03% | 0.03% | 0.05% |
| Lebanon | 0.06% | 0.03% | 0.03% | 0.04% |
| Republic of Moldova | 0.05% | 0.09% | 0.03% | 0.05% |
| Nauru | 0.00% | 0.43% | 0.03% | 0.07% |
| Guyana | 0.01% | 0.35% | 0.03% | 0.06% |
| Bosnia and Herzegovina | 0.05% | 0.04% | 0.03% | 0.04% |
| Sao Tome and Principe | 0.00% | 0.40% | 0.03% | 0.07% |
| Saint Lucia | 0.00% | 0.40% | 0.03% | 0.07% |
| Panama | 0.05% | 0.03% | 0.03% | 0.04% |
| Samoa | 0.00% | 0.38% | 0.03% | 0.07% |
| Grenada | 0.00% | 0.39% | 0.03% | 0.07% |
| Jamaica | 0.04% | 0.11% | 0.03% | 0.04% |
| Albania | 0.05% | 0.04% | 0.03% | 0.04% |
| Oman | 0.05% | 0.02% | 0.03% | 0.04% |
| Uruguay | 0.05% | 0.01% | 0.03% | 0.04% |
| Mongolia | 0.04% | 0.06% | 0.03% | 0.04% |
| Saint Vincent and the Grenadines | 0.00% | 0.32% | 0.03% | 0.06% |
| Kuwait | 0.05% | 0.00% | 0.03% | 0.03% |
| Bhutan | 0.01% | 0.25% | 0.03% | 0.05% |
| Armenia | 0.04% | 0.03% | 0.03% | 0.03% |
| Marshall Islands | 0.00% | 0.30% | 0.03% | 0.05% |
| Maldives | 0.00% | 0.26% | 0.03% | 0.05% |
| Equatorial Guinea | 0.01% | 0.20% | 0.03% | 0.04% |
| Botswana | 0.03% | 0.07% | 0.03% | 0.03% |
| Cape Verde | 0.01% | 0.22% | 0.03% | 0.04% |
| Fiji | 0.01% | 0.15% | 0.03% | 0.04% |
| Saint Kitts and Nevis | 0.00% | 0.23% | 0.03% | 0.04% |
| Trinidad and Tobago | 0.02% | 0.10% | 0.03% | 0.03% |
| Gabon | 0.02% | 0.07% | 0.03% | 0.03% |
| The former Yugoslav Republic of Macedonia | 0.03% | 0.02% | 0.03% | 0.03% |

| | | | | |
|---|---|---|---|---|
| Qatar | 0.03% | 0.00% | 0.03% | 0.03% |
| Antigua and Barbuda | 0.00% | 0.19% | 0.03% | 0.04% |
| Dominica | 0.00% | 0.18% | 0.03% | 0.04% |
| Barbados | 0.00% | 0.14% | 0.03% | 0.03% |
| Mauritius | 0.02% | 0.04% | 0.03% | 0.03% |
| Belize | 0.00% | 0.13% | 0.03% | 0.03% |
| Bahrain | 0.02% | 0.03% | 0.03% | 0.03% |
| Suriname | 0.01% | 0.10% | 0.03% | 0.03% |
| Bahamas | 0.01% | 0.09% | 0.03% | 0.03% |
| Cook Islands | 0.00% | 0.10% | 0.03% | 0.03% |
| Niue | 0.0% | 0.10% | 0.03% | 0.03% |
| Montenegro | 0.01% | 0.03% | 0.03% | 0.02% |
| Seychelles | 0.00% | 0.08% | 0.03% | 0.02% |
| Brunei Darussalam | 0.01% | 0.01% | 0.03% | 0.02% |
| Palau | 0.00% | 0.04% | 0.03% | 0.02% |
| Andorra | 0.00% | 0.00% | 0.03% | 0.01% |
| Monaco | 0.00% | 0.00% | 0.03% | 0.01% |
| Liechtenstein | 0.00% | 0.00% | 0.03% | 0.01% |
| San Marino | 0.00% | 0.00% | 0.03% | 0.01% |

The EU stands to benefit most from the CBDV arrangements (due to their mitigation efforts) followed by the BASIC bloc, the LDCS and then the Umbrella Group. This allocation fits the previously mentioned second of CMG governance by redistributing power away from the Umbrella Group, and hence the US, and places an emphasis towards the more progressive parties (the EU), most vulnerable states (the LDCs) and most important countries in terms of future emissions (the BASIC bloc). This distribution could even provide a pathway towards a semi-global critical mass agreement built around the EU and BASIC states. Importantly, the Umbrella Group is not permanently marginalised and could easily become a larger voting force if their individual members improve their domestic mitigation efforts.

CBDV is an idealistic model; despite its advantages it is never likely to come into existence. There are two main factors which limit its political feasibility. Firstly, it violates Article 18 of the convention which stipulates that "Each party to the convention shall have one vote". Therefore weighted voting would require an amendment to Article 18 before its adoption, and it would prove to be almost impossible to have parties universally ratify such a radical change. Secondly, it is even less probable that member parties could come to an amicable agreement on voting criteria. Considering that parties to the UNFCCC have had struggles with developing picking facilitators, assigning voting quotas would prove near impossible. This is particularly true when political hand-grenades like historical responsibility could easily be put forward as possible criteria.

## 8 Conclusion: Risk and Opportunity

The inconvenient truth is that use of consensus within the UNFCCC is unlikely to lead to the fulfilment of the ultimate objective of avoiding dangerous anthropogenic climate change. Voting, in the context of the Convention, is a more efficient and potentially effective alternative. Path dependency is a substantial barrier to changing from consensus, but the potential of adopting rules of procedure and catalysing effect of political crisis make the implementation of voting both legally and politically possible. I propose that Layered Voting is the best way forward in terms of a politically feasible voting system and that the model of *CBDV* provides an idealistic, but currently unrealistic, decision making system.

There are a number of interesting avenues for further exploration of UNFCCC decision making. Firstly, can the UNFCCC act as a catalyst amongst other MEAs and spread majority voting as a new norm for international environmental governance? It is generally assumed that MEAs learn from each other, but there is little empirical evidence that this is true. Research on the diffusion of rules and procedures between MEAs is therefore an important future area of study. Secondly, if voting was to be adopted, what would a global climate agreement without the US look like? Would it be similar to the third form of CMG where the US could pick and choose which issue-specific protocols it could ratify? Would it be more of a hybrid agreement that combines and connects the bottom-up forces and sub-national actors in the US with the benefits of a top-down international approach? How this form of multi-level, critical mass governance requires further investigation.

The main driver for change within the UNFCCC, and perhaps the wider field of environmental governance, is likely to be crisis. Ironically, the long term success of the UNFCCC may be dependent upon its short term failure. In this respect the 2015 agreement and lead-up negotiations provide the best opportunity for a political crisis and decision making change. The fortunes of the next climate agreement and the rules of procedure are intricately interwoven. Naturally there are inherent risks in having the process of consensus collapse within the UNFCCC. It must be questioned whether the potential benefits of introducing majority voting outweigh the risks attendant upon both a short-term crisis and continuing with a decision making process that appears to be fatally flawed. The Hitchhikers Guide to the Galaxy by Douglas Adams once made the famous quip that "the answer to the ultimate question of life, the universe and everything" was the number 42 (1979: 99). While it may not be that cosmic, the number still carries some significance. The future of the UNFCCC, and perhaps of many of the other MEAs, may lie within Draft Rule 42 and the possibility of majority voting.

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## Appendix I: Draft Rule 42

Rule 42

**[1. Alternative A**

**The Parties shall make every effort to reach agreement on all matters of substance by consensus. If all efforts to reach consensus have been exhausted and no agreement has been reached, the decision shall, as a last resort, be taken by a two-thirds majority vote of the Parties present and voting, except:**

**(a) as otherwise provided by the Convention, the financial rules referred to in Article 7, paragraph 2 (k) of the Convention or the present rules of procedure[.] [;]**

**[(b) for a decision to adopt a proposed protocol, which shall be taken by [consensus] [a three-fourths majority of the Parties present and voting][.] [;]**

**[(c) for decisions under paragraph 3 of Article 4 and paragraphs 1, 3 or4 of Article 11 of the Convention, which shall be taken by consensus.]**

**1. Alternative B**

**Decisions on matters of substance shall be taken by consensus, except that decisions on financial matters shall be taken by a two-thirds majority vote.**

2. Decisions of the Conference of the Parties on matters of procedure shall be taken by a majority vote of the Parties present and voting **[, except that adoption of a motion or proposal to close or limit debate or the list of speakers shall require a two-thirds majority vote of the Parties present and voting]**.

3. If the question arises as to whether a matter is one of a procedural or substantive nature, the President shall rule on the question. An appeal against this ruling shall be put to the vote immediately and the President's ruling shall stand unless overruled by a majority of the Parties present and voting.

4. If, on matters other than elections, a vote is equally divided, a second vote shall be taken. If this vote is also equally divided, the proposal shall be regarded as rejected.

5. For the purposes of this rule, the phrase "Parties present and voting" means Parties present at the meeting at which voting takes place and casting an affirmative or negative vote. Parties abstaining from voting shall be considered as not voting.