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FOCUS LESS ON COLLECTIVE ACTION, MORE ON DELAYED BENEFITS AND CONCENTRATED OPPONENTS

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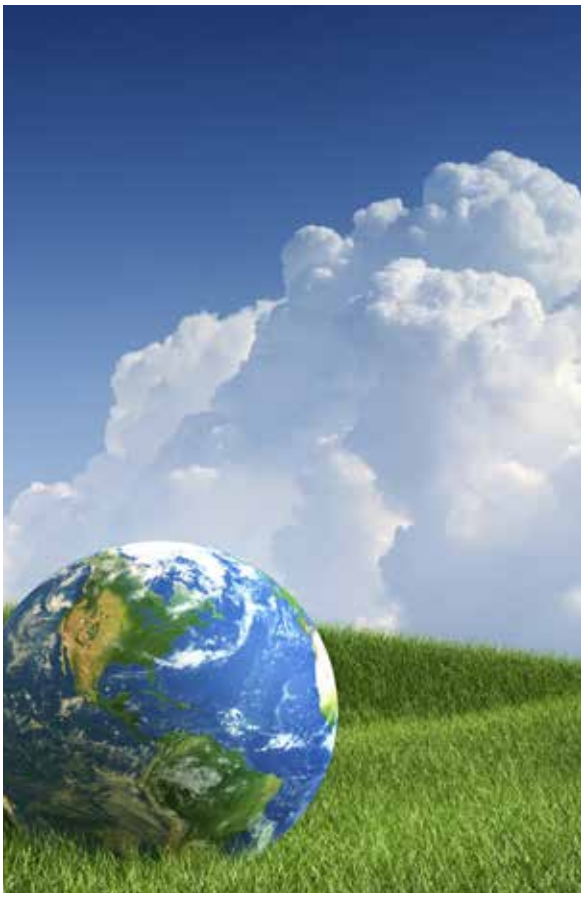

Key Points

- Effective climate change responses have been impeded by focusing too much on the collective-action nature of the problem, relative to other obstacles — delayed benefits and concentrated opponents — that are more important and imply different priorities for action.
- Policy should aim to overcome the problem of delayed benefits, by linking emission cuts with actions that bring immediate benefits, enacting reforms that are sticky or self-reinforcing over time, and framing the issue in appropriately long historical terms.
- Policy should aim to overcome concentrated opposition, by advancing reform efforts first in jurisdictions where fossil interests have less sway and by designing policies to split fossil interests and weaken their political control.

Collective-action Thinking Has Dominated Climate Policy and Analysis

Efforts to limit climate change have mostly presumed that the main obstacle to action is the collective-action nature of the problem. The reasoning is familiar: emission cuts impose local or national costs to provide global benefits, so every nation wants others to bear the burden. The main requirement for global climate action is thus to coordinate reciprocal actions, so states are confident their efforts will be matched by others. When the real, complex problem of limiting climate change is identified with the simple, abstract model of collective action, the resultant guidance for action includes the following:

- Action should be pursued in a global forum.
- Negotiations should seek jointly committed emission-cutting targets or measures: who will do how much and when, in response to reciprocal commitments of others.
- Little can be gained by actions of single states or subgroups, except as bargaining moves announced before international meetings to induce others to respond.
- Monitoring, reporting and verification (MRV) are crucial to maintaining mutual confidence, by ensuring states meet their commitments and do not backslide.

This approach has dominated climate debate since 1995. Even limited efforts at asymmetric action, as in the Kyoto Protocol targets, have collapsed in squabbling over who is not doing enough. Occasional proposals for strong action by subgroups are attacked as naive and infeasible. The dreary spectacle gives continuing ammunition to those who oppose any serious action.

About the Fixing Climate Governance Project

Project Leaders: **John Odell**, CIGI Senior Fellow and **David Runnalls**, CIGI Distinguished Fellow

Climate scientists agree that human activity has been changing our planet's climate over the long term. Without serious policy changes, scientists expect devastating consequences in many regions: inundation of coastal cities; greater risks to food production and, hence, malnutrition; unprecedented heat waves; greater risk of high-intensity cyclones; many climate refugees; and irreversible loss of biodiversity. Some international relations scholars expect increased risk of violent conflicts over scarce resources due to state breakdown.

Environmentalists have been campaigning for effective policy changes for more than two decades. The world's governments have been negotiating since 1995 as parties to the United Nations Framework Convention on Climate Change (UNFCCC). These talks have not yet produced agreements that are sufficiently effective in curbing greenhouse gas emissions or helping the world adapt to climate impacts. Some effort has shifted to partial measures by national governments, provinces, cities and private companies, which, together, also fall far short of the need identified by science so far.

The Fixing Climate Governance project is designed to generate some fresh ideas. First, a public forum was held in November 2013. High-level workshops then developed a set of policy briefs and short papers written by experts. Several of these publications offer original concrete recommendations for making the UNFCCC more effective. Others make new proposals on such topics as how to reach agreements among smaller sets of countries, how to address the problems of delayed benefits from mitigation and concentrated political opposition, ways that China can exercise leadership in this arena and how world financial institutions can help mobilize climate finance from the private sector. These publications will all be published by CIGI in 2015.

Has Too Much Collective Action Thinking Misdirected Action?

What if the importance of the collective-action problem in climate has been overstated, and efforts misdirected as a result? There is evidence for this possibility in both the observed behaviour of states and expert analyses of the problem:

- Several jurisdictions have enacted and sustained aggressive policies to cut emissions with no sign of economic harm. The strongest examples are subnational jurisdictions, such as California and British Columbia, which collective-action theory says should be even less able to take such action than national governments.
- Some nations have tried to obstruct others' attempts to cut their own emissions. While the most persistent obstruction has been by oil states — for whom collective-action logic clearly does not apply (see Depledge 2008) — the United States has also done this, in its efforts in the early 2000s to persuade other states not to ratify the Kyoto Protocol (see Sanger 2001).
- Estimates of the cost of climate stabilization are persistently low, ranging from a few tenths of a percent to a few percent loss of a rapidly growing world economic output, if pursued as a gradual transition over this century (Clarke et al. 2014).
- It is increasingly clear that stabilizing climate requires cutting world fossil fuel use eventually to zero (except in closed systems with emissions captured). While partial cuts provoke intense bargaining over who gets how much, cutting to zero means there is nothing to fight over. A zero goal, even a century away, thus puts a limit on how much benefit from continued fossil-fuel use there is to distribute, or to bargain over. The hundred-year transition allows bargaining over interim cuts, of course, but benefits from moving out of fossil fuels slower will be partly offset by anticipated benefits of moving early toward the post-fossil economy that follows.

Each of these points weakens the fit of the collective-action model to the climate problem, particularly of the starkest forms that suggest any unbalanced action is bound to fail, and to harm those who try to lead. These dire claims have been persistently advanced by groups that oppose any action. This brief does not claim there are no collective-action elements to limiting climate change: there clearly are. Rather, it argues that these are less important than widely believed, particularly for early steps to initiate serious action. If this is correct, several concrete implications follow:

- Global coordination from the outset is less important: there is more scope for serious, leading action by subgroups, single nations or subnational jurisdictions.

- The cost of such action is likely to be smaller and more correctible than has been thought.
- The need for strong MRV measures at the outset is reduced. Global action will still be needed eventually, and MRV measures may be needed at some point on the way there. But since the main job of MRV is to make states confident their actions are reciprocated, less early need for broad reciprocal action implies less need for MRV.
- The pursuit of global action to cut emissions can be recast as a multi-stage process in which serious early action by leaders generates opportunities and incentives for others to follow, thereby limiting any disadvantage that early movers may suffer.

But if it is not the collective-action problem that has blocked effective action, what is it? Twenty years of failure surely calls for explanation and guidance on how to change course. This brief proposes that two other aspects of the climate issue are the most serious obstacles to effective action: delayed benefits from emission cuts; and concentrated costs of emission cuts on groups that are effectively organized to resist action. Focusing on these implies different strategies for early action from those implied by collective-action logic, with greater promise of success.

Prioritizing Other Challenges: Delayed Benefits

Cutting emissions is essential to managing climate change, yet suffers from a strong disconnect between the timing of its burdens and its benefits. Due to the slow dynamics of climate and energy systems, efforts to cut emissions exhibit successively longer delays in their effects on installed capital stock, emissions, atmospheric concentrations and climate. Even extreme efforts today would thus only reduce climate-change risks a few decades from now. Motivating current efforts for future benefits is difficult for any decision, from diet and fitness programs to protecting the global environment, but appears to be especially difficult for climate change. The difficulty goes far beyond any rational weighting of present versus future effects: calculations of preferred trajectories of emission cuts vary with the discount rate, of course — higher discount rates favour delaying the largest reductions — but even high discount rates call for near-term efforts much stronger than those now being made (see Stern 2007; Nordhaus 2013).

Growing evidence of large climate disruptions already occurring has increased support for emission cuts, but this does not mean the challenge of delayed benefits has been overcome. The increased support may reflect a misconception that current efforts can stop current climate changes, when in fact these changes — and bigger ones to come — are essentially locked in place by past inaction. Worse, the delayed benefits problem will not disappear as time passes: later efforts will not act any faster, but will only act from a worse starting point. Just as emission cuts today reduce risks only after a few decades, efforts begun in 2050 will reduce risks only a few decades after that. Climate change is a slow-motion problem, to which cutting emissions is an essential, but slow-motion, solution. As this becomes known, it is unclear whether observed climate disruption will produce sustained support for the large emission cuts needed to limit future risks.

What does this mean for action? If decision makers were to prioritize the delayed benefits problem and design efforts to surmount it, what would that look like concretely? Three types of approach hold promise: linking emission-cutting efforts with actions that bring immediate benefits; enacting reforms that are sticky or self-reinforcing over time; and framing the issue in appropriately long historical terms, as a century-scale challenge.

Couple Slow-acting Efforts with More Immediate Benefits

Efforts to cut CO_2 and other gases with long atmospheric lifetimes (which have the slowest response) should be linked with other activities that bring more immediate benefits. Several approaches show promise in achieving this linkage, at either the national or international level.

- Link cuts to CO_2 and other long-lived greenhouse gases with parallel efforts to cut gases with shorter atmospheric lifetimes, such as black carbon (smoke or soot) and methane. These gases heat the earth roughly as much as CO_2, but they stay in the atmosphere weeks to decades, as opposed to centuries to millennia. Cutting short-lived gases cannot replace cutting CO_2, which is the largest source of the century-scale climate changes of greatest concern. But linking cuts of the two types can simultaneously reduce the long-term problem, while also providing near-term benefits to help surmount the challenge of delayed benefits.
- Link emission cuts to major adaptation efforts. Serious adaptation will pose its own political challenges (related to cost, distribution and government intrusion), which are more severe than is yet recognized — mainly because so little adaptation has yet been done. But demands for adaptation, including emergency response and compensation after extreme events, will mount as climate disruptions grow. These demands can build support for emission cuts through policy linkage, for example, by using revenue from emissions policies for adaptation contingency funds, by linking immediate relief with anticipatory actions to reduce vulnerability to future changes, and by clearly branding all these efforts as parts of an integrated climate change strategy, not ad hoc responses to single events. The growing flow of severe events will keep climate change salient, and the clear benefits of adaptation efforts can build support for

emission policies, both for their contributions to managing long-term risks and for their revenues.

- More controversially, link emission cuts with programs to research and develop climate engineering (CE) measures to offset some of the climate disruption caused by greenhouse gases. CE measures, such as brightening low marine clouds or spraying reflective droplets in the atmosphere to reduce incoming sunlight a little (a few tenths of one percent) can rapidly reduce some climate change risks at shockingly low direct cost, but cannot solve the whole problem. CE is highly controversial, and poses environmental and political risks that need research, assessment, and a commitment to development being gradual, cautious and reversible. As climate disruptions grow more obvious and severe, demand for CE could surge rapidly. This demand could be channelled to help support strong emissions cuts, via a linked package that combines action on both fronts and combines immediate and long-term benefits.
- Use revenues from emission policies to provide rebates to citizens or reduce existing taxes. Where the prior suggestions couple emission cuts with measures that bring immediate societal benefits, this one aims for the greater political force of providing immediate, obvious benefits to citizens individually. Revenues from a policy are a fixed pot, so policy makers must choose how to divide the total among rebates, adaptation measures, cuts in other taxes, or general revenues.
- Attend carefully to the time dimension of policy design. Policies must control the intensity of mitigation effort over time, to steer emissions down as fast as possible without incurring politically unsustainable costs. Promising elements include: phasing cuts to limit premature capital abandonment; treating new and existing sources differently, to deter new investments that lock in high future emissions (while also protecting against gaming to extend the life of existing sources); and processes to adjust cuts over time as knowledge and capabilities advance.

Make Reforms Self-Reinforcing

Policies and reforms should be made self-reinforcing, or sticky, by including elements that promote their strengthening over time and resist efforts to weaken them. Assuming an initial moment of political opportunity that enables a first serious step, this stickines can be achieved in various ways.

- Start policies with moderate stringency but include a pre-announced trajectory of tightening over time, such as a schedule of tightening emission targets or increasing emissions tax rates. Even if the schedule can be overridden by future political decisions, it provides a default that can strengthen long-term incentives. Additional commitment to future tightening can come from institutional or procedural measures, such as delegating adjustments to a technical body (subject to guidance about criteria and conditions). For example, an "emissions adjustment authority" might periodically adjust the cap or tax rate based on new knowledge about climate impacts, cuts achieved, and costs — similar to central banks' control of the money supply.
- Design policies to create political constituencies that support their continuance or strengthening. This can be achieved through directed use of policy revenues as discussed above, or by structuring policies to confer rents on some groups, aiming to either split opponents of emission cuts or create new constituencies of beneficiaries. For example, recent analysis shows that even a simple carbon tax can benefit the US electric utility sector, because rents to existing low-carbon sources from a general price rise exceed losses from idled, marginal high-carbon units (see Isley 2014).

Communicate the Historical Scale of the Problem

Policy design should be matched with appropriate framing, communication and leadership. The gravity of the climate challenge has rarely been appropriately communicated. It requires managing risks over multiple decades, which under the worst plausible assumptions (for its actual severity is indeed uncertain) could threaten the survival of advanced, prosperous, liberal democratic societies. As a grave, slow-motion challenge, climate change is the most important thing, but never the most urgent. Political leaders must communicate the nature of the problem more clearly, with a sustained focus on the long view and with rhetoric that fits the gravity, the monumental historical scale, and the slow but inexorable movement of the challenge.

Prioritizing Other Challenges: Concentrated Opponents

Although estimates of aggregate costs of stabilizing climate through emission cuts are consistently small (Clarke et al. 2014), costs are not uniformly distributed but fall initially on a set of concentrated, well-organized sectors and locations: fossil resource owners and others deriving rents from their production, including trillions of dollars of annual subsidies (Coady et al. 2015); nations and regions heavily dependent on production and export of these fuels; and the most heavily coal-dependent electric utilities. Other sectors will bear larger or smaller costs depending on their fossil-energy inputs, their exposure to competition that faces weaker emission policies, and the price-responsiveness of demand for their output (which determines their ability to pass through costs). As deeper cuts are pursued in the future, other sectors of concentrated opponents are likely to emerge — notably agriculture — but for the first waves of serious cuts the dominant opponents are fossil-energy interests.

Although the needed transition to a non-carbon economy is a multi-decade process, the fossil interests that expect to bear these concentrated costs have mightily resisted even the smallest first steps. Moreover, they appear to see little opportunity to recast themselves as "energy companies" with stakes in the climate-safe future to offset losses on current assets: for example, the two oil majors that briefly tried to position themselves as such, BP and Shell, both made sharp reversals within a few years. Over the past several years, the shift to higher-carbon sources has strengthened the sector's determination to defend fossil-based liquid fuels as long as possible. Recently, innovations in production and upstream processing have expanded supply of both gas and oil, undercutting market-driven shifts toward climate-safe sources and worsening prospects for climate stabilization. Both these recent trends starkly illustrate that not all energy innovation is good for the environment. These sectors have been potent opponents of climate policy, in international and multiple national settings, both in direct political opposition and indirectly as sponsors of the climate science denial movement.

Concentrated opponents may be an even tougher obstacle to effective climate action than delayed benefits. In jurisdictions where fossil interests' control over energy and climate policy is strongest — which include not just obvious petro-states such as the Gulf States and Venezuela, but also Canada, Australia, Russia and, arguably, the United States — opportunities to adopt prudent climate change policies may be limited in the absence of a large-scale shift in political conditions. Severe climate disruptions may bring such a shift, but even this is not guaranteed — and in any case, such speculation provides no guidance for early steps. At least initially, breaking the control of fossil interests over climate policy may thus be of greater strategic importance than normal conditions of good policy design. Two promising directions to do this involve pursuing reform efforts first in jurisdictions where fossil interests have less control, and designing policies to split the fossil sector and thereby weaken its political influence.

National or subnational jurisdictions where fossil interests have less political control should be leaders in cutting emissions. These will often be jurisdictions that are mainly consumers and importers of fossil fuels, rather than producers or exporters, but other idiosyncratic factors may also make some jurisdictions more or less able to take leading action. Although additional policies may be useful or necessary, the first step should be broad, economy-wide policies that put a steadily rising price on emissions, such as a broad emissions tax or tradeable-permit system. Because all economies suffer disruption from energy-price volatility, a tax that varies inversely with market prices to approach a targeted trajectory of consumer prices can benefit the levying jurisdiction by reducing consumer energy-price volatility as well as creating relatively predictable incentives to cut emissions.

Jurisdictions that take such leading action should aim to expand their effect in two ways: by coordinating and linking policies with other leaders, as now being pursued by California in partnership with other West Coast US states and some Canadian provinces; and by imposing border trade measures to apply an equivalent emissions price to traded fuels and emission-intensive goods. Such measures can reduce competitive losses to producers in leading jurisdictions and create incentives for others to follow. They are controversial and may significantly disrupt world trade, but if implemented carefully and non-discriminatorily appear likely to be judged permissible under international trade law.

To the extent possible in specific jurisdictions, emissions policies should aim to weaken fossil interests' control over policy by splitting the sector. How to do this will vary with specific economic and political conditions, but the general approach involves imposing larger burdens on more damaging fuels. This can be done by drawing categorical distinctions among fuel sources — for example, by prohibiting new coal-fired generating stations, coal mines, or developments of other high-emitting sources such as coal liquids, tar sands or heavy crudes. Alternatively, it can be done by basing regulatory burdens on finer differentiation among fuels by their associated emissions, as several policies (notably California's Low Carbon Fuel Standard) already aim to do using life-cycle emissions accounting.

It may be strategically advantageous to discriminate among energy sources by even more than their relative emissions — reducing regulatory burdens or even conferring rents on less destructive sources (such as natural gas or early biofuels), provided these can reduce usage and political power of worse sources (such as coal) in the short term — and, crucially, provided it can be ensured that the expansion of these less destructive (but still destructive) sources is temporary. In this regard, there may be a useful parallel between treatment of natural gas and other less destructive sources in greenhouse gas policies, and that of HCFCs (Hydrochlorofluorocarbons) in policies to control ozone-depleting chemicals, in that both offer partial reductions of the relevant environmental burden, helpful for fast cuts but not for large ones. To achieve fast cuts in the more destructive CFCs (or Chlorofluorocarbons), rapid investment in HCFCs was pushed by agreeing in advance that these chemicals would have a commercial lifetime long enough for full capital recovery, after which phase-downs were negotiated in favour of environmentally better chemicals developed in the interim.

Conclusion

Controlling climate change has significant collective-action aspects, but the importance of these has been exaggerated and efforts misdirected as a result — particularly regarding the feasibility and impact of leading actions to pursue large emission cuts by individual nations or subgroups. Such leading actions need not, as current policy debate presumes, be futile or ruinously costly — particularly if these are viewed as initial steps in a multi-stage pursuit of deep global emission cuts.

Serious climate action must confront other challenges, however, that have been neglected in the excessive focus on the global collective-action problem — most importantly, delayed benefits and concentrated opponents. Focusing on these suggests different priorities for action. This brief has sketched several specific approaches to addressing these challenges, which can be pursued nationally or internationally and which hold greater prospect of success than the present approach.

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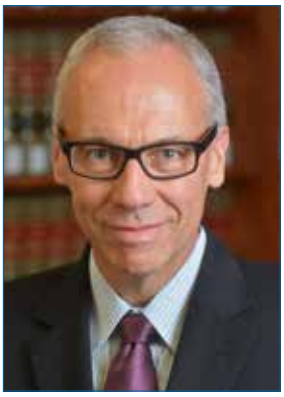

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Le CIGI a été fondé en 2001 par Jim Balsillie, qui était alors co-chef de la direction de Research In Motion (BlackBerry). Il collabore avec de nombreux partenaires stratégiques et exprime sa reconnaissance du soutien reçu de ceux-ci, notamment de l'appui reçu du gouvernement du Canada et de celui du gouvernement de l'Ontario.

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