

The impact of the US retreat from the Paris Agreement : Kyoto revisited?

Climate Policy

Pickering, Jonathan; McGee, Jeffrey S.; Stephens, Tim; Karlsson-Vinkhuyzen, Sylvia I.

<https://doi.org/10.1080/14693062.2017.1412934>

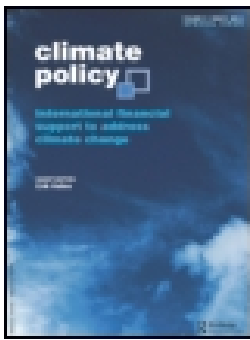
This publication is made publicly available in the institutional repository of Wageningen University and Research, under the terms of article 25fa of the Dutch Copyright Act, also known as the Amendment Taverne.

Article 25fa states that the author of a short scientific work funded either wholly or partially by Dutch public funds is entitled to make that work publicly available for no consideration following a reasonable period of time after the work was first published, provided that clear reference is made to the source of the first publication of the work.

This publication is distributed using the principles as determined in the Association of Universities in the Netherlands (VSNU) 'Article 25fa implementation' project. According to these principles research outputs of researchers employed by Dutch Universities that comply with the legal requirements of Article 25fa of the Dutch Copyright Act are distributed online and free of cost or other barriers in institutional repositories. Research outputs are distributed six months after their first online publication in the original published version and with proper attribution to the source of the original publication.

You are permitted to download and use the publication for personal purposes. All rights remain with the author(s) and / or copyright owner(s) of this work. Any use of the publication or parts of it other than authorised under article 25fa of the Dutch Copyright act is prohibited. Wageningen University & Research and the author(s) of this publication shall not be held responsible or liable for any damages resulting from your (re)use of this publication.

For questions regarding the public availability of this publication please contact openaccess.library@wur.nl



The impact of the US retreat from the Paris Agreement: Kyoto revisited?

Jonathan Pickering, Jeffrey S. McGee, Tim Stephens & Sylvia I. Karlsson-Vinkhuyzen

To cite this article: Jonathan Pickering, Jeffrey S. McGee, Tim Stephens & Sylvia I. Karlsson-Vinkhuyzen (2017): The impact of the US retreat from the Paris Agreement: Kyoto revisited?, Climate Policy, DOI: [10.1080/14693062.2017.1412934](https://doi.org/10.1080/14693062.2017.1412934)

To link to this article: <https://doi.org/10.1080/14693062.2017.1412934>



Published online: 18 Dec 2017.



Submit your article to this journal [↗](#)



Article views: 46



View related articles [↗](#)



View Crossmark data [↗](#)



The impact of the US retreat from the Paris Agreement: Kyoto revisited?

Jonathan Pickering ^a, Jeffrey S. McGee ^b, Tim Stephens ^c and Sylvia I. Karlsson-Vinkhuyzen ^d

^aCentre for Deliberative Democracy and Global Governance, Institute for Governance and Policy Analysis, University of Canberra, Canberra, Australia; ^bFaculty of Law, Institute for Marine and Antarctic Studies, Centre for Marine Socioecology, University of Tasmania, Hobart, Australia; ^cUniversity of Sydney Law School, University of Sydney, Sydney, Australia; ^dPublic Administration Policy Group, Wageningen University, Wageningen, Netherlands

ABSTRACT

The United States' decision to withdraw from the Paris Agreement (pending possible re-engagement under different terms) may have significant ramifications for international climate policy, but the implications of this decision remain contested. This commentary illustrates how comparative analysis of US participation in multilateral environmental agreements can inform predictions and future assessments of the decision. We compare and contrast US non-participation in the Kyoto Protocol and the Paris Agreement, focusing on four key areas that may condition the influence of US treaty decisions on international climate policy: (i) global momentum on climate change mitigation; (ii) the possibility of US non-participation giving rise to alternative forms of international collaboration on climate policy; (iii) the timing and circumstances of the US decision to exit; and (iv) the influence of treaty design on countries' incentives to participate and comply. We find that differences across the two treaties relating to the first three factors are more likely to reduce the negative ramifications of US withdrawal from the Paris Agreement compared to the Kyoto Protocol. However, the increased urgency of deep decarbonization renders US non-participation a major concern despite its declining share of global emissions. Moreover, key design features of the Paris Agreement suggest that other countries may react to the US decision by scaling back their levels of ambition and compliance, even if they remain in the Agreement.

Key policy insights

- Increasing global momentum on mitigation since 1997 means that US withdrawal from the Paris Agreement is potentially less damaging than its non-participation in the Kyoto Protocol
- Despite the declining US share of global emissions, greater urgency of deep decarbonization means that the non-participation of a major player, such as the US, remains problematic for global cooperation and achieving the Paris Agreement's goals
- Differences in the design of the Kyoto Protocol and Paris Agreement suggest that US non-participation is more likely to prompt reluctant countries to stay within the Paris framework but reduce levels of ambition and compliance, rather than exit the Agreement altogether

ARTICLE HISTORY

Received 13 July 2017
Accepted 30 November 2017

KEYWORDS

Kyoto Protocol; Paris Agreement; treaty withdrawal; United States of America

Introduction

On 1 June 2017, United States President Donald Trump announced his Administration's plans to withdraw from the 2015 Paris Agreement, and to 'begin negotiations to re-enter either the Paris Accord [*sic*] or a really entirely new transaction on terms that are fair to the United States' (White House, 2017). Recent analysis indicates that US inaction on climate policy could put out of reach the Paris Agreement's goal of keeping global warming 'well

below' 2°C (Sanderson & Knutti, 2016), a goal that is already in jeopardy under existing Nationally Determined Contributions (NDCs) (Rogelj et al., 2017). Nevertheless, it remains contested whether the net effect of the decision will be beneficial, corrosive or inconsequential for international climate policy and for multilateralism more broadly (Galik, DeCarolis, & Fell, 2017).

In this article, we illustrate the value of comparative analysis for informing assessments of the potential impacts of the US withdrawal from the Paris Agreement, focusing on what might be learnt from US non-participation in the 1997 Kyoto Protocol. We argue that there are key differences between the Kyoto Protocol and the Paris Agreement, both in terms of their substance and wider political and economic context. These reduce the likely extent of negative ramifications of US formal withdrawal from the Paris Agreement and the accompanying retreat from its commitments under that treaty.¹ However, significant concerns persist regarding the effect of US withdrawal from the Paris Agreement on international climate policy, including the potential for the withdrawal to dampen mitigation action, especially in already reluctant countries or countries whose mitigation actions are conditional on access to funding that will likely be affected by US withdrawal.

As this article goes to press there are mixed signals emanating from the Trump Administration as to whether the US will in fact follow through on withdrawal or seek to re-engage on different terms. Irrespective of this uncertainty, it is clear that the Administration seeks to retreat from its current NDC (White House, 2017), and the threat of withdrawal could have significant implications for global climate policy even if it is not ultimately carried through. In addition, it remains important to investigate the implications of a possible (if not certain) withdrawal in order to assess how strongly the US should be urged to stay in the Agreement, and to develop contingency plans in the event that formal withdrawal does take place.

Predicting the impacts of US withdrawal: comparing counterfactuals and past experience

In a recent commentary, Kemp (2017b) argues that the Trump Administration's position on climate change could have (and to a significant extent has already had) adverse effects on international climate policy, even without the US formally withdrawing from the Paris Agreement. Importantly, the withdrawal announcement followed sweeping changes to US federal climate policy after President Trump took office in early 2017. These changes pledged to roll back many of the climate change policies and measures introduced during the Obama Administration. While some of these reversals continue to face legislative or judicial hurdles, even their partial enactment is likely to mean that the US would not meet its existing NDC under the Paris Agreement, namely, to reduce emissions by 26–28% below 2005 levels by 2025 (Höhne et al., 2017). In these circumstances, Kemp (2017b) argues that US withdrawal may, on balance, be better for global climate policy than if it had remained in the Paris Agreement as an obstructive state. This is especially the case if the US decision to withdraw prompts other states and sub-state actors to raise mitigation efforts in response.

Comparing the impacts of a historical event (i.e. the US withdrawal from the Paris Agreement) with those of a counterfactual (i.e. what would have happened if the US remained in the Paris Agreement) is a thought-provoking and often valuable exercise, but raises a host of methodological and conceptual challenges (see generally Levy, 2008). The fact that the Trump Administration's rollback of US federal climate policy and the announcement of withdrawal from the Paris Agreement are temporally so close makes it hard to disentangle the effects of each. A further complication arises from the delay of over three years (for reasons discussed below) between announcement of the US withdrawal and the date on which it will take effect. These concerns highlight the need to rely on consilience across multiple sources of evidence – including qualitative evidence from stakeholder interviews – to explain actors' reasons for their responses to a particular event (O'Mahoney, 2015).

For this reason, a conclusive answer as to whether international climate policy is worse off with the US out of the Paris Agreement is difficult to provide at this point. However, there is another question, less reliant upon sensitive counterfactual assumptions, that can shed light on the present situation, namely: will the US retreat from the Paris Agreement likely affect global climate policy in ways that are comparable to earlier US non-participation in other environmental treaties? While still involving predictions about an uncertain future, comparative analysis of this kind can help to isolate similarities and differences across treaties and their broader contexts,

which may inform judgements about the likelihood of different types of responses, especially other countries' reactions to a treaty withdrawal.

At the broadest level, we may look at how countries respond to the treaty actions of other countries in general. One of the few quantitative studies on treaty withdrawals has found that membership of multilateral treaties typically outlasts the vicissitudes of short-term domestic policy cycles: only 3.5% of these treaties had any country withdrawals in the period between 1945 and 2004 (Helfer, 2005). However, across these 3.5% of treaties, an average of eight countries per treaty had withdrawn, thus underscoring the risk of domino or cascade effects.

There is the possibility that the present case may generate a distinctive reaction from other countries, because of either the country involved, or the subject matter of the treaty. It has long been recognized that US treaty behaviour is idiosyncratic in relation to both multilateral treaties in general (Scott, 2012) and multilateral environmental agreements (MEAs) in particular (Bang, Hovi, & Sprinz, 2012). The list of multilateral treaties that have been signed by US presidents and submitted to the US Senate but not ratified by that country includes eight MEAs. Among them are the Convention on Biological Diversity (CBD) and the Stockholm Convention on Persistent Organic Pollutants (US Department of State, 2017).

At the same time, the relationship between US participation and MEA performance remains mixed. This raises the possibility of distinctive features that may condition the relationship between US membership and treaty performance, including contextual factors (such as the nature of the overall cooperation problem and US practice in relation to the treaty) and design of the treaty itself and its associated governance arrangements.² For example, US participation was widely seen as critical for one of the few notably successful MEAs, the ozone regime, not least because US industry was the largest manufacturer of ozone-depleting substances at the time (Barrett, 2003, pp. 223, 230). US approaches to other MEAs have been more complex. The Basel Convention on hazardous waste was concluded with US support but the US has not ratified it; however, the impact of this non-ratification has been limited because the US legislative framework is already largely in alignment with the convention. Similarly, the UN Convention on the Law of the Sea (UNCLOS) (with a remit including but also extending beyond environmental concerns) is recognized as a well-functioning regime despite US non-participation (Holbrook Smith, 2017, p. 184).³ The impact of US non-participation in UNCLOS has been limited by the fact that the US government treats most its provisions as customary international law and therefore binding in any event (Holbrook Smith, 2017, p. 188) and the US actively asserts legal rights (such as navigational freedoms) protected by the UNCLOS. To take another example, the US participates in CBD negotiations despite not being a party. However, the global biodiversity regime's shortcomings are more commonly attributed to systemic factors, such as the broad remit of the CBD, fragmented governance arrangements, and lack of political priority accorded to biodiversity protection among parties (Morgera & Tsioumani, 2011). These examples suggest that the effect of US participation in the climate regime may be conditioned by one (or more) unique contextual or design features. Accordingly, US non-participation (and participation) in past climate agreements warrants closer attention.

How far from Kyoto to Paris?

The closest precedent to the US withdrawal from the Paris Agreement is its refusal to ratify the 1997 Kyoto Protocol. The Clinton Administration signed the Protocol in 1998, but in 2001 the George W. Bush Administration announced that it would not implement the agreement as the US Congress did not intend to ratify it (CNN, 2001). The Kyoto Protocol did eventually enter into force in 2005, but for reasons outlined below US non-participation was widely seen as damaging for both the Protocol's effectiveness (Böhringer & Löschel, 2003; Buchner, Carraro, & Cersosimo, 2002) and legitimacy (Eckersley, 2007).

Will the same loss of effectiveness and legitimacy beset the Paris Agreement? Here we briefly compare and contrast four areas of concern across the two agreements: (i) independent momentum for global mitigation; (ii) the specific circumstances of US withdrawal from each treaty; (iii) the possible formation of alternative venues for international cooperation on climate policy; and (iv) substantive provisions of each treaty that may influence how other countries react to a major party's withdrawal. These are not the only areas of potential comparison between the Paris Agreement and the Kyoto Protocol: several others are noted in the conclusion as areas for

further research. Nevertheless, these four dimensions have particular relevance for an assessment of the implications of the US *volte face* in respect of the Paris Agreement, as they allow an analysis of each treaty informed by variations across key contextual factors (as identified in areas (i)–(iii)) and design features (area (iv)) discussed above.

Is the momentum for international climate change mitigation now unstoppable?

The impact of US non-participation in climate agreements may be tempered by the presence of substantial independent momentum for mitigation among other key actors.⁴ Hovi, Skodvin, and Andresen (2004) argue that US exit from the Kyoto Protocol gave the EU an opportunity to take up global leadership on climate policy, and Depledge (2005) reports an international ‘backlash’ to the decision that stimulated domestic mitigation policy in other countries. Moreover, the US decision not to ratify the Kyoto Protocol significantly delayed but ultimately did not prevent its entry into force. Nevertheless, while the EU and other remaining parties largely complied with their original emission reduction targets under Kyoto, none increased their targets to make up for the absence of the US (Shishlov, Morel, & Bellassen, 2016). In other words, a geopolitical shift in climate leadership does not automatically translate into a higher aggregate commitment from the remaining states.

However, the world is now arguably very different to the time of the US retreat from the Kyoto Protocol in that there is far greater independent momentum for action on climate change. The price of renewable energy technologies has dropped considerably, reducing the national economic costs of mitigation and rendering private investment in clean energy more attractive for investors (IEA and IRENA, 2017). For many countries climate policy is driven by domestic forces that will be unaffected by the shifting US position. Thus large emitters such as China and India are increasingly viewing climate change action as yielding domestic co-benefits for energy security and human health, irrespective of the mitigation efforts of other countries (West et al., 2013). Further, the US share of annual global CO₂ emissions has fallen considerably from 22% in 1997 to 14% in 2015 (Global Carbon Project, 2017). During the same period, China’s annual emissions have risen from 14% to 28% of the global total.

These factors together suggest that the US withdrawal is less threatening to the Paris Agreement’s functioning than was the US retreat from the Kyoto Protocol. Indeed following the US announcement, the EU, China, India and other major economies have affirmed that they will remain in the Paris Agreement (Gowen & Denyer, 2017). Prior to the announcement, there were already indications that India and China would exceed their current NDCs (Höhne et al., 2017). So far, the signs that parties may take up the slack of the US withdrawal remain mixed. Indian Prime Minister Modi declared that his country would go ‘above and beyond’ the Agreement in the wake of the US announcement (BBC News, 2017), but EU officials have declined to increase their mitigation target in order to compensate for US inaction (Boffey, 2017).

A further important difference between 1997 and the present is the greater urgency for deep, concerted decarbonization required to bridge the gap between current policies and the Paris Agreement’s temperature goals (Bataille et al., 2016). Greater urgency can cut both ways for national motivations to reduce emissions. On the one hand, it could render remaining parties more likely to stand by their existing NDCs and take up some of the US ‘slack’ if they perceive that it will be too late for the US to make up for lost time under a future president. On the other hand, greater urgency renders the non-participation of a significant player more problematic (Sanderson & Knutti, 2016). Rapid and deep decarbonization also implies greater short-term economic costs than a more gradual and less ambitious mitigation pathway (Clarke et al., 2014). This in turn raises the need for mutual assurance and renders cooperative arrangements more vulnerable to instability if a major player defects.

Thus, heightened global momentum on climate change does not eliminate the basic collective action problem – and associated risks of free riding – that the drafters of the Kyoto Protocol had to contend with (Sauquet, 2014). Even in the lead-up to the 2015 Paris talks, when global momentum was already building, major economies remained concerned to formalize mutual assurance arrangements, first through bilateral deals that the US struck with China and India, then multilaterally through the Paris Agreement itself. This suggests that, in formulating their climate policies, states do not simply look to each other’s domestic policies for assurance, but still place considerable value on the reciprocity of international promises.

Paving the way for rival initiatives?

It is often overlooked that US damage to the Kyoto Protocol framework resulted not only from its absence from the Protocol but also from its creation of rival forums for international collaboration on climate policy. Thus, one potential risk to anticipate is whether the US uses its exit from the Paris Agreement as an opportunity to undermine multilateral climate cooperation more generally by advocating for new institutions on climate change mitigation outside the United Nations Framework Convention on Climate Change (UNFCCC) process. After the US indicated that it would not ratify the Kyoto Protocol, it negotiated alternative agreements and institutions (based on voluntary pledges) that pointedly avoided binding targets and timetables for emission reduction as well as clear criteria for differentiation between developed and developing countries (McGee & Taplin, 2009). The most prominent of these institutions was the Asia-Pacific Partnership on Clean Development and Climate (APP). While the APP ultimately withered on the vine, its presence – along with notable fact of US participation in the APP but not the Kyoto Protocol – was sufficient to cast a shadow over the UNFCCC's legitimacy prior to the negotiation of a successor agreement (Karlsson-Vinkhuyzen & McGee, 2013). While President Trump's withdrawal announcement mentioned the possibility of negotiating an 'entirely new transaction' outside the Paris Agreement, subsequent evidence suggests that it is more likely that the Trump Administration would seek to renegotiate its participation in the Agreement on terms more favourable to the US rather than pursuing a new and potentially rivalrous club (Reuters, 2017). It remains unclear whether the Administration has sufficient motivation to follow through on a plan to re-engage on different terms, let alone to build alternative and competing institutions, considering the presence of strong voices of climate change denial in the Trump Administration.

Moreover, since the Kyoto Protocol period, the UNFCCC has increasingly positioned itself as an 'orchestrator' of a wider suite of climate initiatives that complement its own objectives (Bäckstrand & Kuyper, 2017), and for this reason may find itself less threatened than before by climate-oriented clubs organized by smaller groups of countries. However, while the UNFCCC has acquired more credibility as a result of this process, it remains to be demonstrated empirically that the UNFCCC as an orchestrator, or as the fulcrum of a regime complex (Keohane & Victor, 2011), is now more effective than before in strengthening global climate policy. A final possibility is that US withdrawal from the Paris Agreement may create momentum for other countries to create higher-ambition coalitions or clubs, with the US in a non-leading role or altogether absent. For example, the EU, Canada and China jointly convened a ministerial meeting on climate change in Montreal in September 2017 with a view to bolstering support for the Paris Agreement in the wake of US retreat.

The mechanics and timing of US withdrawal

President Trump's announcement shows the Paris Agreement was not entirely 'US-proofed' (Kemp, 2017a). Nevertheless, the circumstances of US withdrawal from the Paris Agreement, coupled with the Agreement's withdrawal provisions, provide important counterpoints to those of the Kyoto Protocol, which may limit the potential negative effects of US withdrawal from the former.

First, US ratification of the Kyoto Protocol indisputably required the advice and consent of the US Senate. Even before the Protocol was adopted, the Senate made clear (via the 1997 Byrd-Hagel resolution) that it would not approve it. In contrast to the Kyoto Protocol, the Paris Agreement was designed to enable a US President to join it via executive action only (Kemp, 2016). This not only made it possible for President Obama to join the Agreement over the objections of Republican Senators, but will also make it easier for a future President to re-join (albeit correspondingly easier for a future President to withdraw). If there is a change in administration, the new President could notify the United States' intention to re-join the Paris Agreement from inauguration day (20 January 2021); re-entry would formally take effect thirty days after the date of notification (as per Article 21.3).

Second, at the time the US repudiated the Kyoto Protocol, it had not yet entered into force. US repudiation of the Protocol meant that the remaining parties had to court the participation of Russia to satisfy the Protocol's requirement of ratification by 55 parties, accounting for 55% of emissions from Annex I Parties (the developed countries) (Article 25.1). In exchange for its willingness to ratify the Kyoto Protocol and thus enable the Protocol's

entry into force, Russia was able to secure concessions on arrangements for implementing the Protocol as well as obtain EU support for Russia's accession to the World Trade Organisation (Dessai & Schipper, 2003; Henry & Sundstrom, 2007). In contrast, the Paris Agreement has already come into force (on 4 November 2016). As with the Kyoto Protocol, Russia has delayed ratifying the Paris Agreement and may not do so until 2019 (TASS, 2017). US non-participation provides Russia with cover for delaying ratification, but as the Paris Agreement is already in force, Russia will not be able to extract as many concessions for its participation.

Third, the Kyoto Protocol and the Paris Agreement provide that parties may not commence withdrawal until three years after the treaty's entry into force (UNFCCC 1997, Article 27.1; UNFCCC 2016, Article 28.1), and withdrawal takes effect one year after notification (UNFCCC 1997, Article 27.2; UNFCCC 2016, Article 28.2). However, the fact that the US had already ratified the Paris Agreement, but not the Kyoto Protocol, renders the effect of these provisions different in each case. As the US was not a party to the Kyoto Protocol, the decision not to ratify had immediate effect. But the earliest that the US can withdraw from the Paris Agreement is 4 November 2020, the day after the next US Presidential election. Given this delay, it is uncertain that withdrawal will ultimately proceed. The Trump Administration could change its position, or may undergo significant internal change, or lose the next presidential election. These factors are likely to diminish the short-term signalling effects of the US decision. So too may the presence of widespread US public support for remaining within the Paris Agreement, although this is counterbalanced by entrenched opposition towards action on climate change within the Republican Party (Marlon, Fine, & Leiserowitz, 2017).⁵ Moreover, if the Trump Administration follows through, or expands, on its existing plans to reverse domestic mitigation measures this will leave little time for a successor administration to fulfil the US NDC by 2025 (Höhne et al., 2017), and render re-entry to the Paris Agreement less attractive. As long as the US remains a party to the Paris Agreement, and continues to be entitled to participate in the Agreement's decision-making bodies, it could hamper or interfere in the effective functioning of these bodies (Kemp, 2017b), although at the time of writing there were signs that some US negotiators – including career diplomats representing the US at the 2017 Conference of the Parties to the UNFCCC – remained willing to play a constructive role despite operating under political constraints (Friedman & Plummer, 2017).

A final difference concerns the roles of states vis-à-vis non-party stakeholders under each treaty. The Kyoto Protocol largely followed a state-centric approach that is typical of many MEAs. Non-party stakeholders were involved mainly as implementing entities or financial intermediaries under the market-based Clean Development Mechanism. The Paris Agreement's implementing decision makes considerably greater provision for non-party stakeholders, including businesses and sub-national governments (see for example UNFCCC 2016, Part V). Although these actors cannot formally join or exit the Agreement itself, they can register their support for the Agreement under the UNFCCC's Non-State Actor Zone for Climate Action (NAZCA). A coalition of stakeholders within the US has already registered an initiative known as 'We Are Still In', which was formed after the US withdrawal announcement (We Are Still In, 2017). Even if initiatives such as these make no difference to the formal status of US membership, they may have the effect of lessening the signalling effects of the US withdrawal.

Does the design of the Paris Agreement minimize risks of defection?

The precedent of the Kyoto Protocol shows how US non-participation can send a negative signal to other hesitant or reluctant countries. Australia relied on US non-participation in the Protocol as one of its main arguments for declining to join (Crowley, 2007), whereas Canada withdrew from the Kyoto Protocol in 2011, in part because the US was not a party and China did not have emissions reduction commitments under the agreement (Grubb, 2016; Guardian, 2011).

However, is it possible that the design of the Paris Agreement reduces the risk that others will withdraw? In one respect the Kyoto Protocol and the Paris Agreement are similar in that neither imposes deep emissions reduction commitments, although at the time of its conclusion the Kyoto Protocol was regarded by industrialized states as imposing not-insignificant economic costs (Hovi et al., 2004). In legal and institutional terms, the Paris Agreement and Kyoto Protocol are markedly different. Key provisions help to lower the costs of staying within the Agreement when compared with the Protocol.

First, the NDC approach provides considerable national flexibility in how countries frame their contributions to mitigation, reducing the likelihood that parties will find themselves bound to targets that lack domestic ownership and support.

Second, Article 4.2 of the Agreement was drafted as an obligation of conduct rather than an obligation of result, meaning that while parties are bound to prepare, communicate and maintain successive NDCs, they are not legally bound to achieve them (Rajamani, 2016). In contrast, the Kyoto Protocol targets were obligations of result, and Canada judged that it was preferable to withdraw from the Protocol altogether, rather than risk non-compliance.

Third, the Paris Agreement's mechanism to encourage compliance is intended to be facilitative, non-adversarial and non-punitive (UNFCCC 2016, Article 15.2). The Kyoto Protocol's compliance framework was not as strong as under some other MEAs and has been criticized for being non-binding and not leading to second-order punishments for non-compliant parties (Hovi, Greaker, Hagem, & Holtmark, 2013). However, the framework did include a requirement that is absent from the Paris Agreement, namely that parties falling short of their targets in one commitment period make up the difference in the next. Moreover, the Protocol possessed an institutional system for compliance with a Compliance Committee comprising both facilitative and enforcement branches that were active in supervising compliance with the Protocol.

Together these features of the Paris Agreement make it less likely that other countries will follow the US example and withdraw. Indeed given the reputational costs that the US has incurred by retreating from the Agreement, other states may strategically decide to remain in the Agreement in order to retain a relatively low-cost means of bolstering their environmental credentials and wider reputation for treaty compliance. The flipside of lowering the costs of continued membership is that it makes it easier for countries to remain in the Paris Agreement while failing to implement their current NDCs or ratchet up their mitigation efforts in future. For example, Australia has long been closely allied with the US in its approach to international climate policy, and particularly under conservative governments has been a reluctant player on mitigation action both domestically and internationally (Beeson & McDonald, 2013; Crowley, 2007, 2017). Despite a handful of more conservative Members of Parliament calling for a review of Australia's membership of the Paris Agreement, the government has signalled its intention to remain a party (Taylor, 2017). Nevertheless, there are growing signs that Australia will fail to put in place domestic policies that are sufficient to fulfil its NDC (Crowley, 2017). US non-participation will strengthen the hand of those MPs that have so far successfully restrained a moderate Prime Minister, Malcolm Turnbull, who had previously been committed to stronger action on climate change (Taylor, 2017).

Developing countries' willingness to fulfil their existing NDCs may also be diminished by the US decision to renege on its pledges of climate finance, particularly since many developing countries' NDCs include measures that are at least partly conditional on international financial support. Since the emission reduction targets under the Kyoto Protocol applied only to developed countries, their achievement did not hinge on the fulfilment of climate finance commitments. At the time of writing, Turkey is the only country that has openly suggested that it may delay or decline ratification in response to US withdrawal from the Paris Agreement (Hurriyet Daily News, 2017). Notably, Turkey's President Erdoğan cited the scale-back of US climate finance as a key reason for its stance. In addition, Indonesia and Saudi Arabia were reportedly reconsidering their commitment to the Paris Agreement before the G20 meeting in Hamburg in 2017 (Guardian, 2017), but they ultimately joined a declaration by 19 of the G20 members affirming the Paris Agreement as 'irreversible' (Guardian, 2017).

While countries such as Australia, Saudi Arabia and Turkey comprise a limited share of global GHG emissions, they are nevertheless amongst the top twenty countries in terms of aggregate emissions from energy (Global Carbon Project, 2017). Moreover, Russia (whose reluctant stance was noted in the previous section) remains the world's fifth-largest producer of GHG emissions from energy, while Indonesia is the world's largest producer of GHG emissions from land use (WRI, 2017). Continued stalling by some or all of these countries, motivated by the US retreat, could make global progress on mitigation significantly harder, not least because the consensus-based decision-making of the UNFCCC renders multilateral cooperation on climate change vulnerable to blocking by reluctant players (Depledge, 2008).

Conclusion

A comprehensive assessment of the impacts of US withdrawal from the Paris Agreement will in time need to take into account a broader range of factors than those presented here, including motivating or demotivating effects on actors within the US, impacts on the negotiations of the 'rulebook' for implementing the Paris Agreement, and ramifications for multilateralism more generally. Nevertheless, our comparison of the Kyoto Protocol and Paris Agreement highlights important ways in which the negative effects of US withdrawal may be attenuated under the latter. At the same time, such a finding does not mean that the negative impacts of US withdrawal from the Agreement will be insignificant, nor that US withdrawal will be better for climate policy than if it had remained. Indeed, our analysis suggests that even under contemporary circumstances, some of the demonstrated risks of US withdrawal under the Kyoto Protocol – in particular demotivating other countries at a time when mutual assurance and greater ambition are still necessary – will remain a major concern for the immediate future of the Paris Agreement.

Notes

1. Throughout the article we use the term 'retreat' to cover a range of actions that signal reversal of a country's previous commitment towards a treaty. Such actions could include: (i) announcing plans to formally withdraw from or exit a treaty (even if the withdrawal is conditional or has not yet taken place); (ii) declining to ratify a treaty that a country has signed; or (iii) indicating an intention not to comply with the treaty despite remaining a member.
2. On the relevance of a related set of factors for the broader effectiveness of international environmental law, see Bodansky (2010, pp. 262–263).
3. Even so, negotiation of Part XI of UNCLOS (which deals with deep seabed mining) was held up for a decade due to US opposition; this slowed the Convention's entry into force.
4. These include actors in the US itself at a sub-national level, although due to space limitations we focus on other international actors.
5. Note also that most opinion polls that asked US residents in 2001–2004 about whether the US should participate in the Kyoto Protocol found that a majority was in favour of participation (Brewer, 2004).

Acknowledgments

The authors would like to thank Christian Downie, John Dryzek, Robyn Eckersley, Mark Howden, Luke Kemp, Peter Lawrence and Anita Talberg for insightful and lively discussions on this topic. Portions of the article were presented at a debate held by the Australian National University's Climate Change Institute, at the Australian and New Zealand Society of International Law (ANZSIL) annual conference, and at a seminar hosted by the Australian-German Climate and Energy College at the University of Melbourne.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

Dr Pickering received support for this research from the Australian Research Council's Laureate Fellowship funding scheme [grant number FL140100154].

ORCID

Jonathan Pickering  <http://orcid.org/0000-0002-1862-3623>

Jeffrey S. McGee  <http://orcid.org/0000-0002-2093-5896>

Tim Stephens  <http://orcid.org/0000-0001-9678-2227>

Sylvia I. Karlsson-Vinkhuyzen  <http://orcid.org/0000-0001-7632-8545>

References

- Bang, G., Hovi, J., & Sprinz, D. F. (2012). US presidents and the failure to ratify multilateral environmental agreements. *Climate Policy*, 12(6), 755–763.

- Barrett, S. (2003). *Environment and statecraft: The strategy of environmental treaty-making*. Oxford: Oxford University Press.
- Bäckstrand, K., & Kuyper, J. W. (2017). The democratic legitimacy of orchestration: The UNFCCC, non-state actors, and transnational climate governance. *Environmental Politics*, 26(4), 764–788.
- Bataille, C., Waisman, H., Colombier, M., Segafredo, L., Williams, J., & Jotzo, F. (2016). The need for national deep decarbonization pathways for effective climate policy. *Climate Policy*, 16(Supp1), S7–S26.
- BBC News. (2017). *Trump climate deal: Modi vows to go beyond Paris accord*. Retrieved from <http://www.bbc.com/news/world-asia-india-40144613>
- Beeson, M., & McDonald, M. (2013). The politics of climate change in Australia. *Australian Journal of Politics & History*, 59(3), 331–348.
- Bodansky, D. (2010). *The art and craft of international environmental law*. Cambridge, MA: Harvard University Press.
- Boffey, D. (2017). EU says no extra emission cuts to fill gap left by US after Paris withdrawal. *Guardian (UK)*. Retrieved from <https://www.theguardian.com/environment/2017/jun/06/european-leaders-scale-up-climate-change-efforts-trump-paris-deal>
- Böhringer, C., & Löschel, A. (2003). Market power and hot air in international emissions trading: The impacts of US withdrawal from the Kyoto Protocol. *Applied Economics*, 35(6), 651–663.
- Brewer, T. L. (2004). US public opinion on climate change issues: Implications for consensus-building and policymaking. *Climate Policy*, 4(4), 359–376.
- Buchner, B., Carraro, C., & Cersosimo, I. (2002). Economic consequences of the US withdrawal from the Kyoto/Bonn protocol. *Climate Policy*, 2(4), 273–292.
- Clarke, L., Jiang, K., Akimoto, K., Babiker, M., Blanford, G., Fisher-Vanden, K. ... van Vuuren, D. P. (2014). *Assessing transformation pathways climate change 2014, mitigation of climate change. Contribution of working group III to the fifth assessment report of the intergovernmental panel on climate change*. Cambridge: Cambridge University Press.
- CNN. (2001). *Bush firm over Kyoto stance*. 29 March 2001. Retrieved from <http://edition.cnn.com/2001/US/03/29/schroeder.bush/index.html>
- Crowley, K. (2007). Is Australia faking it? The Kyoto protocol and the greenhouse policy challenge. *Global Environmental Politics*, 7(4), 118–139.
- Crowley, K. (2017). Up and down with climate politics 2013–2016: The repeal of carbon pricing in Australia. *Wiley Interdisciplinary Reviews: Climate Change*, 8(3), e458–13.
- Depledge, J. (2005). Against the grain: The United States and the global climate change regime. *Global Change, Peace & Security*, 17(1), 11–27.
- Depledge, J. (2008). Striving for no: Saudi Arabia in the climate change regime. *Global Environmental Politics*, 8(4), 9–35.
- Dessai, S., & Schipper, E. L. (2003). The Marrakech accords to the Kyoto Protocol: Analysis and future prospects. *Global Environmental Change*, 13(2), 149–153. doi:10.1016/S0959-3780(02)00082-1
- Eckersley, R. (2007). Ambushed: The Kyoto Protocol, the Bush administration's climate policy and the erosion of legitimacy. *International Politics*, 44(2/3), 306–324. doi:10.1057/palgrave.ip.8800190
- Friedman, L., & Plumer, B. (2017). What happened (and didn't) at the Bonn climate talks. *New York Times*. Retrieved from <https://www.nytimes.com/2017/11/18/climate/bonn-climate-cop23.html>
- Galik, C. S., DeCarolis, J. F., & Fell, H. (2017). Evaluating the US mid-century strategy for deep decarbonization amidst early century uncertainty. *Climate Policy*, 17(8), 1046–1056. doi:10.1080/14693062.2017.1340257
- Global Carbon Project. (2017). *Global carbon atlas*. Retrieved from <http://www.globalcarbonatlas.org/en/CO2-emissions>
- Gowen, A., & Denyer, S. (2017). As U.S. backs away from climate pledges, India and China step up. *Washington Post*. Retrieved from https://www.washingtonpost.com/world/asia_pacific/as-us-backs-away-from-climate-pledges-india-and-china-step-up/2017/06/01/599ccb494-16e4-4d47-a881-c5bd0922c3db_story.html?utm_term=.7a6e5a12e022
- Grubb, M. (2016). Full legal compliance with the Kyoto Protocol's first commitment period – some lessons. *Climate Policy*, 16(6), 673–681. doi:10.1080/14693062.2016.1194005
- Guardian. (2011, December 13). *Canada pulls out of Kyoto Protocol*. Retrieved from <https://www.theguardian.com/environment/2011/dec/13/canada-pulls-out-kyoto-protocol>
- Guardian. (2017, July 9). G20 leaders' statement on climate change highlights rift with US. Retrieved from <https://www.theguardian.com/world/2017/jul/08/g20-climate-change-leaders-statement-paris-agreement>
- Helfer, L. R. (2005). Exiting treaties. *Virginia Law Review*, 91(7), 1579–1648.
- Henry, L. A., & Sundstrom, L. M. (2007). Russia and the Kyoto Protocol: Seeking an alignment of interests and image. *Global Environmental Politics*, 7(4), 47–69.
- Höhne, N., Luna, L., Fekete, H., Sterl, S., Hare, B., Cantzler, J., ... Mir, G. U. R. (2017, May 15). *Action by China and India slows emissions growth, President Trump's policies likely to cause US emissions to flatten*. Climate Action Tracker Update, Climate Analytics, Ecofys, New Climate Institute.
- Holbrook Smith, L. (2017). To accede or not to accede: An analysis of the current US position related to the United Nations law of the sea. *Marine Policy*, 83, 184–193.
- Hovi, J., Greaker, M., Hagem, C., & Holtmark, B. (2013). A credible compliance enforcement system for the climate regime. *Climate Policy*, 12(6), 741–754.
- Hovi, J., Skodvin, T., & Andresen, S. (2004). The persistence of the Kyoto Protocol: Why other Annex I countries move on without the United States. *Global Environmental Politics*, 3(4), 1–23.
- Hurriyet Daily News. (2017, July 9). Turkey 'will not ratify Paris climate accord'. Retrieved from <http://www.hurriyetdailynews.com/turkey-will-not-ratify-paris-climate-accord.aspx?pageID=238&ID=115280&NewsCatID=348>

- IEA, & IRENA. (2017). *Perspectives for the energy transition: Investment needs for a low-carbon energy system*. Author.
- Karlsson-Vinkhuyzen, S., & McGee, J. (2013). Legitimacy in an era of fragmentation: The case of global climate governance. *Global Environmental Politics*, 13(3), 56–78.
- Kemp, L. (2016). Bypassing the 'ratification straitjacket': Reviewing US legal participation in a climate agreement. *Climate Policy*, 16(8), 1011–1028.
- Kemp, L. (2017a). US-proofing the Paris climate agreement. *Climate Policy*, 17(1), 86–101.
- Kemp, L. (2017b). Better out than in. *Nature Climate Change*. (Online (22 May 2017)). doi:10.1038/nclimate3309
- Keohane, R. O., & Victor, D. G. (2011). The regime complex for climate change. *Perspectives on Politics*, 9(1), 7–23.
- Levy, J. S. (2008). Counterfactuals and case studies. In J. M. Box-Steffensmeier, H. E. Brady, & D. Collier (Eds.), *The Oxford handbook of political methodology* (pp. 627–644). Oxford: Oxford University Press.
- Marlon, J., Fine, E., & Leiserowitz, A. (2017). *Majorities of Americans in every state support participation in the Paris Agreement*. Yale Program on Climate Change Communication. Retrieved from http://climatecommunication.yale.edu/publications/paris_agreement_by_state/
- McGee, J., & Taplin, R. (2009). The role of the Asia Pacific Partnership in discursive contestation of the international climate regime. *International Environmental Agreements: Politics, Law, Economics*, 9(3), 213–238.
- Morgera, E., & Tsioumani, E. (2011). Yesterday, today, and tomorrow: Looking afresh at the Convention on Biological Diversity. *Yearbook of International Environmental Law*, 21(1), 3–40.
- O'Mahoney, J. (2015). Why did they do that?: The methodology of reasons for action. *International Theory*, 7(2), 231–262.
- Rajamani, L. (2016). The 2015 Paris Agreement: Interplay between hard, soft and non-obligations. *Journal of Environmental Law*, 28(2), 337–358.
- Reuters. (2017). U.S. envoys told to be coy on re-engaging in Paris climate deal – cable. Retrieved from http://live.reuters.com/Event/Live_US_Politics/1051797571
- Rogelj, J., Fricko, O., Meinshausen, M., Krey, V., Zilliacus, J. J. J., & Riahi, K. (2017). Understanding the origin of Paris Agreement emission uncertainties. *Nature Communications*. doi:10.1038/ncomms15748
- Sanderson, B. M., & Knutti, R. (2016). Delays in US mitigation could rule out Paris targets. *Nature Climate Change*, 7(2), 92–94.
- Sauquet, A. (2014). Exploring the nature of inter-country interactions in the process of ratifying international environmental agreements: The case of the Kyoto Protocol. *Public Choice*, 159(1), 141–158.
- Scott, S. V. (2012). *International Law, US power: The United States quest for legal security*. New York, NY: Cambridge University Press.
- Shishlov, I., Morel, R., & Bellassen, V. (2016). Compliance of the parties to the Kyoto Protocol in the first commitment period. *Climate Policy*, 16(6), 768–782.
- TASS. (2017). Russia can ratify Paris climate agreement in 2019 — presidential adviser. TASS (Russian News Agency). Retrieved from <http://tass.com/politics/945925>
- Taylor, L. (2017). It's way past time to speak truth to climate arguments this stupid. *Guardian Australia*. 3 June 2017. Retrieved from <https://www.theguardian.com/environment/2017/jun/03/its-way-past-time-to-speak-truth-to-climate-arguments-this-stupid>
- UNFCCC. (1997). Kyoto Protocol to the United Nations Framework Convention on Climate Change. (FCCC/CP/1997/7/Add.1 (10 Dec 1997)).
- UNFCCC. (2016). Adoption of the Paris Agreement. (FCCC/CP/2015/10/Add.1 (29 January 2016)).
- US Department of State. (2017). *Treaties Pending in the Senate* (updated as of May 8, 2017). Retrieved from <https://www.state.gov/s/treaty/pending/>
- We are still in. (2017). Retrieved from <http://wearestillin.com/>
- West, J. J., Smith, S. J., Silva, R. A., Naik, V., Zhang, Y., Adelman, Z., ... Lamarque, J.-F. (2013). Co-benefits of mitigating global greenhouse gas emissions for future air quality and human health. *Nature Climate Change*, 3(10), 885–889.
- White House. (2017). *Statement by President Trump on the Paris Climate Accord*. Retrieved from <https://www.whitehouse.gov/the-press-office/2017/06/01/statement-president-trump-paris-climate-accord>
- WRI. (2017). *Climate Analysis Indicators Tool (CAIT)*. World Resources Institute. Retrieved from <http://cait.wri.org/historical>