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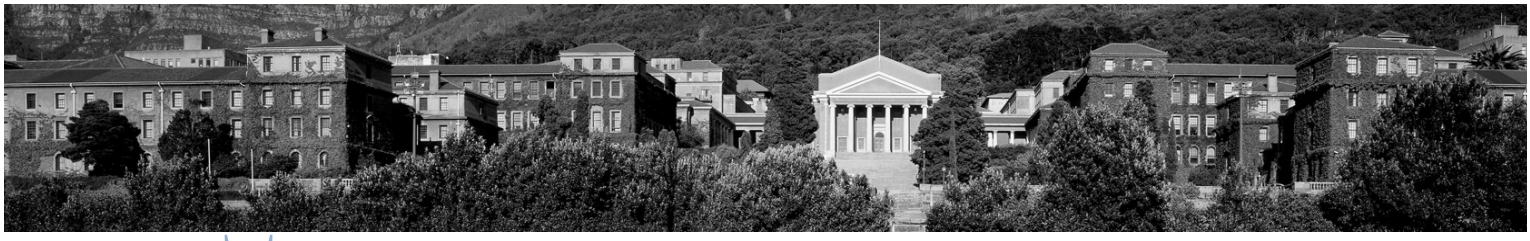

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South Africa's multiple faces in current climate clubs

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1. Introduction

Climate clubs have emerged as a possible strategy to overcome the impasses, which the multilateral negotiations under the United Nations Framework Convention on Climate Change (UNFCCC) have experienced in tackling climate change. 'Clubs' are 'minilateral' subsets of countries with possibly higher potential for resolving some of these impasses than the multilateral process as a whole. While the negotiations themselves address both the causes and consequences of anthropogenic climate change, as well as the means to do so, clubs proposals generally only address mitigation, and are usually structured around the problem of 'ambition' – achieving commitments from countries to limit and/or reduce their emissions sufficiently to avoid human induced climatic change.

Clubs have been advanced to achieve various objectives. The most common one is perhaps to break the 'deadlock' over mitigation ambition by establishing a club of major emitters, which could agree on both ambitious targets and appropriate sanctions. In addition, there are other forms of clubs which could be established to advance innovation and implementation in various elements of the global mitigation effort; for instance, reporting and review processes, finance, technology development etc. Theories on clubs vary to the extent to which clubs augment or replace the multilateral process. Most of the literature focuses on the potential for clubs to resolve problems which appear to be insoluble under the multilateral process; in practice, there are many club-like structures which currently argument the multilateral process, which will also be discussed below.

The underlying idea suggests that countries committed to reducing emissions can advance a stable coalition in the form of a club with other countries (for example, Nordhaus 2015). As a result more countries would possibly put forth targets for more ambitious emissions reductions (for instance, Grubb et al 2015) and / or take other actions associated with enhanced mitigation action. The practice and theory in international relations shows that club governance requires a solid national interest to sustain clubs (Schneckener 2009). Club governance is a small niche in the social science and economics, which has gained relevance in the analysis of climate policy. Most analyses focus on the club design and factors for success and failures of minilateralist approaches, rather than analyzing dynamics in individual countries for joining or leaving clubs.

The developments in Paris at COP 21 change the debate on clubs in a number of key areas: i) individual county contributions will be nationally-determined for the foreseeable future – in other words, there will not be a top-down allocation of mitigation effort; ii) countries will be required to consider the global impact of all contributions in making theirs; iii) countries will be obliged (Parties "shall") to develop domestic policies which are demonstrably capable of meeting their 'contributions'; iv) countries will be obliged to report on progress in meeting their 'contributions'. These changes prioritize domestic climate efforts over any international allocation regime. For this reason, perspectives on the national contributions gain critical relevance to solving the climate problem.

This paper adds to the literature on the potential contribution of 'climate clubs' to the resolution of the global climate problem via an analysis of South Africa's potential involvement in various types of climate club, and what such involvement is likely to lead to in terms of the various goals outlined in the literature review below. South Africa has a number of interesting characteristics as a participant in the international climate process; it is classified as a middle-income country, and is a non-Annex I country under the UNFCCC. Its history and its role as a pre-eminent African economy has shaped an international profile which outweighs the size of its economy or its population. Post-apartheid foreign policy has sought to balance historical political and economic relationships with the EU and the USA, with on the one hand a foreign policy emphasising regional co-operation, playing a major role in the Southern African Development Community (SADC) and the African Union (AU), and on the other hand a policy of engagement with major developing countries via BRICS and BASIC. South Africa chaired the G77+China in 2015, and a South African currently heads the AU.

South Africa's national interests in this context are complex. South Africa is a major coal producer and exporter, and the country has one of the most coal-dependent economies in the world. Its economy is not only heavily dependent on coal, but also characterised by a large mining and minerals processing industry, which is very energy-intensive. By contrast to the emissions profile of many other developing countries, South Africa has an insignificant land sector, and its emissions are dominated by energy emissions at around 80% of the total. At the same time, South Africa's climatic conditions render it extremely vulnerable to impacts of climate change, and high levels of inequality combined with extensive poverty both pose urgent development challenges, and increase the population's vulnerability to the impacts of climate change.

The purpose of the analysis is to identify if and how South Africa can possibly contribute to advancing ambition in climate clubs. Furthermore, it advances ideas about possible design options for climate clubs that may appeal to developing countries. [1]

2. Literature Review: Club governance and minilateralism in climate policy

The literature on climate clubs falls into two categories. We call the first category carbon-pricing clubs, which operate under the assumption that there is a strong and enforceable agreement between participating countries. These models for climate clubs are inspired by economic theory on international public goods. Theories on public goods establish the criteria of rivalry and non-rivalry in consumption and exclusive or universal access to the consumption of a good. While public goods are accessible to everyone and non-rival in their consumption, access to private goods is restricted. The theory of clubs vis a vis public goods is to establish exclusivity by establishing a proxy private good within the club. For instance, Nordhaus (2015) advocates a form of carbon tax for club members, coupled with border tax adjustments imposed on non-club members. In this case, the

[1] This ongoing research is part of a project on "a pioneer's alliance" jointly lead by the German Development and Wuppertal Institutes.

public good is still accessible to non-members (avoiding climate change), but at the cost of the loss of a private good (trade / access to global markets on favourable terms). Economic research has advanced club theory mainly on national public goods, like public roads or recreational areas that can be limited in access (Buchanan 1965, Sandler and Tschirhardt 1980). Some clubs in the climate arena may not have these characteristics, which is discussed further below. In climate change, the public good in question is the avoidance of dangerous climate change, which translates directly into limiting global emissions in the near future to a level which would require transformation of the global economy. This is non-exclusive in the sense that reduction of a unit of emissions anywhere is equivalent; thus free riders would benefit in the same way as those who bear the burden of emissions reduction. The real problem is not simply reducing emissions, but doing so in a way, which meets a range of complex social, political and economic objectives. Although many of these are common to all or most countries, many of these are not. Furthermore, while mitigation is traditionally assumed to impose a straightforward cost[2], it is increasingly apparent that the kind of economic transformation which low-carbon development will require will also create vast new, and potentially very competitive industries. These characteristics of the mitigation problem suggest that although the type of club structured around the simple notion of public goods outlined above may be effective, if politically plausible.

The literature on climate clubs in the literature from international relations have generally been proposed to address and overcome problems perceived to be inherent in the international climate negotiation process, specifically the cumbersome and ill-defined process of decision-making based on consensus[3]. These are in turn of two kinds: a) the challenge of consensual decision-making processes amongst all UN member states, which opens the process to potential vetos by countries with minority views; and b) the associated challenge of negotiating innovative and complex solutions to the climate problem in such a large forum. Thus, club proposals seek to address both the process of reaching agreement on climate action, and also the process of innovation required to establish an apropriate international regime to tackle the climate change problem.

Falkner [ref] identifies three variants on climate clubs in the literature:

1. "enhancing political dialogue and bargaining" by taking the negotiations process out of the formal UNFCCC setting, removing the pressures and constraints of the formal process, and allowing more latitude for building mutual trust and understanding, including via restricting participation to key actors.
2. This variant would go beyond (1) by "creating membership-specific incentives" and sanctions attached to possibly binding mitigation targets within the club;
3. This variant would formalise "great power cooperation" in the context of the multilateral regime and effectively create a subset of the multilateral process in which major emitters would be able to agree on key tradeoffs necessary for more ambitious targets.

[2] The so-called McKinsey cost curve is the simplest portrayal of this, but even the cost curve often has 'negative' costs. In reality the cost curve hides a range of complex factors.
[3] Rules of procedure were proposed but never agreed under the UNFCCC.

Falkner's (2016) overview suggests international legitimation as an additional aspect in his analysis of climate club governance. International legitimation matters for a climate club, as it doesn't aim to undermine the current regime. The aim for positive externalities addresses this aspect. Legitimation results from shared beliefs. Here, again, a club with more members can contribute to higher legitimation. Yet, given the differences in emissions profiles and wealth between nations, it'll depend who is in the club to attract or put other members off.

Climate clubs are smaller complexes in a wider regime full of complexities, according to Keohane and Victor (2011). The authors argue that the climate change regime doesn't consist of one regime, but a regime complex that comprises many different negotiations. These loosely connected sets of regimes may be conflicting or mutually reinforcing. Under these conditions a comprehensive climate regime will be less likely to be successful in achieving the required emissions reductions. The problems that need to be solved are too different to be successfully addressed in one regime (Keohane and Victor 2011). If smaller regime complexes, or clubs, will be successful for climate protection depends on six criteria, some of which link up with previous suggestions:

1. Coherence: the regime complex or clubs needs to be compatible with other objectives, so that it does not create conflict or harm.
2. Accountability: some actors can hold others accountable for to complying with the agreed rules and standards, which relates to governance
3. Determinacy: firm rules of the club to reduce uncertainties and enhance compliance.
4. Sustainability: long term commitment to the rules is necessary to attract membership
5. Epistemic quality: the quality of consistency between rules and knowledge between members matters for the legitimacy and effectiveness
6. Fairness: necessity to reflect the differences in financial resources and emissions profile.

Novelty is another important factor that the authors establish in their analysis, but not listed as a criteria. There is trade-off between creating new clubs versus using existing structures is that new clubs require higher transaction cost, while existing clubs have lower transaction costs but the expectations and opinions on these clubs, members and their functionality has already been formed (Keohane and Victor 2011).

These criteria raise some new aspects and overlap with others, which have already been established in the research literature. The table below summarizes the main determinants of success and failure of climate club governance. Each factor can create trade-offs, which require careful decision in the club design.

Figure 1 Determinants of success and failure of clubs

Factor		High cost standards	Low cost standards
Benefits	Cooperation benefits for every club member, non-rival club goods, private gains may be	High externalities	Lower externalities, total depending on total club members

	related		
Costs	Contribution of dues, membership cost	High membership cost off putting	Low membership cost attracts more members
Size	Number of members may compromise likelihood of optimal outcomes	Few members, higher cost, possibly more optimal outcomes	Large group of members, lower cost, possibly less optimal outcomes
Commitment	Stability of the club, so that no one wants to leave	No explicit conclusion, the outcome depends on the benefits	No explicit conclusion, the outcome depends on the benefits
	Long term sustainability of membership		
Governance	Membership and exclusion rules	Exclusion of non-members at high cost for members less beneficial for the functionality of the club	Exclusion of non-members at low cost for members more beneficial for the functionality of the club
	Determinacy of rules matters to reduce uncertainties and increase compliance		
	Long term sustainability of rules		
International legitimation	Shared belief that club membership is worthwhile and compatible with other efforts	Low, as fewer members join	High, as more members may join
	Epistemic quality (Like mindedness)	Low, if lower income countries can't access	High, if lower income countries can join
	Fairness	Low, as high cost excludes lower income countries	High, if accessible for lower income countries
Coherence of negotiated issues	Many different negotiations in the climate change regime complexes	Depends on core issues of the club	Depends on core issues of the club
Novelty	Existing vs. new club	Higher transaction cost for new clubs	Lower transaction cost for existing structures

Source: own compilation based on Nordhaus (2015), Prakash and Potosky (2007), Falkner (2016), Keohane and Victor (2011).

Further literature assessed the nature of various existing climate clubs. The variety of the existing clubs reflects the breadth of issues in the current climate regime. For an overview see Weischer et al (2012) who distinguish between dialogue forums and implementation groups. Widerberg and Stenson (2013) assess the landscape of existing clubs according to their compatibility with the UNFCCC regime.

For the purposes of this paper we divide current 'clubs' into four categories – 1) to develop and pursue common positions; 2) to develop consensus around specific technical areas, 3) to promote dialogue between "great powers" in a less formal setting on key issues; and 4), carbon-pricing clubs with the ability to penalize non-compliant members and to create an economic disadvantage for non-members, as a counter-factual. The first are clubs, which play a role in developing, deploying and pursuing negotiating positions within the UNFCCC process itself. These groups of countries meet regularly at or outside UNFCCC meetings, co-ordinate common positions on key issues, and work

collectively to promote these positions in the negotiations. The function of these groups is not only to aid countries in pursuing collective interests, but also to a) simplify the negotiations process, b) act as fora for innovation, and c) help to resolve differences via intergroup dialogue. Second are technically-focused groups which generally operate with reference to the UNFCCC, but operate outside the UNFCCC process per se, and are aimed at policy innovation and addressing differences in specific areas within the negotiations – for instance REDD. Third, "great power" groups, which usually consist of major emitters, and are aimed at promoting dialogue between a limited number of of key actors in a less formal setting than the UNFCCC. Fourth, carbon-pricing clubs, which would work best when there is regime with a low cost penalty in form of modest carbon prices as opposed to a regime with high or no penalties, according to Nordhaus (2015). His example assumes an international carbon price, which can be lowered between club members. The study shows that even penalties can still lead to significant emissions reductions. The underlying assumption in this analysis is the one of a classic economic club that works as long as members want to be part of the club and they can exclude non-members at relatively low cost (Nordhaus, 2015). He states that "..the present study finds that without sanctions there is no stable climate coalition other than the non-cooperative, low-abatement coalition"; he uses the Kyoto Protocol as an example of the latter. Nordhaus' version of a climate club would thus require quite an ambitious international agreement (albeit amongst a smaller group of countries than the UNFCCC), which required countries to bind themselves to sanctions, and which would also likely require modification of the current international trade regime. It is not clear why this would be less challenging or more likely to succeed than the UNFCCC process itself.

The first club category would consist of countries with similar positions, and group processes are aimed at further these position; the second category suggest club's activities that are aimed at innovation in specific technical fields; the third category suggests countries promoting informal dialogue between groups with opposing positions, and the category aims at an exclusive club based on implementing carbon-pricing with sanction mechanisms for non-compliant members. We have summarised these in the table below; the table is for illustrative purposes and is not comprehensive.

Figure 2 Overview of current climate clubs

Type of club	Designation
"Likeminded" political clubs	Association of Small Island States (AOSIS)
	Like-minded Developing Countries (LMDCs)
	Least Developed Countries (LDCs)
	Environmental Integrity Group (EIG)
	Arab Group
	African Group of Negotiators (AGN)
	Brazil, South Africa, India, China BASIC Group
	G77 + China
	Umbrella Group
	Independent Association of Latin America and the Caribbean (AILAC)
	Bolivarian Alliance for the Peoples of Our America (ALBA)
Technical clubs/ innovation	Climate and Clean Air Coalition to Reduce Short-lived Climate Pollutants (CCAC)
	Mitigation and MRV Partnership

	REDD+ Partnership
"Great power" clubs	Major Economies Forum on Energy and Climate (MEF), previously Major Economies Meeting on Energy Security and Climate Change (MEM)
	G8/7[4], G8/7 +5
	Cartagena Dialogue
	G20
Carbon-pricing clubs	none

Source: own compilation based on Weischer (2012), Widerberg and Stenson (2013), Pearce (2014)

It is important to emphasise that membership of the first three categories is not exclusive, and that multiple membership is an important facet of the regime, and reflect the complexity of the interests at stake in the UNFCCC process.

The technical achievements of the UNFCCC process thus far should not be underestimated. The regime complex which includes the UNFCCC and the IPCC has succeeded in developing an international reporting infrastructure on climate change, including emissions and national climate policy and programmes, which is critical to existing and future efforts to combat climate change. While the UNFCCC and specifically the Kyoto Protocol may have failed to deliver adequate emissions reductions, the regime has delivered a remarkable set of rules for reporting and transparency, which will form the basis for the post-2020 reporting and transparency institutional arrangements post-2020 under the Paris Agreement. Climate clubs could play a critical role in this process.

3. South Africa's national and international climate policy

The goal of this section is outline South Africa's domestic mitigation policy, its position in the international negotiations, and the relationship between the two, to assess a) the likelihood of South Africa participating in specific forms of club, and b) the likely impact of such participation on South Africa's mitigation and other goals. The key dynamic governing the potential for more ambitious climate action in the country is the political-economic tension between major stakeholders and policymakers, and amongst policymakers, on the speed and desirability of mitigation efforts. International commitments on the one hand are difficult to attain widespread political consensus on, within government and with stakeholders, and on the other hand, once made, provide a powerful source of legitimation for the implementation of mitigation measures or associated reporting and transparency obligations.

South Africa's emissions currently comprise around 1% of global emissions and, as alluded to above, are derived primarily from coal use, and around 80% of these are from energy use. The majority of these emissions are produced by large emitters, and

[4] Russia's membership of the G8 was suspended in 2014 on account of its role in Ukraine

over half of the country's emissions are from just two emitters – Eskom, the state-owned electricity utility, and Sasol, a petrochemicals and synthetic fuels company. Without mitigation, coal-derived energy emissions would continue to comprise the overwhelming share of South Africa's emissions in the long term. Reducing emissions would not only involve diversifying energy supply (away from coal to low-carbon sources), but would also involve the shifting of South Africa's development path from its current trajectory – carbon and energy-intensive – to a low-carbon, less energy-intensive economy.

South Africa's lead government agency for the development and implementation of climate policy is the Department of Environmental Affairs (DEA). DEA depends on a wide range of other agencies, and specifically key government departments, for detailed programme formulation and implementation. Of particular importance are the "economic" departments – the Departments of Energy, Trade and Industry, Economic Development, Public Enterprises (formally shareholders of Eskom, the state-owned electricity utility, and Transnet, the state-owned transport utility), and the National Treasury. The DEA and the Department of International Relations and Co-Operation (DIRCO) develop South Africa's international negotiating position in the UNFCCC jointly. As will be elaborated below, South African domestic and international climate policy is the outcome of a complex "two-level game"[5] – in addition to the strategic context of the UNFCCC, national tensions over mitigation, and what should comprise South Africa's contribution are reflected in government, and international commitments have played a significant role in providing the political impetus for domestic mitigation programmes, and for the development of national reporting systems.

South Africa's domestic climate policy was developed over a period of a decade, including a number of national consultative conferences and two long-term scenario processes (one for mitigation and one for adaptation) (Winkler 2007). The process culminated in the 2011 National Climate Change Response Policy White Paper (NCCRWP), which balances national action on mitigation and adaptation (RSA 2011). The White Paper commits the country internationally to a fair contribution to the international effort to avoid dangerous climate change, and nationally to a just transition to a low-carbon, climate resilient development path, with central consideration of the country's development needs, and especially job creation and poverty alleviation.

South Africa's mitigation policy is defined in the White Paper in emissions terms as a "peak, plateau and decline" trajectory range, from 2010 to 2050, which consists of an upper and a lower bound. The upper end of the range peaks in 2025, remains at a plateau for a decade and begins to decline in 2035. The rationale for an emissions range was uncertainty in South Africa's emissions baseline, and the range also provides a certain amount of policy flexibility. South Africa's initial mitigation contribution announced at Copenhagen by President Zuma and subsequently communicated to the UNFCCC in the wake of Cancun, commits the country to restrict emissions to 34% below "Business As Usual (BAU)" in 2020, and 42% below "Business as Usual" in 2025. The South African communication was not clear at the time, and South Africa has not been clear since, on what "Business As Usual" emissions were implied, although this

[5] Putnam (1988).

was clarified by implication in the NCCRWP and its accompanying technical information document. South Africa's INDC confirms this reading of BAU for 2020 by specifying an emissions range for 2025 and 2030. Thus South Africa's mitigation commitment for 2025 and 2030 is stated as an actual emissions level for 2025 and 2030, and an implied emissions level for 2020.

The specific details of mitigation policy in the White Paper are that a) the overall national mitigation effort will be guided by the "national benchmark range" (the PPD); b) this will consists of a "carbon budget approach" whereby "Desired Emissions Reduction Outcomes" will be defined for each economic sector, and these will in the case of large emitters be "cascaded" to firm level – in other words, carbon budgets will be set for each large emitter; and c) a mix of other measures will be deployed to enhance the realisation of carbon budgets and to cover parts of the economy not covered by carbon budgets. In addition, economy-wide instruments such as a carbon tax will be considered.

In practice, implementation of these measures has been very uneven. The upside of South African mitigation policy so far has been the Renewable Energy IPP Procurement Programme (REIPPPP), a large-scale renewables procurement programme in operation for the last few years, which has for the first time seen significant investment in South Africa in wind and solar power. Progress in other areas identified as key measures for mitigation, such as energy efficiency and transport, have been more uneven in terms of implementation, and what is now referred to in South Africa as the 'mitigation system' (comprising all elements above, and including information and MRV systems) is still under development. Specifically, the carbon budget system and the tax, both primarily applicable to large emitters, have been very challenging to implement – government and large emitters have not been able to reach consensus on implementation, and government is unwilling, especially under current economic conditions in the country (stagnation, low international commodity prices, and low oil prices),[6] to take the political risk of imposing either of these measures without buy-in from business. Despite the publication of draft carbon tax legislation in 2015, the future of the carbon tax, especially in an environment in which low economic growth and low international commodity prices are putting additional pressure on large emitters, is uncertain.

Aside from the success of the REIPPPP, which may have a large impact on South Africa's emissions by 2030, two factors have had an impact on emissions growth in the short term. First, the economy has grown more slowly than predicted, and secondly, the electricity intensity of the economy has reduced significantly over the last seven years on account of rising electricity prices, and an electricity shortage. South Africa's national inventory also reports a longer-term emissions intensity reduction in the period 2000-2010. As a result, South Africa will not struggle to meet its 2020 commitment, but will require additional measures to meet future targets. DEA

[6] Low oil prices internationally, while having a beneficial impact on South Africa's trade balance, also result in low prices for liquid fuels, due to South Africa's regulatory system. This in turn puts pressure on South Africa's synthetic fuels industry, one of the country's largest GHG emitters.

designated the period 2016-2020 as a pilot phase, during which the country's emissions reporting system and also the carbon budget system for large emitters will be trialed.

Domestic reticence to implementing current mitigation measures, and to aspiring to more ambitious mitigation goals, has a number of sources, including concerns about simultaneously meeting development goals, concerns about the international competitiveness of trade-exposed industries, and specifically commodities-based, energy-intensive industries such as mining and minerals processing, and concerns about the difficulties of financing the massive infrastructure investments which would be required. On the other hand, South Africa has some of the best renewable energy resources in the world (wind, and particularly solar radiation), which have up to very recently remained largely unused.

4. South Africa's international position

South African foreign policy pertaining to climate change follows four main cooperation lines: engagement with Africa, engagement with other major developing countries, participation in focused 'great power' fora such as the G20 and the Major Economies Forum, and bilateral engagements.

The first cooperation lines focuses on the developing countries and especially other African countries. South Africa has been the largest economy on the continent for a long time, surpassed only recently by Nigeria. Its geopolitical position as a middle income country with mostly low income neighbors in sub-Saharan Africa has comprised an important element of South African foreign policy since the end of apartheid in 1994, particularly given the support rendered by many African states to the anti-apartheid movement, and the governing ANC specifically. Foreign policy under Nelson Mandela (1994-99) was largely a policy learning experience – the country emerged from international and especially regional isolation, and was welcomed internationally to various fora from which it had been excluded. Mandela's successor, Thabo Mbeki, had a degree in international relations and was particularly active in shaping South Africa's foreign policy agenda. Mbeki coined the concept of the 'African Renaissance' and which directed South African foreign policy towards focusing on Africa (Smith 2013). From a climate point of view, South Africa participates in three key 'clubs' – the African Union, the African Ministerial Conference on the Environment (AMCEN), a regular meeting of African environment ministers which provides critical political guidance on the negotiations, and the African Group of Negotiators (AGN), a regional grouping within the UNFCCC process. Since the majority of African countries are also LDCs, there is a significant overlap between the interests of LDCs and African countries from a climate point of view, with a key focus on vulnerability and adaptation, and less focus on mitigation.

The second cooperation line allies South Africa with other middle-income developing countries, primarily outside Africa. This has primarily taken the form of participation in the BASIC (Brazil, South Africa, India, China) group. While the newly-

formed BRICS development bank may play a role in financing climate investments, BRICS (Brazil, Russian Federation, India, China, South Africa) explicitly does not tackle climate issues.

The third cooperation line consists of South Africa's participation in minilateral fora, of which the most important for climate change are the Major Economies Forum on Energy and Climate (MEF), the G8 / G7 +5 and the G20, which all consist of climate 'great powers' from developed and developing countries.

The fourth cooperation line includes the various bilateral and multilateral engagements with the developed countries. The cooperation with the US, Australia, Japan, and the EU fall in this category. This aspect of foreign policy appears less dynamic than the first two, but is of equal importance. A third of South African trade and investment continues to flow to and from these countries (Moore 2013).

The South African government is thus generally open towards multi- and minilateral cooperation generally and specifically in the climate space; this is partly because of the complex balancing act which the country has to perform between different spheres of influence with different interests – specifically between LDCs (Africa), major developing countries (BASIC) and developed countries. South African officials are fairly active in international organizations and attach importance to the prestige associated with participation in 'great power' fora. There is a tendency towards compliance with international norms, which has been observed in several policy areas (Black 1999). South Africa has historically been a strong proponent of the multilateral process under the UNFCCC, and has resisted any attempts to develop an alternative basis for an international climate regime. This does not preclude participation in a wide range of for a such as the G20 and the MEF, but South Africa's participation has always been on the basis of an understanding that these fora in no way constitute alternatives to the UNFCCC.

South Africa is currently involved in a wide range of clubs listed in the table above. Within the UNFCCC process, South Africa is involved in the G77+China as a developing country, and chaired the G77 in 2015, and crucially, during COP 21, and is also involved in the AGN and BASIC, as well as having strong bilateral relationships with a number of key climate actors. South Africa plays a co-ordinating role (with Germany and South Korea) in the Mitigation and MRV Partnership, and participates in other technical partnerships. South Africa is an active participant in the G7+5, the G20 and the MEF. While the value of technical innovation is important, it is important to observe that none of these clubs provide any basis for the kind of increased ambition referred to in the literature.

5. Prerequisites to joining a Climate Club for South Africa

The previous sections identified the opportunities and constraints in South Africa's international and domestic climate policies vis-à-vis clubs. We now establish the prerequisites for the country to join a climate club in relation to the four types of club

established earlier: 1) to develop and pursue common positions; 2) to develop consensus around specific technical areas, 3) to promote dialogue between "great powers" in a less formal setting on key issues 4) carbon-pricing clubs with the ability to penalize non-compliant members and non-members.

Of these options, we will focus on types (2) and (4), since clubs in (1) are well-developed in the negotiations and focused on these, and several type (3) clubs are likewise established. It is worth noting again that none of the type 4 clubs exist at present. A prerequisite for club membership, which is reflected also in South Africa's current participation in climate clubs, is that such membership does not conflict with the country's current principles and practices on international climate engagement as outlined above. In brief, club memberships would have to lie within South Africa's position on the legitimacy of the UNFCCC as the sole formal multilateral forum for the international climate regime, and also be consistent with South Africa's climate-diplomatic positioning.

This would rule out any potential club, which seeks to replace rather than augment the UNFCCC. In the wake of the Paris Agreement, this is less relevant, since the Agreement provides much scope for individual or collective efforts in increase ambition at the discretion of individual Parties. In addition, South Africa's involvement in the club would not be able to compromise the complex role that South Africa plays in relation to Africa, the G77 and other major developing countries (BASIC); in other words, South Africa would be unlikely to subscribe to a club which excluded other major developing countries, or is perceived as not meeting, or marginalising some of the aspirations of African countries in the climate regime.

The potential benefits to South Africa fall into three categories. The first is perhaps politically the easiest to achieve, in an area of the international regime, which has traditionally been underemphasised, but was central to the Paris outcome – reporting and transparency. The 5-year national contribution cycles, combined with the global stocktake and the "ratcheting up" mechanism, are all dependent on the establishment and effective operation of credible and accurate national systems for reporting and transparency, which is a challenge especially for developing countries[7]. In addition to the capacity-building initiatives established under the PA and the UNFCCC, technical clubs focused on developing national systems, specifically those focused on sharing experiences between developing countries, could play a significant role in building the national systems mandated under the PA. Initiatives such as the Mitigation and MRV partnership are to a certain extent already playing this role.

The second category of benefits are international forms of co-operation which could potentially increase South Africa's mitigation ambition. These benefits could be provided via technically-focused clubs which could enhance specific programmes such as the REIPPPP in South Africa, via a set of measures possibly including enhanced access to

[7] Obviously this encompasses a very wide range of countries with an equally wide range of national circumstances, but at the very least, reporting requirements for developing countries will increase after 2020, whereas those for developed countries will remain similar to pre-2020 arrangements.

finance, peer review and comparison of programmes and institutions, and possibly voluntary targets. The Solar Alliance launched by the governments of India and France in Paris during COP 21 may be an example of such a club. These initiatives would effectively lower the cost of mitigation measures, and provide a basis for accelerated action. Given the number of carbon-pricing or ETS initiatives now being implemented, especially in developing countries, it would also be potentially valuable to establish a process for swapping detailed national experiences on either establishing an ETS or a carbon tax, to facilitate policy learning in this complex area.

The third category consists of benefits which would potentially lower or eliminate the consequences of imposing either a direct carbon price on the South African economy, or an indirect cost via other measures on trade-exposed sectors in the South African economy, which would address some of the concerns currently raised by domestic stakeholders related to the proposed introduction of a carbon tax. This could take the form of the kind of club envisaged by Nordhaus, which would impose border tax adjustments on commodities from non-member countries. In order for such a club to have such a benefit for South Africa, it would have to include both South Africa's key trading partners as well as other commodity producers, which share markets with South African producers. The key economic impact of such a club from a South African point of view would be on the cost of producing energy-intensive trade-exposed basic commodities; since South Africa is primarily an exporter of such commodities rather than an importer (except potentially in the case of steel), the economic impact of such an arrangement would depend primarily on which other producers and consumers were included in such an arrangement, rather than South Africa's ability to impose border tax adjustments (other than on steel).

Even though the focus of the literature on clubs is primarily on mitigation, given the vital importance of adaptation, especially for vulnerable developing countries, there is scope for a process to share adaptation experience and practices similar to some of the technical clubs described above.

The benefits of the above options for South Africa may be both political and financial, depending on the results of the negotiations of the club. The benefits of technical clubs might be more tangible and less contested. A technical focus of a club might motivate the government to contribute, as the political terrain is less contested. The South African international delegation to the UNFCCC is large and well capacitated. Yet, the community of researchers and experts on climate change in the country as a whole is quite small. Additional capacity for the pool of climate knowledge would benefit the country and the quality of efforts in climate protection. South Africa could play a role in pioneering peer review mechanisms under the UNFCCC to advance capacity in emissions management. Peer review between like-minded countries that allows for policy learning and technical exchange on implementation may be beneficial even at the policy level.

The literature was quite clear that a low cost club is more likely to be successful than high cost options. The rules for membership would have to be very clear. The

exclusion of non-members at low cost is necessary, but the entry for interested non-members should be possible and not exclusive through economic income, region etc.

Fairness, size and the "likemindedness" are very important for the international legitimacy. This is a very important concern from a South African perspective. South African foreign policy is juggling between the three faces of developing country, an emerging economy with regional power and a reliable partner of the industrialized world. The club membership would have to allow South Africa to continue playing that role. Fairness applies to membership costs and criteria for benefits, access and conclusion. The members would also have to be selected to allow for a coherent representation of developing country interests if the focus is political or technical expertise if the focus is technical.

A small club might be more beneficial as long as the goals aren't clearly defined. A small club with 2-20 members facilitates more productive outcomes, as we saw in the research literature earlier. This club size would apply to all three options.

Figure 3 Prerequisites of a climate club from a South African / developing country perspective

Determinants	"Likeminded" Club	Technical Club	Great power club	Carbon pricing club
Benefits	Advancing ambition in mitigation and adaptation	Advancing knowledge in specific areas, peer review, technology transfer and finance	Advancing dialogue between parties with opposing positions	Enhance the implementation of a carbon price, emissions reductions
Costs	Low political and financial cost	Low political and financial cost	Low political and financial cost	Politically contested
Size	small	small	small	
Commitment	Clear long term goals and benefits	Clear long term goals and benefits	Clear long term goals and benefits	
Governance	Exclusion at low cost, access open for likeminded countries	Exclusion at low cost, access open for those who can contribute and are willing to learn	Exclusion at low cost, access for great powers +	Exclusion at high cost
International legitimation	Developing country focused	Developed and developing countries	Developed and developing countries	Developed and developing countries
Coherence of negotiated issues	Focus on mitigation and adaptation ambition	Focus on issues depending on member countries needs and knowledge	A combination of both	Focus only on carbon pricing
Novelty	New club advisable as mindsets and expectations have not been shaped yet	Build on existing structures	Create new ambition, build on existing structures technically	New club, built on WTO structures

There is a general mind-set and ambition to promote climate action and to play an international role between developing and developed countries along with like minded emerging economies across the relevant government departments, which motivates the delegation to play an active role in advancing climate action under the UNFCCC as well as in smaller groups.

6. Conclusion

South Africa has consistently played a pragmatic and progressive role in the climate negotiations, and would very likely be receptive to co-operative initiatives to enhance the implementation of the Paris Accord and further the development and implementation of the climate regime under the UNFCCC, especially initiatives which hold the promise of enhancing national implementation of South Africa's INDC. Any initiative, which South Africa joined, would have to be consistent with foreign policy objectives and the balance between the interests of major developing countries and African countries which this reflects.

In terms of the potential to enhance implementation and potentially mitigation ambition, the two types of club, which have been identified above are technical clubs focusing on reporting and transparency, and on technical mitigation initiatives, and carbon-pricing clubs.

The latter type of club would potentially lower some of the domestic obstacles to the implementation of an effective carbon price in the South African economy, but it is likely that South Africa's participation in such a club would also require the participation of the country's key commodities trading partners and competitors in key commodities markets. Since such a club would likely involve the imposition of border tax adjustments, it would require both the negotiation of a WTO-like mechanism and set of rules between participating countries, and the necessary associated mechanisms, and also very likely a negotiation process within the WTO itself. Both of these may be more challenging than the current negotiations processes within the UNFCCC have proved to be. So far, any attempts to raise such initiatives within the UNFCCC have been strenuously resisted. It is very unlikely that South Africa would participate in such a club without the complex terrain between the UNFCCC and the WTO having been politically navigated by major economies in some way within the UNFCCC.

An easier objective would be clubs focused on specific technical areas – reporting and transparency, mitigation and carbon pricing, with an emphasis on sharing experiences of policymaking and implementation, specifically between developing countries, to facilitate policy learning and innovation. Many countries, including South Africa, are currently putting in place the policy and institutional infrastructure to meet mitigation targets and establish low-carbon development trajectories, and a formal process of sharing this experience, especially between similar developing countries, could be extremely valuable, potentially coupled with a facilitative peer-review mechanism.

Elements of this approach already exist in the Mitigation and MRV Partnership, and in the Partnership for Market Readiness.

Another variant of a technical club which South Africa would find attractive would be a technology-focused club aimed at accelerating implementation of low-carbon technologies such as renewable energy technologies, which would be aimed at a) sharing experience on institutional arrangements for planning and procurement; b) sharing experiences on key technical challenges, and c) enhancing access to finance. Effectively lowering the costs of such technologies (either directly via accelerated international investment, lowering risk and/or the cost of capital) would very likely accelerate the rate of investment in low-carbon technologies in the country.

In conclusion – South Africa would very likely join and actively participate in implementation-oriented technical clubs, within the context of the overall UNFCCC climate regime, and would possibly consider membership of a carbon-pricing club, with very specific provisos concerning membership, and with the specific political obstacles within South Africa's climate-diplomatic environment having been removed.

7. References

Black, A., 1999: The long and winding road: International norms and domestic political change in South Africa in Risse, T., Ropp, S., Sikkink, K.: The power of Human Rights: International norms and domestic change, Cambridge University Press, Cambridge.

Buchanan, J., 1965. An Economic Theory of Clubs, *Economica* 32, 125, 1-14

Falkner, R. (2016). "A Minilateral Solution for Global Climate Change? On Bargaining Efficiency, Club Benefits, and International Legitimacy." *Perspectives on Politics* 14(01): 87-101.

Grubb, M., 2015. From Lima to Paris, Part 1: The Lima Hangover. *Climate Policy*, 15(3), pp.299–301. Available at: http://dx.doi.org/10.1080/14693062.2015.1029767.

Grubb, M., de Coninck, H. & Sagar, A.D., 2015. From Lima to Paris, Part 2: Injecting Ambition. *Climate Policy*, 15(4), pp.413–416. Available at: http://dx.doi.org/10.1080/14693062.2015.1029767.

Keohane, R.O. & Victor, D.G., 2011. The Regime Complex for Climate. *Perspectives on Politics*, 9(1), pp.7–23.

Moore, C., 2013. Twenty Years on, It's All Academic: Progressive South African Scholars and Moral Foreign Policy After Apartheid. *Politikon*, 40(3), pp.545–563.

Nordhaus, W., 2015. Climate Clubs : Overcoming Free-riding in International Climate Policy. *American Economic Review*, 105(4), pp.1339–1370.

Pearce, R. 2013. Infographic: Mapping country alliances at the international climate talks, Carbon Brief, http://www.carbonbrief.org/infographic-mapping-country-alliances-at-the-international-climate-talks

Prakash, A. & Potoski, M., 2007. Collective action through voluntary environmental programs: A club theory perspective. *Policy Studies Journal*, 35(4), pp.773–792.

RSA, 2011. National Climate Change Response White Paper, Tshwane. http://www.info.gov.za/view/DownloadFileAction?id=152834,

Sandler, T. and Tshirhardt, J., 1980. Economic Theory of Clubs: An evaluative Survey, *Journal of Economic Literature*, 18,4. 1481-1521.

Schneckener, U., 2009. Globales Regieren durch Clubs. *SWP-Aktuell*, 47, pp.1–8.

Smith, K., 2013. International Relations in South Africa: A Case of "Add Africa and Stir"? *Politikon*, 40(3), pp.533–544.

Victor, D.G., 2015. *The Case for Climate Clubs*, E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum. Available at: www.e15initiative.org/.

Weischer, L., Morgan, J. & Patel, M., 2012. Climate Clubs: Can Small Groups of Countries Make a Big Difference in Addressing Climate Change? *Reciel*, 21(3), pp.177–192.

Widerberg, O. & Stenson, D.E., 2013. *Climate clubs and the UNFCCC "Clubs are not challenging the current governance more conducive to UNFCCC than others.,"* Stockholm: FORES.

Winkler, H. (ed.), 2007. Long Term Mitigation Scenarios: Technical Report. Prepared by the Energy Research Centre for Department of Environment Affairs and Tourism, Cape Town.

UNFCCC, 2015. *Party groupings*, Bonn. http://unfccc.int/parties_and_observers/parties/negotiating_groups/items/2714.php