



SASAKAWA USA

Forum Issue № 1

Climate Politics in Japan

The impacts of public opinion, bureaucratic rivalries, and interest groups on Japan's environmental agenda

Ken Sofer

Senior Policy Advisor

Center for American Progress

Abstract

The 2015 Paris climate agreement was a significant achievement in international efforts against climate change, but the agreement's success will depend heavily on the domestic politics of major emitters such as Japan and the United States. As the agreement enters the implementation phase, it is crucial for U.S. policymakers to understand the roles, interests, and relative power of the numerous political actors in Japan's climate policy process. This report examines the role of public opinion, a bureaucratized decision-making process, and the balance of power between interest groups in the formulation of Japan's climate and energy goals, and how these forces both complicate and provide opportunities for greater U.S.-Japanese collaboration to combat climate change.

It's been nearly twenty years since Japan was at the center of the international climate debate. In 1997, the world gathered in Kyoto to sign the first legally binding treaty to reduce greenhouse gas emissions—an effort that ultimately failed, in part because the United States and Japan, at the time two of the world's four biggest greenhouse gas emitters, didn't live up to their international commitments.

Two decades later, Japan and the United States remain two of the most important international actors on climate change mitigation. The two countries account for 18.5 percent of total global carbon dioxide emissions and are among the top 25 nations in carbon dioxide emissions per capita.¹ Today, as in 1997, coordinated U.S. and Japanese leadership on climate change is crucial to achieving the internationally agreed-upon goal of limiting global temperature rise to 2 degrees Celsius.

But this leadership at the global level depends greatly on the turbulence of national and, sometimes, even local politics in each country. While domestic politics has always been a factor underlying previous international climate negotiations, the structure of the Paris climate agreement, negotiated in December 2015, creates a bottom-up approach that gives domestic politics an even greater role in shaping global mitigation efforts.

For U.S. and international policymakers who support an ambitious climate mitigation agenda, understanding the domestic political forces that influence, shape, and veto each country's climate agenda is now more important than ever. Particularly in a large democracy such as Japan, with 127 million people, 47 prefectures, 2 of the 12 largest metropolitan areas in the world, and a wide range of constituencies and interest groups all voicing their opinions, the decision-making process is just as important as the final policy it produces.

Japan's national climate change agenda is a direct product of the government's unique policy process, which includes:

- **Public opinion** that emphasizes energy security and economic growth
- **Bureaucratized decision-making** that currently lacks strong input from the parliament or the prime minister
- **Consensus-based decision-making** and **balance of power among interest groups** that favor the priorities of heavy industry.

As a result of these forces, Japan's contribution to international mitigation efforts:

- Focuses on **demand-side emissions reductions** over supply-side reforms
- Invests in policies that only **marginally change the economic equation** for businesses and consumers
- **Does not incorporate adaptation** into the national climate conversation

¹ "CO2 Time Series 1990-2014 per Region/country." Emission Database for Global Atmospheric Research. Accessed February 17, 2016. <http://edgar.jrc.ec.europa.eu/overview.php?v=CO2ts1990-2014>.
 "CO2 time series 1990-2014 per capita for world countries." Emissions Database for Global Atmospheric Research. Accessed February 17, 2016, http://edgar.jrc.ec.europa.eu/overview.php?v=CO2ts_pc1990-2014&sort=des9.

- **Emphasizes the role of low- and middle-income countries** over the contributions of economically developed countries, like Japan.

These domestic political factors will continue to shape Japan's future climate agenda, particularly as the emissions targets and energy portfolio are reviewed every five years. But additional factors, such as the national energy liberalization effort, the role of local actors such as the Tokyo Metropolitan Government, and the feasibility of the nuclear energy target will further shape Japan's climate policy moving forward. Understanding how these forces interact is crucial to U.S. policymakers' understanding of the politics of climate change in Japan.

The Paris Climate Agreement and Japan's Contribution

The increased importance of domestic politics in international climate change is a product of the way the Paris climate agreement was structured. The 1997 Kyoto Protocol—Paris's predecessor—was a legally binding, international treaty that obligated industrialized countries to reduce their greenhouse gas emissions by 5 percent from 1990 levels by 2012.² Opponents of the agreement criticized the legally binding nature of the treaty, the one-size-fits-all approach to emissions reductions, and the omission of high-emitting, developing countries, such as China and India. Japan, though the host country of the final agreement and, at the time, a key international climate leader, later declined to participate in the second phase of the treaty, citing the need for a more bottom-up approach to emissions reductions and the inclusion of all major emitters, regardless of economic status.³

In the years leading up to the United Nations Climate Change Conference of the Parties in Paris, a new approach was crafted that reflected the legal and logistical realities that limited the Kyoto Protocol's success. Instead of a uniform emissions reduction target negotiated at the international level and implemented at the national level, each country would submit their own individual emissions reduction plan every five years in the form of Intended Nationally Determined Contributions (INDCs). Taken together, these INDCs would form the global emissions reduction target. All countries, from the most economically advanced countries, like the United States and Japan, to low- and middle-income countries, like China and India, would put forward INDCs. The scale, scope,

² "Kyoto Protocol." United Nations Framework Convention on Climate Change. Accessed February 28, 2016. http://unfccc.int/kyoto_protocol/items/2830.php.

³ "Japan's position regarding the Kyoto Protocol." Ministry of Foreign Affairs of Japan. December 2010. http://www.mofa.go.jp/policy/environment/warm/cop/kp_pos_1012.html.

strategy, and level of ambition for emissions reductions would be put entirely in the hands of individual countries, giving domestic political actors more influence than ever before.

The combined INDCs pledged at Paris are expected to cover 30–44 percent of the total emissions reductions needed to remain below the 2 degrees Celsius goal.⁴ For its part, Japan pledged to reduce greenhouse gases by 26 percent below 2013 levels, by 2030⁵—a 16 percent reduction from 1990 levels and a 25 percent reduction from 2005 levels. Japan used 2013 as its base year, in part because that was a year of high emissions for Japan, much in the same way the United States used 2005 as its high-emissions base year. The reduction target is based largely on expected improvements in energy efficiency in the commercial, residential, and transport sectors, with additional contributions through improvements in land use and forestry, use of a Joint Crediting Mechanism to account for Japan’s contributions to emission reductions in low- and middle-income countries, and an improved energy supply mix.

Some members of the domestic and international climate community criticized Japan’s INDCs as underwhelming, given that they represented a step back from its 2009 pledge at the Copenhagen climate conference and did not match the commitments made by other industrialized countries.⁶ Based, in part, on Japan’s unambitious INDCs, Climate Action Network Europe ranked Japan fifty-eighth out of sixty-one countries on its annual Climate Change Performance Index and second to last among Organization for Economic Cooperation and Development (OECD) member countries.⁷

⁴ Kitous, Alban, and Kimon Keramidias. *Analysis of Scenarios Integrating the INDCs*. Policy brief no. JRC97845. October 2015. <https://ec.europa.eu/jrc/sites/default/files/JRC97845.pdf>.

⁵ “Submission of Japan’s Intended Nationally Determined Contribution (INDC).” United Nations Framework Convention on Climate Change. July 16, 2015. [http://www4.unfccc.int/submissions/INDC/PublishedDocuments/Japan/1/20150717_Japan's INDC.pdf](http://www4.unfccc.int/submissions/INDC/PublishedDocuments/Japan/1/20150717_Japan's%20INDC.pdf).

⁶ Asaoka, Mie. “Japan’s INDC Draft is Neither Ambitious nor Fair.” Press Release, June 2, 2015. Kiko Network. <http://www.kikonet.org/eng/press-release-en/2015-06-07/japans-indc-draft-is-neither-ambitious-nor-fair>

Kobayashi, Hikaru. “Japan on the Trailing Edge of Global Climate Action.” Nippon.com. September 11, 2015. <http://www.nippon.com/en/currents/d00191/>

Embassy of Japan in Germany. “Note Verbale.” United Nations Framework Convention on Climate Change. January 26, 2010.

https://unfccc.int/files/meetings/cop_15/copenhagen_accord/application/pdf/japanphaccord_app1.pdf.

⁷ Burck, Jan, Franziska Marten, and Christoph Bals. “The Climate Change Performance Index: Results 2016.” Climate Action Network Europe. December 8, 2015. <http://www.caneurope.org/docman/position-papers-and-research/un-climate-negotiations-2/2813-ccpi-2016-results-emborgoed/file>.

Shifting Public Opinion: From Climate Change to Energy Security

Japanese public opinion on climate change is full of contradictions. On one hand, 83 percent of Japanese citizens support limiting greenhouse gases as part of an international climate agreement—14 points higher than the United States and near the top of all industrialized countries—according to a 2015 Pew Research Center poll.⁸ But on the other hand, that same poll showed only 45 percent of the Japanese public believes climate change is a very serious problem, a 13-point decline since 2010.⁹ Furthermore, only half of the country believes major lifestyle changes will be necessary to reduce the effects of climate change—14 percentage points lower than the global average and 13 points lower than the United States—which appears to indicate that, though the Japanese public may want to act on climate, it is unwilling to take the actions most scientists and policymakers believe are necessary to match the scale of the challenge.¹⁰

Fukushima's Impact

The de-prioritization of climate change in Japanese public opinion is largely the product of the Fukushima nuclear disaster. In March 2011, Japan was hit with the triple disaster of a 9.0 earthquake in Tohoku, a tsunami that hit Japan's east coast, and a level 7 meltdown at the Fukushima Daiichi Nuclear Power Plant, which killed 16,000 people, contaminated local water supplies, and left millions without electricity.

The Fukushima disaster affected both political and public support for an ambitious Japanese climate policy by shifting priorities away from addressing climate change and towards securing a safe, stable energy supply. Public opposition to nuclear energy became one of the most salient issues in Japanese politics. Nuclear energy made up 29 percent of Japan's electricity generation in 2010,¹¹ but all nuclear reactors were shut down following the disaster. 59 percent of the public opposed restarting the reactors in a

⁸ Stokes, Bruce, Richard Wike, and Jill Carle. "Global Concern about Climate Change, Broad Support for Limiting Emissions." Pew Research Center. November 5, 2015. <http://www.pewglobal.org/files/2015/11/Pew-Research-Center-Climate-Change-Report-FINAL-November-5-2015.pdf>.

⁹ Ibid.

¹⁰ Ibid.

¹¹ "Energy Mix in Japan – before and after Fukushima." National Bureau of Asian Research. 2013. http://www.nbr.org/downloads/pdfs/eta/PES_2013_handout_kihara.pdf.

2014 poll,¹² and as a result, Japan's energy mix has increasingly relied on more carbon-intensive sources to fill the gap left by nuclear.

Concerns about Japanese energy security have also increased because nuclear was one of the only domestically produced sources of energy. With the increase in natural gas, coal, and oil use, Japan is now dependent on foreign imports for 94 percent of its fossil fuels, the vast majority from the Middle East or Russia.¹³

Electoral Repercussions

The Fukushima disaster and the shift in Japanese public opinion had major electoral consequences, as well. When the Democratic Party of Japan (DPJ) and then-Prime Minister Yukio Hatoyama came into power in 2009, they pledged to triple Japan's emissions reduction target, an ambitious display of climate leadership from the new prime minister.¹⁴ But after three tumultuous and ineffective years that included three different prime ministers, the DPJ failed to deliver on its environmentally ambitious agenda.

In the 2012 elections, the DPJ was swept out of power, losing roughly 75 percent of its seats in the Diet.¹⁵ The election brought the center-right Liberal Democratic Party (LDP) and former Prime Minister Shinzo Abe back into office on an economy-focused agenda. Although, as noted earlier, the Diet and prime minister do not play major roles in Japan's climate policy, the Abe government's prioritization of economic growth, above all other issues, has created a mindset among many in Japan that any action on climate change mitigation inherently requires an economic tradeoff. As one energy expert stated on the issue, "If you give [Japanese citizens] the choice [between acting on climate change and economic growth], they will choose economic growth."¹⁶

Equally as important as the change in power between political parties was the shift in power within the LDP. Prior to the 2011 disaster and the 2012 election, there were a number of LDP members engaged in climate policy and actively promoting a more ambitious party platform, but many of those members either lost their seats or have since

¹² "ASAHI POLL: 59% Oppose Restart of Nuclear Reactors." *Asahi Shimbun*. March 18, 2014. <https://ajw.asahi.com/article/0311disaster/fukushima/AJ201403180058>.

¹³ Toyoda, Masakazu. "Energy Challenges and Policies for Japan in the Dramatically Changing Energy Landscape." Institute for Energy Economics Japan. January 2016.

¹⁴ "Japan Vows Big Climate Change Cut." BBC News. September 7, 2009. <http://news.bbc.co.uk/2/hi/8241016.stm>.

¹⁵ "UPDATE: Kaieda Elected President of Shattered DPJ." *Asahi Shimbun*. December 25, 2012. http://ajw.asahi.com/article/behind_news/politics/AJ201212250101.

¹⁶ Interview with Japanese energy expert. January 27, 2016.

moved away from such issues, effectively removing the issue from the LDP's governing agenda. According to one environmental activist, "In the past decade, the LDP had some good environmentally-friendly members, but now it's very difficult to even find one or two LDP members who are sympathetic."¹⁷ Though the partisan divide on environmental policy between the DPJ and LDP is not as wide as between the Democratic and Republican parties in the United States, the role the issue plays in their governing agendas and the tradeoffs each party's leaders are willing to make on environmental policy can be clearly seen and felt in the policymaking process.

Today, the Japanese public's prioritization of energy security and economic growth over emissions reductions has turned climate change from a national issue to a purely global issue. In interviews, experts and activists have argued that the Japanese public views climate change as a global leadership issue for Japan. That is, Japan must play a role as a responsible stakeholder in the international system, but not in a way that directly impacts the well-being of Japanese citizens.¹⁸ Little connection is made by the public, the government, or the risk-averse Japanese media between a changing global climate and the increase in extreme weather events, including heat waves, in Japan. The result is that the Japanese public does not view climate change mitigation as purely in Japan's national interest and, instead, emphasizes the need for other countries to act. For example, only 34 percent of Japanese citizens believe developed countries should take the lead on mitigation efforts, 20 percentage points lower than the global average and 6 percentage points lower than the United States.¹⁹

¹⁷ Interview with environmental activist. January 28, 2016.

¹⁸ Interview with business representative. January 27, 2016.

Interview with environmental activist. January 28, 2016.

¹⁹ Stokes, Wike, and Carle. "Global Concern about Climate Change, Broad Support for Limiting Emissions."

Bureaucratized Decision-Making: The METI-MOE Rivalry

Japan's policymaking process is, in many ways, defined by the strength of its bureaucracy and the structural conservatism of the Japanese system.²⁰ Environmental and energy policy in Japan is similarly concentrated in the hands of the bureaucracy, particularly the Ministry of Economy, Trade, and Industry (METI), the Ministry of Environment (MOE), and to a lesser extent the Ministry of Foreign Affairs (MOFA).

Bureaucratic Autonomy

In contrast to climate policy under the DPJ and Prime Minister Hatoyama, today these three bureaucracies manage Japan's international climate policy with little input from the Diet, party leadership, or the prime minister's office, which largely functions as an arbiter of last resort. Particularly since the 2012 elections, Diet members appear to lack the interest, expertise, or motivation to advocate for specific energy or mitigation policies, largely leaving the bureaucracies full autonomy to create policy.²¹

Prime Minister Abe and Chief Cabinet Secretary Yoshihide Suga prefer to play a limited role in the policymaking process, largely by breaking deadlocks between METI and MOE on individual policy issues—which usually land in METI's favor—and by providing a sense of priorities for the bureaucracy. The Japanese prime minister's arms-length approach to climate policy stands in stark contrast to the Obama administration, where the White House has played an active role, centralizing and directing U.S. climate policy through a series of executive actions.²²

According to those involved in the policymaking process, the prime minister's office emphasized two priorities for Japan's INDCs. First, "economic growth should not be sacrificed by climate change policy."²³ Second, Japan's contribution at Paris should be comparable to U.S. and European contributions.²⁴ Though some government officials credited Prime Minister Abe with creating the political space for more ambitious INDC

²⁰ For an in-depth look at policymaking in Japan and the government-bureaucracy dynamic, see Zakowski, Karol. *Decision-Making Reform in Japan: The DPJ's Failed Attempt at a Politician-Led Government*. (New York: Routledge, 2015).

²¹ Interview with government officials. January 29, 2016.

²² Atkin, Emily. "White House Official: Obama Will Use Executive Powers to Meet Climate Goals." Think Progress. December 4, 2014. <http://thinkprogress.org/climate/2014/12/04/3599564/podesta-obama-executive-powers-climate/>.

²³ Interview with government officials. January 29, 2016.

²⁴ Ibid.

targets, the general consensus was that the prime minister's office largely took a hands-off approach to the specifics of INDC formulation.²⁵

Left largely to their own devices in the INDC formulation process, METI and MOE represent what can best be described as pro-business and pro-environment factions, respectively. The different missions, constituencies, and incentives of the two ministries understandably lead to their different perspectives on climate policy.

METI is responsible for encouraging economic growth in Japan and fostering a healthy environment for domestic and international business, which is the clear focus of the Japanese government right now. When asked what the Abe government's political priorities are, one Japanese bureaucrat responded, "The economy, the economy, and the economy."²⁶ Most importantly from a climate perspective, METI is responsible for deciding Japan's energy mix and has the closest relationship with the major sources of greenhouse gas emissions: electric utility companies and heavy industry. As a result, compared to MOE, METI is a well-established bureaucracy with significant political capital and influence in the Japanese government, and possesses unique levers of control in the INDC process.

By comparison, MOE is a relatively new ministry, elevated from an agency to a cabinet-level ministry as part of the 2001 Central Government Reform. MOE's primary responsibility is improving environmental conditions within Japan, including reducing air and water pollution. MOE is formally responsible for Japan's climate and emissions policy, but due to the multidimensional nature of the INDCs, it does not have sole decision-making authority over the process. Though MOE does not have the same political capital as METI, it is responsible for key levers in climate and energy policy, including nuclear energy safety regulation and the environmental assessment of coal plants.²⁷

²⁵ Ibid.

²⁶ Ibid.

²⁷ "Reform of Japan's Nuclear Safety Regulation." Nuclear Regulation Authority of Japan. January 2012. <https://www.nsr.go.jp/data/000099642.pdf>.

MOFA also plays a role in the climate policy process because of its responsibility over international negotiations, such as the Paris agreement, and bilateral relationships, such as with the United States and European partners. According to one former METI official, MOFA rarely advocated for any particular policy as part of Japan's INDCs, but regularly provided feedback based on the international community's response, and tried to ensure that Japan's INDCs would be comparable to those of the United States and European countries, limiting any diplomatic fallout from the process.²⁸

METI's Advantage

The negotiation processes between METI and MOE, with MOFA and the Cabinet Office as largely neutral players, does not happen on a level playing field. METI has three key advantages in Japanese climate policy debates that contributed to the country's less ambitious INDCs at Paris.

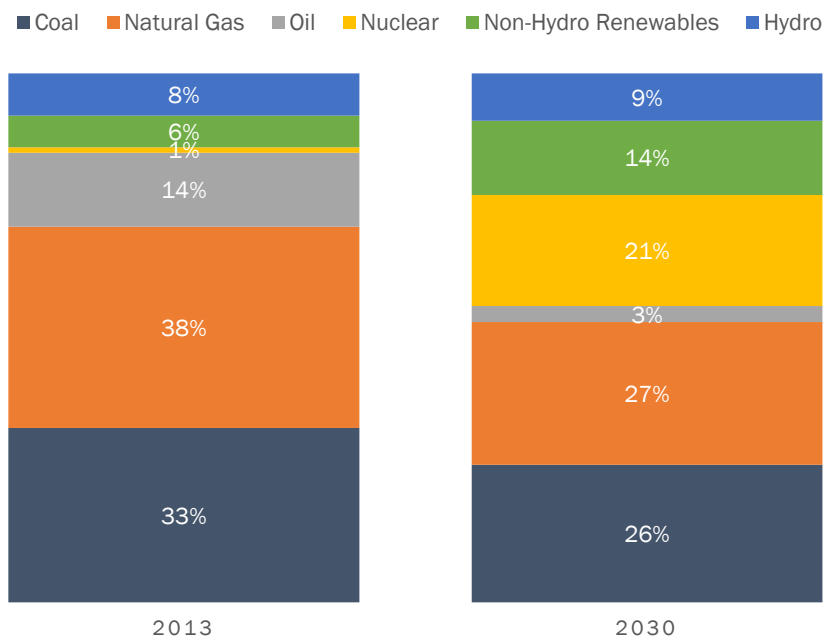
First, METI set Japan's 2030 energy mix before the INDC conversation began in earnest, limiting both the tools and potential for significant emissions reductions. More than 90 percent of Japan's greenhouse gas emissions come from the energy sector,²⁹ which means that, without significant changes to the country's sources of electricity, the bulk of emissions reductions would need to come from energy efficiency improvements or non-energy sources, such as land use changes and improved industrial processes. The 2030 energy mix established by METI in 2015 seeks to increase renewable energy to 22–24 percent (from 14 percent in 2013), slightly reduce the role of coal and oil (down to 26 percent and 27 percent, respectively), largely eliminate oil from the electricity mix, and bring nuclear energy back to 20–22 percent of electricity generation.³⁰ Regardless of the feasibility or ambition of this mix, setting the energy target before the emissions target limits the tools and resources available to set ambitious INDCs. As one senior government official noted, "Once the [energy] portfolio is set, it automatically translates into the INDC."³¹

²⁸ Interview with Japanese energy expert. January 27, 2016.

²⁹ "Summary of GHG Emissions for Japan." United Nations Climate Change Secretariat. Accessed February 9, 2016. https://unfccc.int/files/ghg_emissions_data/application/pdf/jpn_ghg_profile.pdf.

³⁰ "Long-term Energy Supply and Demand Outlook," Ministry of Economy, Trade, and Industry. July 2015. http://www.meti.go.jp/english/press/2015/pdf/0716_01a.pdf.

³¹ Interview with senior government official. January 29, 2016.

Figure 1. Japan's 2030 Electricity Mix.

Second, METI's priorities and constituencies closely match those of the Abe government and the LDP. The emphasis on economic growth above all, fueled by the traditional pillars of large Japanese industry, is shared by METI and Prime Minister Abe, putting METI in a position to win most policy deadlocks that are appealed to the prime minister's office for arbitration. For example, Japan's electricity costs were already twice as high as U.S. electricity costs before the Fukushima disaster, and rates have gone up by some 28 percent since then, due to the loss of nuclear power.³² As a result, the decision to pursue a less ambitious 2030 energy mix likely reflected shared concerns among METI, the business community, and the Abe administration that an aggressive push to limit coal in the electricity supply would further increase prices and limit economic growth.

Finally, Japan's emphasis on a bottom-up approach to policymaking puts greater emphasis on feasibility over ambition. Furthermore, METI's relationship with the business

³² "Average Electricity Prices around the World: \$/kWh." OVO Energy. Accessed March 12, 2016.

<https://www.ovoenergy.com/guides/energy-guides/average-electricity-prices-kwh.html>

"Japanese Firms Struggle with Electricity Rates." World Nuclear News. February 16, 2015. <http://www.world-nuclear-news.org/NP-Japanese-firms-struggle-with-electricity-rates-1602155.html>.

community and role in managing the economy give it final say within the Japanese bureaucracy on what is and is not feasible. As one member of the business community, who was involved in the INDC process, said, “METI has been winning most of the battles because they have more tools. They manage the energy policy and are in charge of the actual technologies. MOE can talk about the emissions target, but that’s it.”³³

In a policymaking process between an economic ministry with advantages in timing, tools, and political capital and an environmental ministry with limited authority and tools, as well as policy positions that run counter to the government’s political agenda, it is no surprise that the outcomes favor economic and business interests over environmental interests, whenever the two are perceived to be in conflict.

Consensus-Based Decision-Making and the Role of Interest Groups

The dynamic at play in the bureaucratic process is augmented by the consultative, consensus-based nature of Japan’s decision-making processes and the balance of power among competing interest groups. The result is greater emphasis on feasible, business-friendly climate policies, while offering few opportunities to expand the role of renewables in the energy mix.

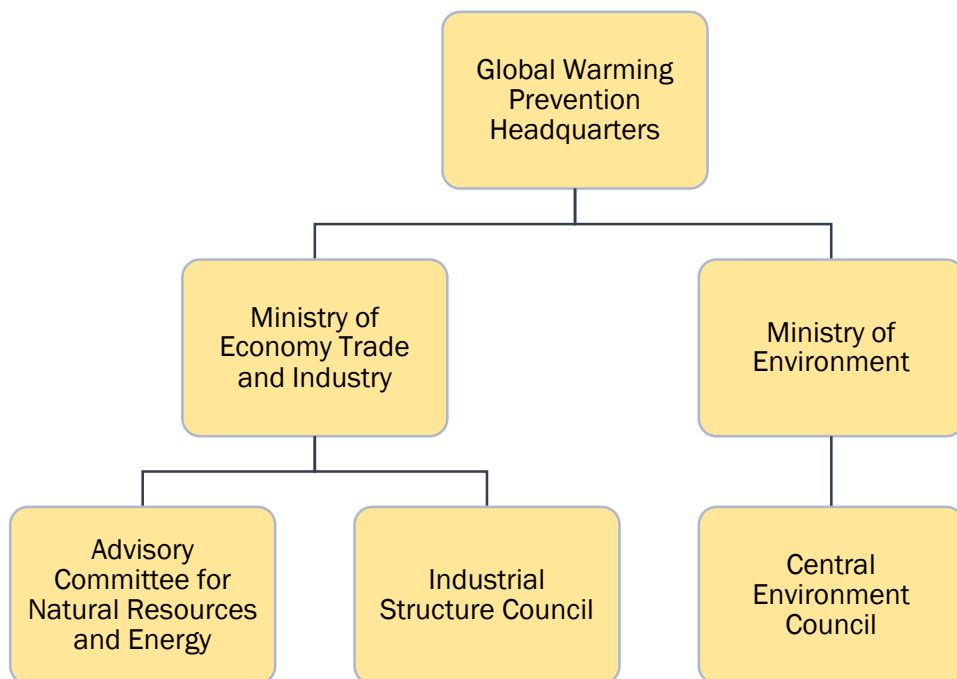
The Advisory Committees

The emphasis in Japan on a bottom-up approach to the INDC process extends not only to the bureaucracy, but also to the constituencies and interest groups these bureaucracies represent and must work with to implement any emissions target. Climate policy experts and interest groups, such as environmental scientists, business representatives, electric utility companies, consumer advocates, nongovernmental organizations, and environmental activists, participate in formal advisory committees called *shingikai* (審議会), established by METI and MOE. These shingikai are meant to provide policy expertise and recommendations to the bureaucracies, ministers, and prime minister, but also to serve as venues to coordinate and negotiate the differences among various interest groups.³⁴

³³ Interview with business representative. January 27, 2016.

³⁴ For more on the shingikai process, see Schwartz, Frank J. *Advice and Consent: The Politics of Consultation in Japan*. (New York: Cambridge University Press, 1998).

Figure 2. Structure of Japanese Climate Policy Process.



The formal advisory committees are a key difference in the policymaking processes of the United States and Japan. Though energy and environmental policy in the United States is made in consultation with experts, activists, and business interests, there is rarely such a formal, influential consultation process as that in Japan. Outside influence on the U.S. policymaking process tends to utilize many informal points of entry—such as conversations with executive branch officials, lobbying Congressional members, or shaping media coverage of the issue—while outside influence on the Japanese policymaking process operates predominantly through this single, formal *shingikai* process.

As part of Japan's INDC process, METI and MOE consulted two of their advisory committees—the Industrial Structure Council and the Central Environment Council, respectively. METI also consulted a separate Advisory Committee for Natural Resources and Energy to assist with the formulation of the 2030 energy mix. The METI and MOE advisory committees, in turn, fed into a joint advisory committee that made policy recommendations to the Global Warming Prevention Headquarters, a cabinet-level, interagency body charged with formulating the INDCs. This interagency group is formally chaired by the Prime Minister and Chief Cabinet Secretary, though in practice the body is run by the METI and MOE ministers.

The composition of these advisory groups can have a significant impact on policy formulation not only because of the relevant information its members provide bureaucrats and government ministers, but also because it is the primary venue for interest group negotiation and consensus-building. The membership of these advisory committees is not readily transparent, but, based on conversations with various interest groups currently or previously represented in the committees, it is possible to piece together the composition of the shingikai. The consensus among both interest groups and the ministries is that the composition of METI's Industrial Structure Council reflects the interests and perspectives of the "pro-business faction," including Keidanren (the Japanese Business Federation), consumer advocates, electric utilities, and heavy industries, such as steel, chemical, cement, and automobile manufacturers.³⁵

Though interest groups and the ministries agree that the composition of MOE's Central Environment Council is distinctly more in favor of climate-friendly policies than the Industrial Structure Council, the LDP's return to power appears to have diminished the role of the strongest environmental advocates in the shingikai. Multiple environmental activists complained that Nobuteru Ishihara, the first Environmental Minister under Prime Minister Abe, removed nongovernmental organizations and environmental activists—such as the head of the Kiko Network—from MOE's advisory council, due to their strong ties with the DPJ.³⁶ As a result, even the Central Environment Council is "on-balance more business-sided" and does not currently include representatives from any environmental groups, according to Japanese nongovernmental organizations.³⁷

The METI-Keidanren Relationship

In this context, a strong relationship between the bureaucrats who have significant policymaking authority and the interest groups that have significant influence through the shingikai process can effectively set the national climate policy agenda.

The strongest relationship between an interest group and a bureaucracy, in this context, is the METI-Keidanren relationship. Keidanren is the Japanese Business Federation, representing over one thousand Japanese companies and industrial associations and functioning as the collective lobbyist for large Japanese corporations. Keidanren's closest equivalent in the U.S. political system is the U.S. Chamber of Commerce, but this understates the degree of centralization and hierarchy within the Japanese business

³⁵ Interview with business representative. January 27, 2016.

Interview with government officials. January 29, 2016.

³⁶ Interview with environmental activist. January 28, 2016.

³⁷ Ibid.

community. Keidanren's role as the singular political voice of the Japanese business community does not have an exact comparison in a more competitive and diverse U.S. business community, where individual businesses have their own strong lobbying operations. Keidanren plays such a central role that the chairman of the federation has been called the "prime minister of business" in Japan.³⁸

Keidanren, which has close ties to the LDP and, in the past, has been a major contributor to LDP politicians, epitomizes the traditional Japanese focus on national economic growth through large industrial conglomerates, such as steel, cement, energy, electronic, and automobile companies. These traditional industries that Keidanren represents are also among the most energy-intensive industries in the Japanese economy and require reliable access to cheap energy to remain economically competitive. As a result, Keidanren has been a strong advocate for reinstating nuclear power as a pillar of Japan's energy mix in 2030 and maintaining the role of coal-fired power plants for the foreseeable future.³⁹

As part of the bottom-up approach to the INDC process, METI sought Keidanren's input on feasible emissions reduction efforts, particularly in terms of energy conservation and efficiency improvements. Keidanren, in consultation with the more than one thousand businesses it represents, put forward a series of emissions reduction targets across a range of industrial sectors. To determine the national emissions reduction target in the INDC, METI "simply added up all these actions," according to a bureaucrat involved in the process.⁴⁰ The business community, for its part, appears pleased with the outcome. Said one industry representative, "We were satisfied with the conclusion of the special committees. Our initiatives were some of the main pillars of the INDC."⁴¹

Each year, the Japanese government, in conjunction with Keidanren, checks each industry's progress towards meeting these emissions targets, as part of a process called PDCA, or Plan Do Check Action, which was advocated for by Keidanren during the shingikai process.⁴² But these targets are voluntary, and it is unclear what, if any, punishment Japanese businesses would face for failing to meet their proposed targets. This model differs from the United States, where individual businesses may set voluntary

³⁸ Yoshimatsu, Hidetaka. "Japan's Keidanren and Political Influence on Market Liberalization." *Asian Survey* 38 (3). University of California Press: 328–45.

³⁹ "A Proposal for Near-Term Energy Policy." Keidanren. October 7, 2014.

⁴⁰ Interview with environmental activist. January 28, 2016.

⁴¹ Interview with business representative. January 27, 2016.

⁴² Kimura, Yasushi. "The Japanese Business Community Initiative to Tackle Climate Change." Keidanren. September 2, 2014.

http://www.meti.go.jp/policy/energy_environment/kankyoku_keizai/va/seika/140902/3_Kimura_e.pdf.

emissions or energy targets, but the primary method of limiting industrial emissions is through government regulation, such as the Environmental Protection Agency's stricter standards on industrial boilers, or financial incentives, such as the Business Energy Investment Tax Credit.⁴³

Japan's collaborative approach to climate policy, as opposed to the more adversarial process that exists in the United States, is typical of METI's relationship with the highly organized, centralized, and hierarchical business community in Japan. The role of interest groups in the shingikai process, the relative balance of power between the business community and environmental advocates, and the strong relationship between METI and Keidanren give further insight into why Japan's INDC emphasizes efficiency improvements over changes in the electricity mix and feasibility over ambition.

Impact on Japanese Climate Policy

The domestic political forces in Japan can be seen in a public focused on energy security and economic growth, a bureaucratized decision-making process that favors the economic ministry over the environmental ministry, and a consensus-based model of decision-making that encourages incrementalism. These political forces, now more important than ever due to the structure of the Paris agreement, have created a climate policy in Japan that focuses on demand-side emissions reductions over supply-side reforms, marginally changes the economic calculus of most consumers and businesses, does not incorporate adaptation into the climate change conversation, and emphasizes the role of low- and middle-income countries over leadership by industrialized nations.

Demand-Side vs. Supply-Side Emissions Reductions

Japan's 2030 energy mix emphasizes cheap, stable, and secure supplies of energy, which is supported both by public priorities as well as the energy-intensive businesses that dominate the policy advisory process. Because the energy mix was set before the emissions target, Japan's INDC relies heavily on improvements in energy efficiency and conservation. The 2030 energy plan calls for a 35 percent improvement in energy efficiency, leading to 196.1

⁴³ "FACT SHEET: Adjustments for Major and Area Source Boilers and Certain Incinerators." U.S. Environmental Protection Agency. 2012.

https://www3.epa.gov/airquality/combustion/docs/20121221_sum_overview_boiler_ciswi_fs.pdf

"Business Energy Investment Tax Credit (ITC)." U.S. Department of Energy. Accessed March 14, 2016.

<http://energy.gov/savings/business-energy-investment-tax-credit-itc>.

kilowatt hours in energy savings.⁴⁴ Efficiency improvements have added co-benefits for energy security and economic interests by decreasing the amount of energy Japan must import from abroad and reducing total energy expenses for both businesses and consumers.

Japan's emphasis on demand-side reduction through efficiency differs from the U.S. approach under the Obama administration, which has emphasized reducing emissions by expanding renewables and minimizing coal in electricity generation. Neither supply-side nor demand-side reforms, alone, will be sufficient to reach the 2 degrees Celsius goal. The International Energy Agency estimates end-use energy efficiency and fuel switching improvements will make up 48 percent of the emissions reductions necessary to achieve a 2 degrees Celsius pathway, compared to 51 percent from energy production reforms from increased renewables, nuclear power, and carbon capture and storage.⁴⁵

But reaching this efficiency target will not be easy. Japan has already made significant improvements in transport, industry, and building efficiency in recent years, and is already one of the most efficient industrialized countries in the world in terms of energy consumption per dollar of gross domestic product—27 percent lower than the OECD average.⁴⁶ This means much of the low-hanging fruit on efficiency improvements has already been implemented, potentially limiting future gains.

Limited Change to the Economic Equation

The combination of voluntary emissions targets by Japanese industry, along with limited investments in renewable energy technologies, means the economic incentives to reduce emissions for both businesses and consumers remain largely unchanged by Japan's INDC and 2030 energy plan.

Japan currently plans to build forty-one new coal-fired power plants over the next ten years and maintain a large role for baseload power plants,⁴⁷ delaying the sort of reforms to the electric sector that would favor the expansion of intermittent energy sources, such as wind and solar. Though Japan has implemented a feed-in tariff and a \$2.53/tCO₂ carbon

⁴⁴ "Long-term Energy Supply and Demand Outlook."

⁴⁵ "The Way Forward." International Energy Agency. 2014.

http://www.iea.org/publications/freepublications/publication/The_Way_forward.pdf.

⁴⁶ "Energy Intensity – Total Primary Energy Consumption per Dollar of GDP." U.S. Energy Information Administration. Accessed February 27, 2016.

<https://www.eia.gov/cfapps/ipdbproject/iedindex3.cfm?tid=92&pid=46&aid=2&cid=CG5,&csid=2007&ceid=2011&cunit=BTUPUSDP>.

⁴⁷ "Japan, South Korea Stick to Coal despite Deal." Reuters. December 15, 2015.

<http://www.reuters.com/article/us-climatechange-summit-coal-idUSKBN0TY2TG20151216>.

tax to incentivize renewable energy, the cheapest, most stable, and most preferred sources of electricity for most businesses and consumers continue to be coal, gas, and to a lesser extent nuclear.⁴⁸

Without properly pricing greenhouse gas emissions (Japan's carbon price is just one-third that of Europe's), shifting investment away from coal-fired power plants, or creating some sort of financial penalty for industries that fail to meet their emissions targets, the economic equation on climate change and the market incentives for green technology innovation are unlikely to change. One of the biggest challenges for climate advocates in Japan is changing the national "mental model" of the relationship between emissions and economic growth and highlighting potential co-benefits of low-carbon growth.

Limited Adaptation Conversation

Similar to many other industrialized countries, the general perception in Japan is that the worst effects of climate change will be felt in the low- and middle-income countries of the world, particularly in Africa, South Asia, and Southeast Asia, and that Japan is unlikely to feel many of the worst effects of climate change. While this logic may be true, to an extent, it understates likely climate impacts on Japan, particularly on the country's food resources and large, low-lying coastal communities, such as Nagoya and Osaka, which are among the top ten cities in the world most at risk of potential economic damage from climate change.⁴⁹

In December 2015, MOE released a national adaptation plan that highlighted how climate change may impact Japan through the end of the century. The assessment predicts much greater rainfall variability, which will significantly decrease agricultural productivity in all but the most northern parts of Japan, and greater frequency and intensity of typhoons and storm surges.⁵⁰ But so far, the adaptation conversation has been limited and has failed to break into the public conversation about climate change, which is surprising given the country's experience with the Fukushima disaster, which showed just how dangerous extreme weather events can be if the country's infrastructure is unprepared.

⁴⁸ Note: Full carbon tax price went into effect April 2016.

"Details on the Carbon Tax (Tax for Climate Change Mitigation)." Ministry of Environment of Japan. Accessed February 26, 2016. https://www.env.go.jp/en/policy/tax/env-tax/20121001a_dct.pdf.

⁴⁹ Hallegatte, Stephane, Colin Green, and Robert J. Nichols. "Future Flood Losses in Major Coastal Cities." *Nature Climate Change*. September 2013: 802-806.

⁵⁰ "Communication on Japan's Undertakings in Adaptation." UN Framework Convention on Climate Change. November 27, 2015.

https://unfccc.int/files/adaptation/application/pdf/submission_on_japan_undertakings_in_adaptation.pdf.

Japan's adaptation conversation has also been hampered by the uncertainty and wide variance of possible climate impacts and the difficulty of measuring and monetizing the impact of climate change, particularly in urban communities. These challenges are not unique to Japan's adaptation conversation, but will continue to limit adaptation investments and prevent a shift in the country's mental model on climate change. As a result, Japan's focus on adaptation is almost exclusively on how Japan can financially assist low- and middle-income countries that are the most vulnerable to the impacts of climate change.

Emphasis on Low- and Middle-Income Countries

The combination of neighboring China's carbon-intensive economic growth, the perception that emission reductions are inherently harmful to economic growth, and the view that the impact of climate change will largely affect low- and middle-income countries has resulted in a strong emphasis by Japan on the role of developing countries in global mitigation efforts.

Japanese policymakers are correct in arguing that it is impossible to reach the 2 degrees Celsius target without putting rising economies, such as China, India, Indonesia, and Brazil, on a low-carbon pathway. Part of the success of the Paris agreement was getting these countries to contribute to global mitigation efforts, a position championed by Japan throughout the negotiations. But in making this argument about the importance of low- and middle-income countries, Japanese policymakers largely reject any sense of climate justice or responsibility that industrialized economies, such as the United States, Japan, and the European Union, have in the current situation. The Japanese public rejects the notion that the global rich should take on a large share of the burden in emissions reduction, at higher rates than even the United States or any European country.⁵¹

The result is a policy that emphasizes financial assistance and technology transfers from Japan to low- and middle-income countries, particularly to improve energy efficiency. For instance, Keidanren argues that improving U.S., Chinese, and Indian coal-fired power plants to Japanese efficiency levels would save 1.3 billion tCO₂, roughly equivalent to Japan's entire annual emissions output.⁵² The Japanese government supports these efforts through the Joint Crediting Mechanism (JCM) run by MOFA, which has signed

⁵¹ Stokes, Wike, and Carle. "Global Concern about Climate Change, Broad Support for Limiting Emissions."

⁵² "COP21: From Kyoto to Paris, and toward Future of the Earth." Keidanren. November 2015.

<https://www.keidanren.or.jp/en/policy/2015/COP21.pdf>.

agreements with 19 low- and middle-income countries to provide the legal structure and financial support for low-carbon technology transfers.

Japan's financial and technological contributions to emissions reductions in carbon-intensive, developing countries is an important piece of the puzzle to get to the 2 degrees Celsius target, but the big question is whether Japan views this strategy as a substitute for or complement to making the difficult changes required domestically. Furthermore, the value of this strategy depends on several uncertain assumptions, including that Japanese technological innovation and efficiency improvements will continue to outpace economic and emissions growth in the developing world, and that Japan will have the political relationships in place to promote technology transfers, which may be likely in India, but unlikely in China.

The Future of Japan's Climate Policy

The political dynamics that shaped Japan's INDCs at Paris remain in place and will continue to be key drivers of Japanese climate policy as it faces a series of decisions points in the near future.

Upcoming Policy Choices

In mid-May, the Japanese government adopted a national implementation plan for its INDC's emissions targets following a several-month policy process led by METI and MOE that largely solidified status quo assumptions about Japan's future energy mix, emphasis on efficiency improvements, and largely voluntary approach to emissions reductions by Japanese businesses and households.

Moving forward, two key issues not taken up in the implementation plan that remain a point of debate between METI and MOE are whether to establish a nationwide emissions trading system (ETS), and what, if any, penalties should exist for industries and businesses that fail to meet their emissions targets. MOE is championing the introduction of a nationwide ETS, similar to the system the Tokyo Metropolitan Government introduced for Tokyo in 2010, and wants the ability to fine industries that fail to meet their proposed emissions targets. METI opposes a nationwide ETS, echoing Keidanren's concerns that Japanese businesses may simply move abroad in response, often to more carbon-intensive countries, like China.⁵³ METI also believes that the industry-wide

⁵³ "Opinion Paper on Climate Change Policy." Keidanren. Accessed March 1, 2016. <https://www.keidanren.or.jp/en/policy/2012/089.html>.

emissions targets should remain voluntary, with a naming-and-shaming system to ensure compliance.

The debate over how voluntary the emissions targets should be and whether an ETS or financial penalties should be introduced is a matter of trade-offs among compliance, political cost, and ambition. As seen in the results of the implementation plan, MOE appears to be on the losing side of both issues for now.

Forces of Change

Several factors have the potential to alter the political dynamics of climate change in Japan in the near future. Japan is in a multi-year process of liberalizing its electricity generation and distribution sector, breaking up the power of ten regional electricity monopolies. In April, Japan opened its retail electricity market to full competition, allowing consumers to choose among several hundred suppliers and sources of energy.⁵⁴

The electricity sector reforms could affect Japan's annual emissions by altering its national energy mix, though the direction of the effect remains unclear. While liberalization will allow for the proliferation of renewable energy suppliers, it also creates the possibility of a race to the bottom, in which consumers simply choose the cheapest sources of energy on the market, currently coal and natural gas. One government official put the odds of Japan's energy mix shifting in either direction at 50-50.⁵⁵ One determinant of how energy liberalization impacts the role of renewables is whether the electrical grid is effectively reformed,⁵⁶ particularly to allow for the efficient transfer of energy production from one region to another, such as from wind-rich Hokkaido in the north or Kyushu in the south to areas of high demand, such as Tokyo or Kansai. The increased competition in electricity production could also affect the way the electric sector is represented in the *shingikai*, potentially making it more difficult for them to present a unified industry voice.

The second factor that could change current political dynamics on climate is what actions city and prefecture governments take, independent from the central government. The Tokyo Metropolitan Government is the most important actor in this space, due to the

⁵⁴ Inajima, Tsuyoshi and Stephen Stapczynski. "The \$67 Billion Prize on Offer as Japan Shakes up Power Market." Bloomberg Business. October 26, 2015. <http://www.bloomberg.com/news/articles/2015-10-26/the-67-billion-prize-on-offer-as-japan-shakes-up-power-market>.

⁵⁵ Interview with government officials. January 29, 2016.

⁵⁶ "Japan's Electricity Market Deregulation." Ministry of Economy, Trade, and Industry, June 2015, http://www.meti.go.jp/english/policy/energy_environment/electricity_system_reform/pdf/201506EMR_in_Japan.pdf.

concentration of people, economic productivity, media attention, and political power in the city. Tokyo has already shown a willingness to play an active role in this space, as seen in the emissions trading system it introduced in 2010, which has produced a much more aggressive emissions target than the national INDCs, established an average carbon price of \$95/tCO₂e, and led to per capita emissions in Tokyo that are less than half of the national average.⁵⁷

The Tokyo metropolitan area is home to 37.8 million people—one-third of Japan’s total population—and has the sort of gravitational mass to redefine what is politically and economically possible on climate change in Japan, particularly among the business community. What is unclear is whether the policies introduced in Tokyo will proliferate to other major cities, such as Osaka or Nagoya, which have less bargaining power than the national and economic capital, and whether policies for an urban service-sector economy can be replicated at a national level with lower population density, larger agricultural and industrial sectors, and greater heterogeneity.

Finally, Japan’s emissions future will be significantly affected by whether Prime Minister Abe and his successors have the ability to reintroduce nuclear energy over the protests of the public. The feasibility of nuclear power producing 20–22 percent of the country’s energy in 2030 is highly questionable. Meeting this target will require either restarting and running all existing plants for the next forty years, many of which may not be able to pass MOE’s safety inspections, or making significant investments in new nuclear plants.⁵⁸ Consumers may also actively choose to divest from nuclear energy as the electricity sector liberalizes, so these changes are not entirely in the government’s hands. If Japan cannot meet its nuclear energy target, the gap will most likely be filled by coal and natural gas, the two cheapest alternatives that have filled the supply gap since 2011, significantly driving up Japanese emissions.

Future Opportunities for U.S.-Japan Cooperation

As the United States and Japan move beyond the Paris negotiations and into the next phase of climate change action at home and abroad, they will have to grapple not only with the difficult international politics of the issue, but also their own frequently messy domestic

⁵⁷ “Tokyo: An Emissions Trading Case Study.” International Emissions Trading Association. May 2015. http://www.ieta.org/resources/Resources/Case_Studies_Worlds_Carbon_Markets/tokyo_case_study_may2015.pdf

“Cities and Climate Change: An Urgent Agenda.” World Bank. December 2010. <http://siteresources.worldbank.org/INTUWM/Resources/340232-1205330656272/CitiesandClimateChange.pdf>.

⁵⁸ Interview with Japanese energy expert. January 27, 2016.

politics. While the U.S. and Japan may not pursue the same climate strategies at home, there are five areas on which they can work together to tackle this challenge and help one another achieve their emissions targets.

First, though the two countries have divergent approaches to emissions reductions—the United States focuses on supply-side reforms through the Clean Power Plan, while Japan focuses on demand-side reforms through efficiency improvements—they can learn from and incorporate each other's best practices into their own climate actions. The more progress the United States makes in reducing the cost of renewable energy production and storage, the easier it will be for METI to convince businesses and consumers that increasing renewables in the energy portfolio will not further drive up energy costs. Similarly, the more progress Japan makes on energy efficiency, the less challenging the U.S. Environmental Protection Agency's efficiency standards will be for U.S. companies.

Second, as two of the major scientific and technological leaders on the planet, the United States and Japan can expand existing cooperation under the U.S.-Japan Science and Technology Agreement, with a focus on innovation and research and development for renewable energy, energy efficiency, carbon capture and storage, and better electrical grid management. Carbon capture and storage will be particularly important for Japan, given the electricity sector's continued preference for coal, which will make any emissions reductions target difficult to reach. Technological breakthroughs and cost reductions in these areas will be critical to redefining the economic equation on climate action and promoting more ambitious emissions targets in the future.

Third, as two of the three biggest economies on the planet, the United States and Japan must coordinate their economic support for low-carbon development in low- and middle-income countries. Ensuring that rapidly growing countries in Africa, South Asia, and Southeast Asia are making investments in a low-carbon future, instead of getting trapped in carbon-intensive economies, should be a top international development priority for the United States and Japan. The two allies have significant influence over a variety of tools and financing mechanisms to encourage this sort of investment, from the World Bank and the International Monetary Fund to the Asian Development Bank and the Green Climate Fund, and should ensure that these green financing initiatives are all coordinated with similar standards and best practices. Such efforts will support the Japanese public's belief that developing countries should be contributing equally to international mitigation efforts.

Fourth, the United States and Japan should ensure that the G7 remains a global leader on climate policy, by using the forum to keep emissions reductions on the international agenda, galvanize public and private capital, and form a strong negotiating bloc at the G20 and future United Nations Framework Convention on Climate Change

conferences.⁵⁹ Japan has a crucial role to play in this space as it hosts the G7 summit at the end of May in Mie Prefecture, and can use this forum to support Prime Minister Abe's efforts to reassert Japan's role as an international leader. The focus on climate in such high profile international forums will likely also give MOE greater support from MOFA and the Cabinet Office in its policy debates with METI.

Finally, both countries must use their relationships and leadership roles in the Asia-Pacific to encourage this rapidly growing region to take concrete steps to reduce emissions and de-carbonize their economies. This will be most important in India, where both the United States and Japan have strong, bilateral relationships, and Southeast Asia, where both the United States and Japan are actively engaged with the Association of Southeast Asian Nations.

Climate change is the type of immense global challenge that is impossible to address without the coordinated action of the world's leading countries. The United States and Japan are two of these global leaders and will need to work hand in hand to prevent the worst effects of a rapidly warming planet. But this coordination and leadership will not happen in a vacuum. Both countries will create national and international climate policy in the context of their domestic politics, where public opinion, bureaucratic competition, and the power of interest groups all shape what is politically feasible. In the context of a post-Paris world, U.S. policymakers must understand not just the outcomes of Japanese climate policy, but also the process by which these policies are created and the domestic actors who participate in this process. Understanding the domestic politics of climate change in Japan will help the United States find better areas for cooperation and influence that can benefit both countries and, hopefully, save the planet from itself.

Ken Sofer is a Senior Policy Advisor with the National Security and International Policy team at the Center for American Progress and a John Parker Compton Memorial Fellow at the Woodrow Wilson School of Public and International Affairs at Princeton University. He would like to thank Sasakawa Peace Foundation USA for its generous support for this paper's research.

⁵⁹ For more on the G7's role in international climate policy, see Livingston, David. "The G7 Climate Mandate and the Tragedy of Horizons." Carnegie Endowment for International Peace. February 4, 2016. <http://carnegieendowment.org/2016/02/04/g7-climate-mandate-and-tragedy-of-horizons/itjk>.