Center for American Progress

CLIMATE ADVISERS

Raising Global Climate Ambition

9 Pragmatic Steps for World Leaders to Deliver the Low-Carbon Economy

By Nigel Purvis September 2014

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Contents

Introduction and summary

In 2015, the international community will set a new trajectory for global climate cooperation over the next decade. Presidents and prime ministers will meet several times in the coming months at summits in New York, Paris, and elsewhere to share their respective domestic climate action plans and shape a new global climate agreement. Science dictates that nations pursue urgent and ambitious action.

However, the politics of climate action, both at home and abroad, remain challenging for many world leaders. In an effort to raise climate ambition—or how hard nations are working to promote climate solutions—this report identifies nine pragmatic and politically feasible measures that are available to world leaders to create a low-carbon economy.

Fortunately, just a handful of reasonable emissions-mitigation actions and policies implemented internationally between now and 2030 would put the world fully on a path toward climate protection using existing technologies and without meaningfully reducing economic growth. Success in adopting these policies will depend primarily on domestic politics, but sensible international cooperation has an important role to play too. Because international cooperation takes time and builds incrementally, nations must chart a new course without delay. To start moving in the right direction at the global level, world leaders should take the following pragmatic steps by the end of 2015:

1. Set a specific year by which global greenhouse gas emissions will start to decline.
2. Reframe climate action as essential for near-term prosperity, including by building climate-related targets into new global development goals for 2030.
3. Announce internationally ambitious, unconditional, and unilateral domestic emissions-reduction goals for 2025 or 2030.
4. Commit to measurable goals for shared international emissions cuts and climate financing.
5. Value carbon in all major economies by 2020.

6. Commit to global goals for forest protection and sustainable forest management, including eliminating deforestation from global commodity trade by 2020.
7. Amend the Montreal Protocol to phase down the production of super-polluting hydrofluorocarbons, or HFCs.
8. Set concrete, ambitious energy-efficiency goals through 2030 for power plants, vehicles, buildings, and appliances.
9. Conclude a strong new global climate agreement by the end of 2015.

The remainder of this report explains the importance and political feasibility of these nine recommendations.

A new political moment

Climate change has returned to the international stage after several years in the political wilderness, having been pushed out of the limelight mainly by the prolonged global financial crisis and weak employment in the developed world. Over the next 18 months, world leaders will have numerous high-profile opportunities to shape climate action and to determine how ambitiously the world responds.

Opportunities for global leadership

World leaders will gather in New York City on September 23 for a rare climate summit organized by U.N. Secretary-General Ban Ki-moon. Hundreds of presidents and prime ministers are expected to attend. This high-level U.N. climate gathering will mark the first time since 2009's Copenhagen climate talks—which were only partially successful—that world leaders will devote substantial time to global climate action.[1]

More importantly, many world leaders plan to unveil new domestic climate action plans in early 2015 for the period beyond 2020.[2] Taken together, these national plans will determine the world's overall climate ambition through 2025 or 2030. They are also likely to be codified in a new global climate agreement for the post-2020 period, which is discussed below. For this reason alone, the next few months represent the most important period in climate politics to date. By this time next year, the world will have largely chosen a climate trajectory for the next decade. While subsequent political and scientific developments may revise that trajectory somewhat, past experience suggests that dramatic departures from what nations will announce over the next 18 months are unlikely.[3] Once nations set a course, inertia will set in. Similar to a petroleum supertanker that takes ages to turn, leaders need to pick a direction now to have an impact in the next decade.

Also, nations have agreed to conclude a new global climate agreement by December 2015 to replace the controversial 1997 Kyoto Protocol, which expires in 2020. The Kyoto Protocol requires greenhouse gas emissions reductions from most industrialized nations—but not the United States, as the Bush administration rejected the treaty. It also does not require any new emissions-abatement actions from major emerging economies, including Brazil, China, and India.[4] Heads of government are expected to play a major role in shaping the new global climate pact, just as they did in crafting the 2009 Copenhagen Accord—the outcome of U.N. climate negotiations in Denmark that created the political framework for international climate cooperation through 2020.[5]

On a parallel political track, world leaders will gather at the United Nations in September 2015 to finalize a new set of international development and poverty-alleviation goals for 2030. These goals could include important climate-related quantitative targets to accelerate and expand energy efficiency, renewable energy, forest and ocean conservation, and disaster-risk reduction. The new 2030 international development goals—which may come to be known as the Sustainable Development Goals, or SDGs—are expected to apply to all nations and to become the organizing ideas for global economic cooperation to alleviate global poverty over the next 15 years.[6]

The SDGs will replace the so-called Millennium Development Goals, or MDGs, that expire in 2015. The MDGs, launched in 2000, sought to cut global poverty by half, reduce child mortality, provide universal primary education, and achieve several other world-changing outcomes.[7] While implementation of the MDGs has been uneven, many of the goals, including the overarching poverty-reduction aim, are on track globally.[8] Nonetheless, if unchecked, climate change risks unraveling decades of progress against poverty, hunger, and economic insecurity.[9]

In between these multilateral summits, world leaders will have numerous opportunities to narrow differences on climate change in other leader-level political forums, including meetings of the G-20; the G-7; the Asia-Pacific Economic Cooperation, or APEC; and during transatlantic summits. These smaller forums bring together leaders from major economies that represent the majority of the world's greenhouse gas emissions. For instance, the G-20 countries are responsible for approximately 80 percent of global greenhouse gas emissions.[10] Focusing on climate within these multilateral leader engagements can have a tremendous impact and help speed progress on climate change at the global level. Depending

on economic and security conditions at the time, the 2015 G-20 summit in Turkey could focus heavily on climate change, as was the case with the last G-20 meeting before a major global climate negotiation—the 2009 G-20 summit in Pittsburgh, Pennsylvania.[11] All of these upcoming multilateral meetings are prime opportunities for world leaders to take action on climate change.

Latest climate science foretells a troubled future

The return of climate change to the top ranks of international politics follows on the heels of the release of several major global scientific assessments that have sharpened our understanding of the impacts of and solutions to climate change. We now know that climate change is absolutely real: Scientists agree the evidence is simply unequivocal.[12] Virtually no scientist doubts that the Earth's atmosphere is warming. Also, our understanding that humans are a primary cause of climate change has grown significantly stronger over the past five years. Those facts are now just as strong and clear as the evidence that cigarettes kill—in scientific terms, both have a 95 percent certainty.[13]

Moreover, scientists now agree that the adverse effects of climate change are already being felt across the globe, are more severe than previously anticipated, and will intensify greatly in the years ahead. This is true not only at the global level but also in rich countries such as the United States.[14] From flooding, droughts, and severe storms to sea-level rise, ocean acidification, and human migration, every region and country is already being affected and will suffer more in the years to come.[15] The long-term health, economic, security, and social impacts of climate change, though still somewhat difficult to predict with precision, are expected to be major and pervasive.

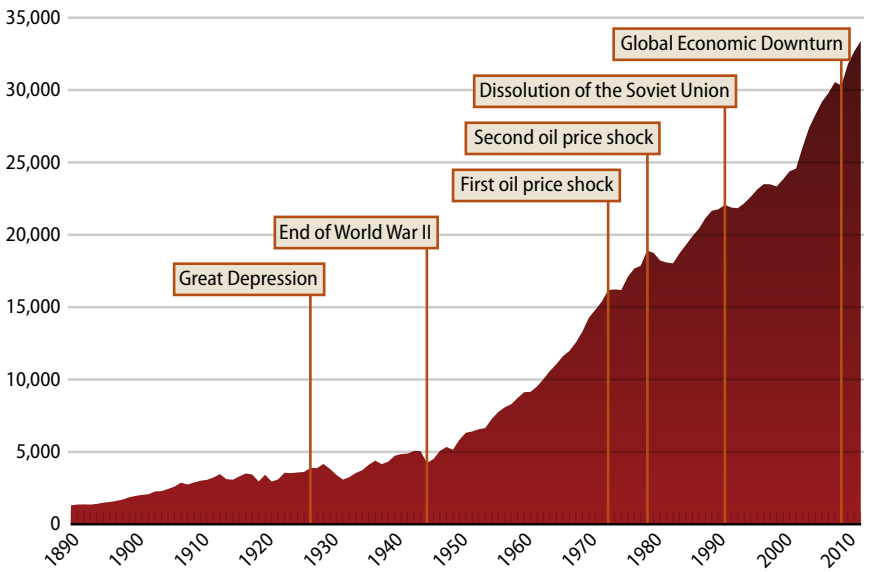
These effects mean that climate change is not a traditional environmental concern; rather, it is an economic and humanitarian crisis. And it is not just scientists who hold these views. The White House Council of Economic Advisers warns that one additional degree of global warming could reduce economic growth by about 1 percent of global gross domestic product—or GDP—or about $150 billion.[16] Both the U.S. Department of Defense and the Council on Foreign Relations describe climate change as a threat multiplier that magnifies existing security risks.[17] U.S. intelligence agencies consider climate change one of the biggest forces currently reshaping the world.[18] The World Bank warns that climate change could reverse all recent gains the world has made against poverty.[19] As a result, climate change will have wide-reaching implications for all aspects of society if we do not take action now.

Average global temperatures have already increased around 0.85 degrees Celsius from preindustrial levels, and without additional action, a further increase of more than 2 degrees Celsius appears likely, with most of this occurring by 2100.[20] The international community has agreed in principle to take action to limit global warming to no more than 2 degrees Celsius, or 3.6 degrees Fahrenheit, by the end of the century.[21] Many scientists believe that warming beyond this level could prove dangerous or even catastrophic. However, even this level of warming may prove dangerous, and more-ambitious global goals seem politically infeasible.[22]

Nations are responding individually, but they are doing so inadequately. Although the number of countries that have come forward with meaningful national climate plans has doubled in the past decade, the emissions-mitigation measures that nations have pledged to date—even if fully implemented—would amount to less than half the action needed to keep the 2 degrees Celsius goal within sight.[23] In fact, as a consequence of population and economic growth, global emissions are still rising more than 20 years after the world adopted the first global climate treaty.[24]

FIGURE 1

Global carbon dioxide emissions from fossil-fuel consumption



Sources: Carbon Dioxide Information Analysis Center, "Global Fossil-Fuel CO2 Emissions," available at http://cdiac.ornl.gov/trends/emis/tre_glob_2010.html# (last accessed July 2014); Carbon Dioxide Information Analysis Center, "Fossil-Fuel CO2 Emissions," available at http://cdiac.ornl.gov/trends/emis/meth_reg.html (last accessed July 2014); Carbon Dioxide Information Analysis Center, "Global, Regional, and National Fossil-Fuel CO2 Emissions," available at http://cdiac.ornl.gov/trends/emis/overview.html (last accessed July 2014).

While fully eliminating climate pollution will take many decades, we must act urgently. The latest research indicates that global climate pollution must peak and begin to decline very soon—perhaps around 2025—to stand a likely chance of meeting the global goal of limiting warming to 2 degrees Celsius.[25]

Public policy matters

From one perspective, limiting climate change is a technological problem. We need smarter, cheaper, and better energy technologies and land-use practices to replace today's high-carbon fuels, infrastructure, power plants, factories, buildings, and farms. However, innovation usually responds to demands from government, business, or consumers. Consequently, supportive public policy is needed to help spur the technological advances that will solve climate change problems.

From another perspective, climate change is primarily a financial challenge. Currently, the world spends about $1 billion per day—a total of $360 billion in 2011—on climate-smart investments.[26] Getting on the pathway to limit warming to 2 degrees Celsius will require more than doubling this annual climate spending by 2020 and tripling it by 2030.[27]

Stated this way, the challenge seems daunting, but these figures are misleading in two ways. First, an additional $360 billion per year to protect the climate is not a large figure in the context of the global economy. To meet societal demands, humanity spends roughly $6 trillion on the infrastructure that determines energy consumption—including cities, factories, power plants, buildings, and vehicles.[28] The global energy bill for oil, electricity, and natural gas amounts to another $5 trillion per year. With global GDP at about $60 trillion, these infrastructure and energy expenses account for almost 20 percent of the global economy.[29] Each year, the world spends approximately $3.6 trillion on agriculture, managed forests, and natural resources, accounting for an additional 6 percent of the global economy.[30] In other words, the sum needed to finance climate solutions represents less than 1 percent of the global economy and only a few percentage points of the energy and land-use sectors that are most responsible for climate emissions.

Second, the total amount of investment vastly overstates its own cost. Because fighting climate change would reduce other costs—through enhanced efficiency and reduced health impacts, for example—the net cost of climate investments to society would actually be small or, potentially, even negative—or pro-growth. This is discussed below.

About one-third of climate finance—money spent to reduce emissions or to adapt to climate change in all countries—comes from public sources, with the remainder coming from the private sector.[31] While three-quarters of climate finance stays within national borders, the bulk of the remaining one-quarter of public climate finance that is spent internationally travels to major emerging economies through a variety of national, bilateral, and multilateral institutions, such as the World Bank, the Asian Development Bank, and the Overseas Private Investment Corporation.[32] Both at home and abroad, governments are allocating an increasing share of public money to better leverage private investment. Further increases in public finance are required to mobilize private investment at scale, but governments face fiscal limits and are unlikely to close the climate investment gap simply by allocating more revenue from their general treasuries. However, other government policies that do not empty government coffers—from technology and energy-efficiency standards to carbon markets and taxes—are available to help fill the financing gap.

At its core, therefore, climate change is a policy problem, not a resource problem. The task of accelerating clean energy innovation and closing the climate finance gap falls to governments via an intelligent mix of public spending, environmental regulation, tax incentives, and the other tools of the policy world. The world could get lucky—private innovation could solve the climate crisis without strong public policies. But smart government policies are a far more probable path to success, particularly since time is running out and success depends on securing a step change in climate ambition now. Without public policy drivers, it is unlikely that private finance will be sufficient to adequately assist developing countries to adapt to the devastation that is already being wrought by climate change.

Time for leadership

Just a handful of affordable climate policies implemented widely through 2030 would make an enormous difference; these policies range from adopting better energy-efficiency standards for vehicles and eliminating fossil-fuel subsidies to shutting down inefficient coal plants and investing in renewable energy. Moreover, nations could undertake these policies using only existing technologies and without significantly reducing economic growth. What governments need to do to combat climate change between now and 2030 is abundantly clear and readily achievable.

We live, however, in a political world—one where a chasm often exists between what policymakers should do and what they feel they can do. Interest-group politics, ideology, institutional barriers, and other real-world obstacles frequently get in the way of good policy, particularly when it comes to climate change. Politically and psychologically, climate change is a nightmarish problem. The threat is invisible, complex, slow moving, intergenerational, and difficult to isolate. Success depends on harnessing collective action to massively restructure virtually all aspects of global economic life.

In some countries, such as the United States, climate change threatens strongly held beliefs that some people hold about religion, humanity, and nature, as well as biases against government regulation, international organizations, taxes, and constraints on personal freedom. The corrosive influence of money in politics and the ability of special interests to block changes to the status quo are also complicating factors. Climate action requires politically difficult international cooperation in an age of strong nationalism, fierce economic competition, and weak global institutions.

Heads of government cannot sweep away these political, societal, and institutional constraints overnight. While some climate solutions are politically harder to undertake than others, none are easy, or nations would have taken those steps already. All of the main policy solutions to climate change have the potential to create winners and losers both within and between national economies. Well-financed interest groups that strongly oppose climate action are using all the levers

of power available—including financial contributions to political campaigns and disinformation campaigns—to maintain the status quo.[33] These are formidable obstacles to climate action. Yet world leaders must lead, and they must do so now. As former U.S. Secretary of State Henry Kissinger said, "The task of a leader is to get his [or her] people from where they are to where they have not been."[34]

Leadership on climate change is most essential at the national and local levels. Most of the potential policy solutions to climate change depend primarily on domestic implementation. As a consequence, leaders need to remain focused on delivering domestic action as their top climate priority. Nevertheless, international cooperation and coordination of climate policies is a useful secondary strategy. International efforts can accelerate progress by aligning economic incentives across countries; ensuring a level playing field for international competition; avoiding international carbon leakage; avoiding the pointless shifting of emissions from one country to another to evade climate regulations; and creating useful global norms and standards for other nations to follow. The combination of upcoming high-profile, multilateral summits and the increasing scientific consensus on climate change make the period of time between now and the end of 2015 a key political moment for global climate action.

A blueprint of policy recommendations for leaders

Taking into account both political limitations and the primacy of domestic action, what can leaders do internationally at this key political moment to raise global climate ambition through 2030? The answer, perhaps surprisingly, is quite a lot. Nine challenging but politically feasible actions that world leaders can take together by the end of 2015 are spelled out below.

Set a specific year by which global greenhouse gas emissions will begin to decline

Despite 25 years of global climate diplomacy, nations have yet to articulate a shared vision of how they hope to mitigate carbon emissions in the near term. The international community has not agreed on concrete, measurable global objectives to guide action and create accountability. Although it will not be easy, leaders can fill this void. To understand what is possible at the present time, one must look at the political history of the ongoing effort to define global climate goals.

The international community agreed to work together to "avoid dangerous anthropogenic climate change" in 1992, without defining in scientific or economic terms what that phrase meant.[35] This abstract standard serves as the starting point for international efforts to combat climate change. For more than a decade, nations made virtually no further progress. Then, G-8 leaders agreed in 2009 on a global goal of reducing global emissions by at least 50 percent by 2050 and, as part of this, reducing emissions from developed nations by 80 percent by that date.[36] Major emerging economies—particularly India, China, and Brazil—refused to go along with these goals because those nations feared that the 2050 emissions goals would constrain their economic growth.

After the G-8 failed to reach a global consensus on mitigation goals for 2050, the international community agreed in 2010 to limit warming to no more than 2 degrees Celsius, or 3.6 degrees Fahrenheit.[37] The 2 degrees Celsius target has many shortcomings. First, scientists are not sure what level of emissions would trigger a more than 2 degrees Celsius rise in global temperature. Second, the goal leaves open a wide range of options for when nations should reduce emissions. They could cut emissions steadily or backload reductions in later decades; both are theoretically possible pathways to staying within the 2 degrees Celsius threshold. As nations delay, of course, the risk of overshooting 2 degrees Celsius increases, and the costs of achieving the target will rise. Third, and perhaps most problematically, the end-of-century 2 degrees Celsius goal provides virtually no near-term political accountability, absent interim goals. Today's world leaders will not be alive in 2100 or even decades before that, let alone still in office and subject to public pressure.

The geopolitics associated with forging a new near- or medium-term global emissions goal remain fraught. Until now, many, if not most, major economies have preferred the flexibility and lack of accountability inherent in not having an agreed-upon global emissions target. Developing countries, particularly India, have insisted on a per-capita allocation of any agreed-upon global carbon budget.[38] In contrast, developed nations have favored allocations based on the capacity of nations to reduce emissions cost effectively. These differences remain too great to bridge at this time, which is why leaders are unlikely to set an annual emissions goal for 2050 or a global emissions budget that covers many years, such as 2020 to 2030. To agree on either of these would require working out each country's share of the emissions pie, and that remains too hard for leaders to grapple with at this time.

An **emissions goal** refers to annual emissions in a future year, such as 2050.

In contrast, an **emissions budget** describes cumulative emissions over a specific period, such as between 2020 and 2030.

Instead, leaders should try for something less lofty but still helpful. They should, for example, define 2025 as the year when global emissions should peak and begin to decline, without trying to define either the total global emissions in that year or the rate of decline afterward. Accepting a voluntary, nonbinding global peak year would require neither divvying up national carbon budgets nor forging a global consensus at this time on how fast or for how long emissions in developing nations should grow. Nations would not even need to decide at what level global emissions should peak, giving them flexibility in the near term. Even so, a peak year would help inform future political decisions, provide a modicum of global political accountability in the years ahead, and send a signal today to business about a growing global commitment to climate action.

Reaching agreement on a reasonable peak year may prove easier than veteran climate experts think. Reportedly, China has already concluded that its consumption of coal will peak as early as 2020,[39] and in the context of China's emerging five-year economic plan, it may be preparing to pick a year when its national emissions will begin to decline. Brazil's emissions are already declining—at least for now—as a consequence of massive reductions in deforestation.[40] Emissions in the United States, Europe, and many other industrialized nations are also on the decline.[41] Emissions reductions in all these nations would provide headroom for emissions to continue growing in poorer developing nations, including India, even after a new global peak-emissions year. The math works. While some nations are heading in the wrong direction, enough nations will be heading in the right direction. Soon, we will be able to say that on the whole, humanity has turned things around, albeit later than is ideal.

Capturing this economic reality in a new global political pledge to have global emissions begin to decline by a specific year would help leaders communicate this good news to the general public, as well as provide a yardstick for measuring future progress and holding future policymakers accountable.

Reframe climate action as essential for near-term prosperity

Most leaders are good at explaining things to their people. They create what policy wonks call "political narratives"—straightforward arguments or stories that citizens can understand and support. In many ways, creating these narratives may be the most important thing leaders do. The prevailing political narrative around climate action is entirely wrong—both substantively and politically—and leaders need to use upcoming global gatherings to fix that problem.

For decades, global climate negotiations have been dominated by the idea that climate policies and solutions will be painfully expensive. Climate negotiations were needed to allocate burdens and responsibilities. Forward-leaning governments described climate action as an insurance policy that would prove a wise investment in the long run. Climate action will reduce economic growth now, they said, but it will guard against severe and potentially catastrophic effects later. Scientists were unable to describe precisely where, how, or when these effects would occur. "Sacrifice now, and one day you'll be glad you did, probably" was a miserable campaign slogan.

Ten years ago, the case for climate action became clearer, but the evidence was still not overwhelming for nonexperts. Leading economists demonstrated that the costs of inaction would likely exceed the costs of climate action by a significant factor.[42] Progressive politicians described climate action as necessary and affordable, but this promise of long-term gain proved ineffective at mobilizing widespread support in many nations.

Today, after more than a decade of actual experience with both climate policies and the real effects of climate change, the economic case for climate action has become overwhelming. Simply put, most of the things that nations, companies, and consumers need to do to confront climate change over the next 10 to 15 years are in their own short-term economic self-interest. Smart climate policy is smart economic policy. Many sensible measures to tackle global warming now produce immediate economic and social dividends; others are extremely low cost. Even through 2100, well-designed climate policies would only reduce global economic growth a mere 0.06 percent per year.[43] As economist Paul Krugman has said, this amounts to a trivial rounding error.[44] If virtually decarbonizing the entire global economy by the end of the century costs next to nothing, it makes sense that in its early years—when policymakers can harvest low-hanging fruit, such as improving energy efficiency, and focus on the policies that produce many benefits outside of climate change—climate action promotes economic growth and is thus better than free.

The conclusion that early climate action through 2030 is likely to accelerate economic growth holds up upon closer examination. Energy-efficiency measures more than pay for themselves, while often improving energy security and public health. Wind, solar, and other renewable energy prices have tumbled and are the most economically sensible choice in many situations. This is why renewable energy was responsible for 99 percent of all new energy production in the United States for several months in 2013 and 2014.[45] Germany leads Europe in economic growth[46] and, at the same time, has the most ambitious clean energy policies.[47] Nordic countries reduced fossil-fuel emissions by 9 percent between 1990 and 2011 and increased gross domestic product by 55 percent over the same period.[48] In regions with cheap natural gas, replacing dirty coal-fired power plants increases profits, cuts health care costs, and saves lives. Even carbon taxes and carbon markets spur innovation and create revenue to invest in climate innovation and adaptation.[49] Methane-capture regulations could cost society next to nothing and would barely dent the profits of major oil and gas companies.[50] Alternatives to hydrofluorocarbons are already cost competitive, and their prices will decline further as demand increases.[51] In short, sensible climate policy today is pro-growth: It promotes sustainable development here and now, not just in the long run.

World leaders need to work together to replace the old climate narrative of sacrifice, burden, and uncertainty with a new narrative of opportunity and prosperity. Leaders will have ample opportunity to get this right in the months ahead.[52] At the global level, one place to start would be in the post-2015 global framework for international development, the Sustainable Development Goals. The SDGs are intended to paint a picture of the world we want in 2030. Since we now understand that climate change and global poverty are closely connected, climate action—although not necessarily labeled as such—must be included in all aspects of the SDGs. The SDGs should include concrete targets to double energy-efficiency improvements, double vehicle efficiency, double renewable power production, end deforestation, phase down HFCs, and cut in half deaths and economic losses from disasters, coastal wetland loss, and food waste.[53] Achieving these goals would promote global prosperity, increase energy security, protect the climate, and help eliminate extreme poverty. Increasing the efficiency of coal-fired power plants, for example, can reduce costs for manufacturers and consumers while also saving lives by reducing air pollution.[54] The climate benefits are important but need not be the primary political driver.

Not everything that the world needs to do to solve climate change will produce immediate economic benefits, but a great deal of what is needed by 2030 would, and world leaders must communicate that forcefully.

Announce ambitious domestic emissions-mitigation goals for 2025 or 2030

As explained above, nations have agreed to articulate internationally in 2015 their contributions to global climate action for the period after 2020. Most major economies will announce their climate targets or plans early in the new year, and all major economies are expected to comply by year's end. Leaders must ensure these international pledges are as ambitious as possible while remaining realistic and achievable at home.

Because the international community has already conceded—at the urging of the United States, China, India, and other major economies—that each nation alone must decide its post-2020 emissions-mitigation plan rather than negotiate it internationally, there remains little for world leaders to do collectively on these post-2020 plans other than give each other the confidence to act boldly. Each leader must muster the political will needed to defend at home the new, strong national-level climate measures pledged internationally.

The European Commission has already proposed to its member states that the European Union reduce emissions by 40 percent by 2030 entirely through domestic action.[55] European leaders are expected to approve this goal soon, potentially after some negotiation over related economic policies to satisfy coal states in Eastern Europe, most notably Poland. The Obama administration will probably make its move after the midterm elections in November. Its recently proposed regulations on existing power plants suggest that the Obama administration will have a serious post-2020 plan to offer the international community. China is also working out the details of its post-2020 plan, which may include domestic policies for carbon taxes and carbon markets. China will likely come forward with a relatively ambitious mix of policies in order to avoid becoming the global villain on climate.

Commit to measurable goals for shared international emissions cuts and climate financing

While many nations are finally starting to abate their own greenhouse gas emissions, the international community has yet to get serious about reducing emissions at scale through international partnerships among and between governments. Fixing this problem would make a huge contribution to increasing climate ambition. However, doing so is politically difficult due to the mismatch between climate responsibility and geography.

Most of the financial, technological, and governance capacity to reduce emissions remains in wealthy, developed nations. Yet by some estimates, only about 20 percent of the emissions cuts required globally through 2030 can be accomplished in the developed world, and this type of climate action would require more than 30 percent of total mitigation investment.[56] Most of the lowest-cost mitigation opportunities reside in the developing world. These countries not only have the potential to reduce emissions from deforestation but also to build climate-smart power plants, roads, and cities as they develop. Making new, green energy and agricultural investments in these nations would be far cheaper than retrofitting the already-built industrial economies of developed nations. Developing countries, of course, have fewer resources, inferior technology, and weaker governments than most developed nations.

While all major emerging economies must take responsibility for abating some portion of their climate pollution without international financial assistance, major emerging nations such as China and India will not agree to finance more than their fair share of pollution control simply because their costs are lower than ours.

Leaders in developed nations, including in the United States, who fail to understand this geopolitical reality will commit the world to unnecessarily high climate costs, inadequate climate action, or both. Increasing climate ambition, therefore, will require figuring out by 2020 how to make new international partnerships between developed and developing nations work at scale by 2030. By the end of 2015, world leaders need to take a major step toward overcoming the mismatch between climate responsibility and geography.

Politically, nations remain far apart at the global level on how these sorts of international partnerships between developed and developing countries should be structured and financed. While some countries have had success with bilateral North-South relationships, such as Norway's emissions-reduction partnerships, not many countries have Norway's oil wealth and budget surpluses. Consequently, Norway's preference for straight budgetary outlays may not work in many other nations. Developing nations and emerging economies are demanding some type of economic incentive for doing more than their fair share. Meanwhile, developed nations are looking at their feet, not quite sure what to offer beyond their existing foreign aid. Bridging these differences completely may prove too difficult in the next year or two, even for world leaders. Instead, nations should strive to agree on two specific propositions by the end of 2015.

First, nations should set measureable goals regarding the scale of emissions reductions and climate adaptation sought through all forms of international partnerships combined during the period between 2020 and 2030. For example, they could agree to halve the gap between what science reveals is needed to avoid dangerous climate effects and what nations intend to do by 2030. For accountability and clarity, this goal could be translated in gigatons—or billions of tons—of carbon dioxide needed from international climate action partnerships among developed and developing nations.

Norway's emissions-reduction partnerships

Norway has led the way in forging North-South emissions-reduction partnerships. It has entered into major bilateral agreements with both Brazil and Indonesia to lower emissions in the forest sector. Norway has pledged to help these nations cover the low cost of emissions mitigation, but only if those nations actually meet agreed-upon emissions-reduction targets.

With Norway's help, Brazil has succeeded massively, netting a 75 percent reduction in Amazonian deforestation.[57] Its partnership with Norway was not the only—or even the primary—factor in Brazil's success, but the international results-based financial incentive played a politically important role in galvanizing its action. Now, Brazil is using Norway's money to lock in the environmental and development gains in the Amazon region by funding low-carbon development projects.[58] Norway pays $5 per ton of carbon dioxide, which is a tiny fraction of what it would cost it to reduce emissions by the same amount at home.[59]

In Indonesia, emissions reductions are taking longer to realize through this type of results-based international partnership, which is not surprising given the nation's rampant forest corruption and the systematic reforms needed in its land-tenure system. Yet the promise of international funding has triggered more forest and land reforms in Indonesia than at any previous point in the past 20 years.[60] Since Indonesia has not yet delivered emissions mitigation, Norway has not had to pay—that is the ingenious nature of a truly results-based partnership.

As part of this effort, nations could also agree on what sorts of emissions-reduction actions should count toward this goal—presumably, only actions that are above and beyond the mitigation that developing nations should finance themselves. One measure of this self-financed contribution might be the unconditional emissions-mitigation commitments that developing nations included in their existing pre-2020 national climate plans, as well as similarly unconditional emissions-reduction pledges in the soon-to-come post-2020 national action plans. A clear, internationally agreed-upon goal for additional emissions limits in developing nations beyond these self-financed measures would help the international community think clearly about the scale of cooperation needed through bilateral and multilateral climate action partnerships, investment funds, and policy mechanisms.

Second, after setting a clear goal for jointly financed international emissions reductions, nations should come forward with their own self-determined contributions to achieving this shared goal. The European Union, for example, could pledge to conclude international partnerships with developing nations that would reduce an additional one or two gigatons of carbon dioxide per year. Europe would have the flexibility to implement this political commitment through whatever combination of policies work best for it. It might, for example, choose to achieve a portion of this goal through European carbon markets. Some EU nations also may choose to follow Norway's example by creating results-based bilateral agreements with developing nations, both in the forest sector and otherwise. Some countries may wish to contribute to a multilateral mitigation fund, such as the new Green Climate Fund. This decentralized but coordinated international approach could raise ambition and provide flexibility for each country to do what it can without requiring every country to join every effort or creating incentives for nations to block progress in areas where they cannot take action themselves.

Moreover, nations could adapt their approaches over time. For example, the international community is currently working to develop a market-based approach for reducing emissions from international aviation.[61] Nations might decide in a few years to use a portion of the revenue from that new system to finance additional international mitigation in developing nations. When the time is right, they could also reform and augment existing international development institutions, such as the World Bank, to provide the resources needed to make sure that all internationally financed energy projects are climate friendly. Reforming the World Bank would take years and would require additional capital contributions from donor nations in the years ahead.

While designing the right approach could take years to figure out, leaders should get the ball rolling now. The first step should be to socialize the political norm that all major economies should come forward with both their domestic emissions-reduction contributions and their international mitigation and adaptation contributions by the end of 2015. No major economy, particularly no advanced industrial economy, should be considered a climate leader without ambitious domestic and international climate action plans. Developing nations, for their part, need to distinguish clearly between what actions they will take unilaterally and those that will require international financial support. By structuring their climate pledges this way, developing nations could incentivize developed nations to muster new financial resources in a global results-based framework.

Value carbon in all major economies by 2020

Economists generally agree that carbon markets and carbon taxes—different but related methods of making carbon polluters pay for the harm they cause—represent by far the most economically efficient climate policies. By the end of 2015, almost 3 billion people—representing roughly half of global GDP—will live in places that set a value on carbon.[62] However, more countries need to adopt these policies, and carbon prices everywhere need to be higher.

Despite growing support for carbon-valuation policies, heads of government are highly unlikely to commit on the world stage to major new carbon-pricing policies before the end of 2015. Decisions to value carbon represent a major change in fiscal policy, and few heads of government will decide this at the global level without securing domestic support in advance. Many countries, such as Japan and Australia, are moving away from carbon pricing.[63] Even when nations or regions do adopt domestic carbon-valuation policies, they tend to do so on their own political terms rather than collectively at the global level. This is certainly true for carbon markets, for example.[64] Politically, nations wish to set the rules of the road to ensure that carbon prices are not too high or too low.

There is also the question of international equity. Developing nations argue vehemently, perhaps with good reason, that carbon values in wealthy nations should be far higher than those in poor nations. They note that most people in India, for example, cannot afford to pay as much as citizens in Europe to protect the global environment. Whether differential carbon prices make sense economically is beside the point politically. For these reasons, the idea that world leaders might agree at the global level now to adopt a common approach to carbon taxes or carbon markets seems politically naive.

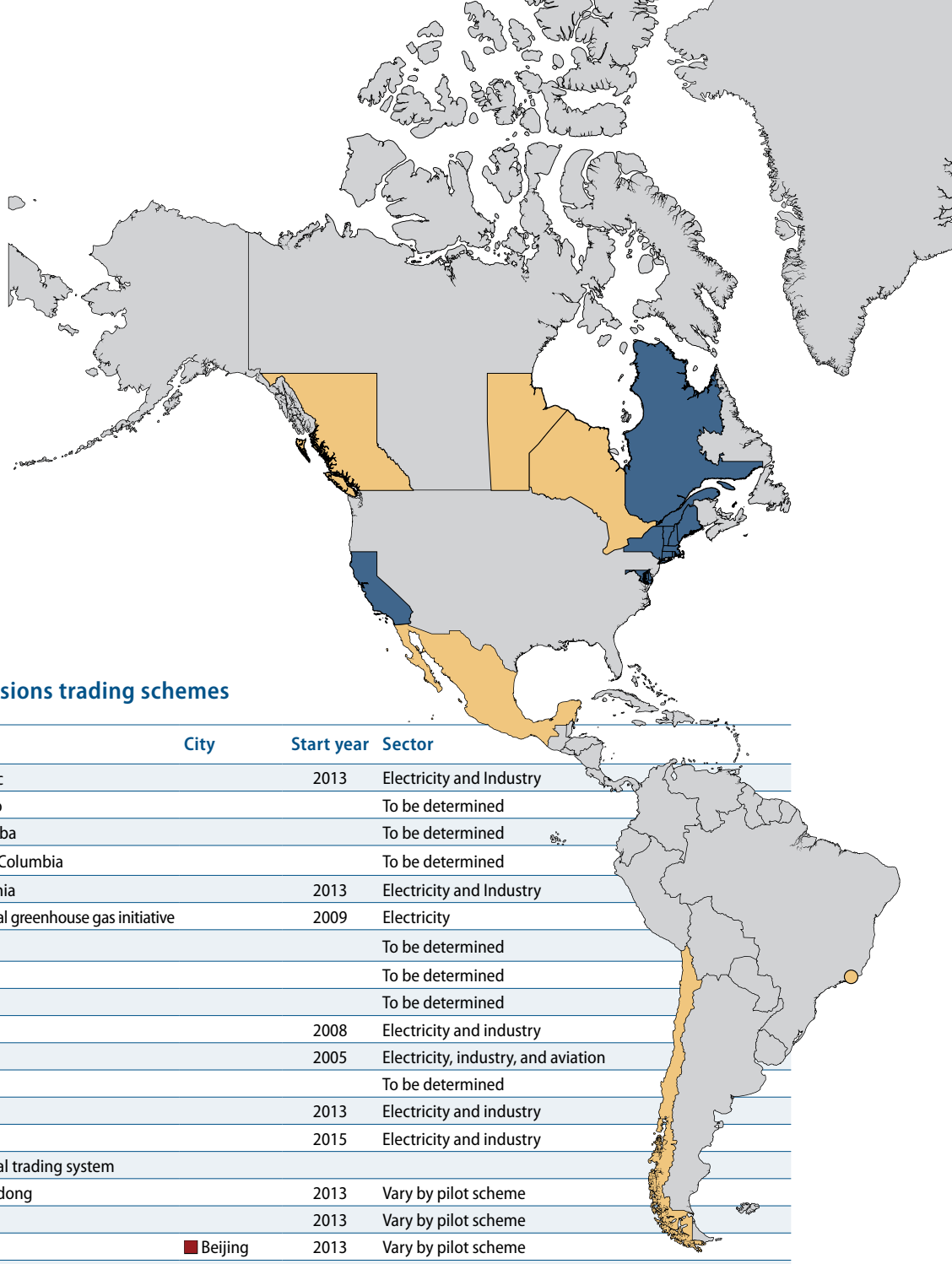


FIGURE 2

Current and proposed emissions trading schemes

Country	Region	City	Start year	Sector
Canada	Quebec		2013	Electricity and Industry
	Ontario			To be determined
	Manitoba			To be determined
	British Columbia			To be determined
United States	California		2013	Electricity and Industry
	Regional greenhouse gas initiative		2009	Electricity
Mexico				To be determined
Chile				To be determined
Brazil				To be determined
Switzerland			2008	Electricity and industry
European Economic Area			2005	Electricity, industry, and aviation
Ukraine				To be determined
Kazakhstan			2013	Electricity and industry
Korea			2015	Electricity and industry
China	National trading system			
	Guangdong		2013	Vary by pilot scheme
	Hubei		2013	Vary by pilot scheme
		Beijing	2013	Vary by pilot scheme
		Tianjin	2013	Vary by pilot scheme
		Shanghai	2013	Vary by pilot scheme
		Chongqing	2013	Vary by pilot scheme
		Shenzhen	2013	Vary by pilot scheme
Japan		Tokyo	2010	Commercial buildings and industry
		Saitama	2011	Commercial buildings and industry
New Zealand			2008	Electricity, industry, waste, forestry, transport fuels, and domestic aviation

Source: Organisation for Economic Co-operation and Development and International Energy Agency, "Current and proposed emissions trading schemes," available at http://visual.ly/current-and-proposed-emissions-trading-schemes (last accessed July 2014).


In place
Implementation scheduled
Under consideration

Yet there remains room for optimism on carbon pricing. Carbon valuation is spreading around the world and will soon cover roughly half of the global economy, as noted in Figure 2. Whereas the European Union had the only large-scale national market a decade ago, national or regional carbon markets are now taking root in Chile, Kazakhstan, Mexico, South Korea, and Vietnam, as well as in major economic regions in Brazil; the Canadian provinces of Québec, Ontario, Manitoba, and British Columbia; China; and California and the northeastern region of the United States. Carbon taxes are also spreading. They are currently in place in Denmark, the Netherlands, Finland, Japan, Sweden, Norway, New Zealand, Switzerland, Costa Rica, and South Africa, as well as in Rio de Janeiro. China could have a national carbon tax in place after 2015.

Many, if not most, serious political and business leaders around the world support reasonable carbon values. As far back as 2005, the heads of 24 of the world's largest global companies—acting through the World Economic Forum—called on governments to adopt carbon polices.[65] Many similar statements from other business groups have followed since.[66] By the end of 2014, more than 100 major companies and 50 national and local governments are likely to issue a joint call for global carbon pricing.[67]

Broadening and deepening commitments to carbon valuation is essential to climate success, and leaders should find common ground on carbon valuation when they gather over the next few months. World leaders—or some critical mass of them—could agree, for example, to a nonbinding political statement that:

1. Notes with satisfaction that carbon-valuation policies are taking root around the world
2. Commits their nations to increase carbon-valuation policies in specific ways over time
3. Encourages all major economies to implement national carbon-valuation policies by no later than 2020
4. Creates a joint task force within the International Monetary Fund, or IMF, and the World Bank for sharing best practices on carbon-valuation policies

Investors and companies would see such a statement as additional evidence that carbon taxes and markets are here to stay and will grow over time. A statement of this sort would also avoid several pitfalls. Nations would retain total control over how to value carbon, including at what price. They would not all have to commit to the same policies. Additionally, the statement would not require nations to coordinate, harmonize, or link their carbon policies internationally at this stage.

The political significance and thus feasibility of such a statement depends almost entirely on the views of the world's two largest climate polluters: China and the United States. When these nations agree on new climate principles, their approach usually takes root across the globe.[68] Perhaps surprisingly, China and the United States might agree to a carbon-valuation statement by the end of 2015.

China is already moving ahead with carbon policies at both the national and local levels and has announced that it might implement a national carbon tax in the near future.[69] China currently has the largest internationally facing carbon market in the developing world, which has provided more than 50 percent of the carbon assets sold to Europe and other developed nations since 2005.[70] Building on this international success, China has launched a variety of local domestic carbon-market programs, with the goal of piloting a national carbon-emissions-trading system later. China's domestic carbon markets already covers around 100 million people, making them a genuine and serious preparation for the new national program to come.[71] The proposed world leader's statement on carbon pricing would be fully consistent with existing Chinese policy. Admittedly, China sometimes opposes international climate declarations for geopolitical or ideological reasons—even when they are consistent with China's domestic plans—so one should not assume China's consent. Yet a carbon-valuation statement at the global level might appeal to China as a way to showcase its climate leadership internationally without requiring new domestic policies.

Securing U.S. support would be more challenging but might still prove feasible. The United States has adopted neither a national carbon tax nor a national carbon market and is unlikely to do so before President Barack Obama leaves office, given opposition in the Republican-controlled House of Representatives. While California and the northeastern states have regional carbon markets, the United States would not commit internationally to carbon policies on that basis alone—past experience confirms that the United States would need to show implementation capacity at the national level.

Yet some federal policies already value carbon at the national level. The Obama administration has calculated a social cost of carbon and uses this figure when making administrative and regulatory decisions.[72] In other words, the social cost of carbon is already included in the latest round of decisions on U.S. pollution controls promulgated by the Obama administration. Plus, proposed U.S. regulations that limit climate pollution from new power plants and forthcoming standards to reduce emissions from existing power plants create what economists call an implied value, or shadow price, for carbon.[73] Other nations could consider these shadow prices

as examples of carbon valuation. Also, President Obama has consistently called on Congress to adopt a comprehensive national climate law that creates an explicit price for carbon. Stating that all major economies should value carbon by 2020 would be fully consistent with the president's existing policies. For all these reasons, getting the Obama administration on board may not be an insurmountable obstacle.

Any efforts to secure U.S. participation in a pro-carbon-valuation leaders' statement should take into account the upcoming U.S. midterm elections in November. The administration will not take any international position on climate change that could harm Democratic Party candidates for public office when control of the U.S. Senate seems to be at stake, as it does this year. Yet a nonbinding international pledge that merely restates existing U.S. policy would be highly unlikely to become a political piñata domestically if it were crafted carefully. Republicans who oppose climate action will campaign against new Environmental Protection Agency, or EPA, carbon regulations, not international communiqués, because voters understand the potential impact of regulations more than those of diplomacy. Yet if the Obama administration insists, a leaders' statement that favors carbon valuation could come after the midterm election in late 2014 or 2015.

Any U.S.-China agreement on carbon valuation would not translate immediately into a global consensus. Some other nations, such as India or even Brazil, might not support a leaders' communiqué calling for domestic carbon-valuation policies. But India has a new government under Prime Minister Narendra Modi, and his administration has yet to put forth a new climate policy. Additionally, Brazil has national elections soon, and climate action is quite popular with voters.[74] Even if other major emerging economies may not join a U.S.-China agreement on carbon valuation, dozens of other nations in Europe, Asia, and the Americas—including Mexico—would do so given their existing policies.

Create global forest goals backed by strong economic incentives

Forests play a vital role in safeguarding the Earth's climate by naturally sequestering carbon. More than 1.6 billion people also depend on forests for their food, water, homes, traditional cultures, and livelihoods.[75] Yet an average of 13 million hectares of forest disappear each year—an area the size of Greece or Costa Rica. Agricultural development—primarily the production of commodities such as soy, palm, beef, and paper—accounts for roughly half of global deforestation.[76]

Reducing deforestation and restoring degraded forests represent the largest, most cost-effective climate solutions available over the next two decades. In fact, the most recent estimates suggest that halting deforestation, restoring degraded forests, and reducing unnecessary emissions from agriculture would provide 40 percent of the emissions reductions the world needs by 2030.[77] Brazil has already proven the merits of this strategy by reducing deforestation emissions from its Amazon region by more than 75 percent in the past decade, while at the same time increasing regional agricultural production and rural incomes.[78]

Ending tropical deforestation, much of which is illegal under domestic law in developing nations but continues because of corruption or weak governance,[79] would have many other benefits, including fighting corruption; stewarding natural resource wealth; maintaining freshwater resources; safeguarding hydrological patterns for drinking water and agriculture; protecting forest-dwelling communities, cultures, and traditional livelihoods; and conserving priceless ecosystems and wildlife. In coastal areas, mangrove forests and wetlands buffer communities from storm surges and absorb floodwaters, filter pollution from waterways, and provide nursery habitat for fish and shellfish species, in addition to storing remarkable quantities of carbon.[80] Moreover, restoring lost or degraded coastal and inland forests is the only large-scale and cost-effective technology available to take carbon out of the atmosphere. The potential for forest restoration on a planetary scale is enormous, and given the multitude of benefits, leaders need to commit to tangible benchmarks for progress.

Because more than half of global deforestation comes from trade in just four commodities—soy, palm, beef, and paper[81]—eliminating deforestation from business supply chains is key to success. Fortunately, major consumer-goods companies, commodity traders and producers, and banks are leading the way. The Consumer Goods Forum, or CGF—a global coalition of 400 consumer-facing companies with combined annual sales in excess of 2.5 trillion euros that works across 40 countries—has pledged to eliminate deforestation from its supply chains by 2020.[82] Unilever, Kellogg's, and Nestlé are among the consumer companies leading this effort with company-specific pledges. Commodity traders, producers, and banks are responding to their corporate customers. Wilmar International—the world's largest trader in palm oil, the commodity most associated with deforestation in Indonesia and Southeast Asia—has stopped buying commodities grown on recently deforested land.[83] Banks such as BNP Paribas and Barclays are creating financial instruments to incentivize deforestation-free commodity investments and trade.[84]

Government leaders need to build on this momentum from the private sector. In 2013, the international community finalized in global climate talks the accounting rules for reducing emissions from forests. What the world needs now is the political will to address deforestation. World leaders should finalize ambitious forest goals and create strong financial incentives through climate and trade policy. Specifically, leaders should agree to:

- Eliminate deforestation and forest degradation from the production and trade of agricultural commodities by 2020 in partnership with consumer-goods companies and others in the private sector
- Restore 300 million hectares of environmentally degraded forests and landscapes by 2030[85]
- Include ambitious forest targets in new global SDGs by 2015
- Create strong, large-scale economic incentives to reduce deforestation and increase forest restoration, including through a new global climate agreement, by the end of 2015

Amend the Montreal Protocol to phase down HFCs

Nations need to agree to phase down the production and consumption of HFCs—highly potent greenhouse gases used in residential and mobile refrigeration, commercial and residential air conditioning, and some types of foam insulation. Rapidly phasing down HFCs would reduce global warming by as much as 0.5 degrees Celsius by the end of the century. In addition, an HFC phasedown would catalyze significant cost-saving energy-efficiency gains in air-conditioning and refrigeration systems, in the range of 30 percent to 60 percent, as well as significantly reduce carbon dioxide emissions from those sources.[86]

Leaders should insist on completing an amendment to the Montreal Protocol—a global agreement concluded in the late 1980s to phase out the production and use of ozone-depleting chemicals—by the end of 2015 to ensure the rapid phasedown of HFCs. Virtually all nations agree on the need to phase down HFCs. The G-20, for example, agreed to that goal in 2013, following bilateral agreements to cooperate on HFCs between the United States and China and, later, the United States and India.[87] Unfortunately, that agreement has yet to translate into a global consensus on using the Montreal Protocol as the means for action.

The Montreal Protocol is perhaps the most successful global environmental agreement to date and the only U.N. treaty that enjoys universal ratification. Not only have nations worked together to almost fully repair the Earth's ozone layer at low cost, but the climate benefits of eliminating those chemicals also exceed the results achieved during the first phase—from 2008 to 2012—of the Kyoto Protocol by fivefold.[88] One of the keys to the Montreal Protocol's success is a companion fund that enables developed nations to help poorer nations cover the costs of switching to safer chemicals. Without this support, developing nations would not have agreed to or implemented the chemical regulations in the Montreal Protocol.

To a degree, the HFC problem is a side effect of the Montreal Protocol's success. Global use of HFCs skyrocketed when they became the preferred alternative to more harmful ozone-depleting substances that were phased out through the Montreal Protocol. Switching to HFCs was desirable at the time since the original chemicals were far worse and since completely climate-safe alternatives did not exist or were not affordable. Today, far more climate-friendly and affordable alternatives do exist. Using the Montreal Protocol now to finish the transition from harmful substances to safe alternatives makes tremendous sense.

A broad international consensus exists for amending the Montreal Protocol to phase down HFCs. More than 25 countries plus the European Union have endorsed this approach explicitly, and many others are prepared to go along.[89] Among major nations, India has been the most adamantly opposed to using the Montreal Protocol to conclude the near-term phasedown of HFCs. India cites a mix of reasonable economic and unreasonable ideological objections.[90] World leaders need to work with Indian Prime Minister Modi to assemble an economic package that helps India conclude a strong agreement on the phasedown. This plan needs to include political assurances and joint ventures to convince India that it will be able to manufacture and use HFC alternatives affordably, as well as technical assistance and financial support under the Montreal Protocol financing arm. Ideally, Prime Minister Modi would agree to a Montreal Protocol HFC amendment later this year, potentially at Secretary-General Ban's climate summit in September. If not, the next opportunity would be at the annual meeting of the Montreal Protocol in November. Leaders need to make sure that progress on an HFC phasedown under the Montreal Protocol occurs as soon as possible and that a concluded HFC phasedown amendment is enacted no later than 2015.

Set ambitious energy-efficiency goals through 2030

Nearly half of the emissions reductions needed from the global energy sector in the next decade could come from energy-efficiency mandates that would actually accelerate economic growth and produce other social benefits, such as reducing local air pollution.[91] Regulations that require more-efficient vehicles,[92] buildings, lighting, and appliances, for example, would save consumers billions of dollars while lowering climate pollution.[93] These regulations and standards are primarily adopted and implemented by nations at a national or regional level, but leaders can help speed the adoption of strong energy-efficiency mandates and technologies by setting global goals for progress.

In the power sector, U.N. Secretary-General Ban has led this effort through his Sustainable Energy for All initiative, which aims to double energy-efficiency improvements globally by 2030, among other important goals.[94] The Global Fuel Economy Initiative, a partnership between the United Nations, the International Energy Agency, and civil society, has advanced the objective of doubling global fuel economy in new vehicles by 2030.[95] World leaders need to embrace and elevate these goals by making them a formal part of the global development framework that nations intend to conclude in 2015.

Foreign and finance ministers from the United States and China promised in July to move forward on new vehicle-efficiency standards for passenger vehicles and trucks in their respective countries.[96] Agreements such as these underscore the potential for agreement and action. Creating a global consensus to accelerate vehicle efficiency would involve setting benchmarks for coordinated domestic action and increasing and aligning international assistance to promote energy-efficiency policies, all of which would send a strong signal to the private sector about future demand for energy-efficient products.

Conclude a strong new global climate agreement

Finally, the world needs a strong new global climate agreement. The existing agreements—the U.N. Framework Convention on Climate Change and the Kyoto Protocol—are anachronistic, at least as interpreted. They divide the world into developed and developing countries based on the world that existed in 1992, with the expectations for action falling almost solely on developed nations even though developing nations now emit 60 percent of climate pollution.[97]

Existing climate agreements also do not create enough transparency about the policies that nations intend to pursue at home to meet their international pledges. Only developed nations are required to disclose relevant information fully and to participate in international consultations about the adequacy or effectiveness of their actions, and no nations are required to demonstrate in real time that they have a credible mix of policies in place to meet their stated pledges.

Leaders have the chance to fix these shortcomings at the final negotiating session for the anticipated new U.N. climate agreement, which will take place in Paris, France, in late 2015. The Paris agreement should require all nations to put forward ambitious but achievable national climate plans and all major economies to adopt measurable climate goals backed by domestic policies that are legally binding. Through this new agreement, nations should agree to participate in technical and political discussions about the adequacy and equity of their pledges, as well as the overall effectiveness of their climate action plans. A strong and sensible climate agreement would considerably improve international transparency, trust, and accountability.

But even a strong new climate agreement along these lines must not become a substitute for either domestic action or the other global forms of international climate cooperation identified previously. In the short run, a new climate agreement will not convince China, the United States, and other major economies to mitigate emissions faster. They will have decided on their climate policies through 2030 well in advance of Paris. Domestic politics will exert a far stronger pull on that decision than any international agreement. A new climate agreement would not convince the U.S. Congress, for example, to adopt a comprehensive climate law. Nor would a new global climate agreement create strong global institutions capable of forcing nations to honor climate pledges once they are made. As in other areas of international relations, the making and breaking of international commitments will remain a largely political question even when those pledges are part of a global agreement governed by international law.

However, there may be a way forward, as nations have yet to determine whether the new Paris agreement will be legally binding under international law. Nations could make the procedural elements of the new climate agreement—such as the obligation to file reports and participate in international consultations—legally binding, while leaving the substantive elements—including the all-important emissions-mitigation pledges—nonbinding at the international level but with assurances they would be binding under domestic law. This approach would bridge the difference between Europe on one hand—which favors a strong internationally legally binding

agreement in the mold of the Kyoto Protocol, in which all mitigation targets were firm obligations under international law for the nations that had them—and major emerging economies on the other hand—which support internationally legally binding obligations for developed nations but not for themselves. Under this compromise, European nations and climate advocates could celebrate an international agreement that has many internationally legally binding elements, while China, India, Brazil, and other emerging economies could take comfort in the fact that their mitigation pledges are not legally binding under international law. The compromise might also suit the Obama administration, which insists that the United States will only accept internationally legally binding obligations that apply to China and India too. This plan would maintain the symmetry the United States insists upon without necessarily causing major emerging economies to balk.

Moreover, a new climate agreement with procedural obligations and nonbinding substantive pledges would probably not require congressional approval as a matter of U.S. law because the president could implement the agreement under his existing legal authority.[98] President Obama would not need to designate the agreement as a treaty, which would require the advice and consent of the Senate. If he had to seek approval from the Senate, he might fail to secure the two-thirds supermajority required by the U.S. Constitution for treaties, given the partisan divide on climate change. Other nations are likely to see merit in an approach that allows the United States to join the new climate agreement, since the U.S. rejection of the Kyoto Protocol a decade ago severely hampered its success. Perhaps that fact alone makes this sort of compromise quite sensible.

The alternative might be an agreement that has no internationally legally binding elements and instead merely political pledges. The United States has brought this option to the attention of other countries without endorsing it.[99] That outcome, though acceptable to major emerging economies and probably to the United States, would be hard for vulnerable nations, European climate leaders, and nongovernmental advocates to stomach. For this reason, the compromise presented above—a binding process with nonbinding substance—provides a way forward if China and India—and therefore also the United States—are unfortunately unwilling to be bound internationally by their own emissions-mitigation plans.

Conclusion

World leaders will soon set a new course for global climate action. It is clear what the world needs to accomplish on climate change prior to 2030 and which policies are required for success. Implementing these policies, though politically challenging, would not only place the world on a path to keep global temperature increases below 2 degrees Celsius, but it would also simultaneously promote economic growth, enhance energy security, improve public health, protect the world's forests, and bring about many other benefits.

Most of what world leaders need to deliver globally on climate change by 2030 will require domestic political will and domestic policy, but pragmatic global cooperation can play a helpful role as well. At the global level, leaders should use the numerous summits and conferences that lie before them in late 2014 through 2015 to create conditions for success at home. Although they cannot sweep aside the very real political constraints they face, numerous opportunities for progress exist.

It is time for world leaders to live up to their titles. The nine concrete policy recommendations presented in this report offer an ambitious yet politically realistic path forward for international climate cooperation now. By following through on these suggestions, world leaders can make practical down payments toward the policies nations need to achieve low-carbon economic growth and a secure, prosperous, and just future for generations to come.

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