

FOREIGN POLICY IMPLICATIONS OF CLIMATE- FRAGILITY RISKS FOR JAPAN

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Japan needs to consider climate risks beyond its borders. Climate change impacts globally and in the Asia-Pacific region will affect Japan's food security, the increasing competition around resources such as fisheries, and the stability of states. Foreign policy will have to rise to these challenges and take an active role in addressing them. A new and effective way for the G7 would be to engage in long-term resilience partnerships with affected and vulnerable countries.

Background

Climate change is one of the key global security challenges of the 21st century. Its impacts are a 'threat multiplier' that will increase state fragility, fuel social unrest and potentially result in violent conflict. Existing state fragility is simultaneously hampering efforts at adaptation, particularly among vulnerable populations. This threatens to lock many societies into 'fragility traps'.

Japan as part of the Group of 7 (G7) has recognized the resulting challenges for sustainable economic development, peace and stability. In April 2016, under the Japanese G7 presidency and following up the independent report "A New Climate for Peace: Taking Action on Climate and Fragility Risks" commissioned by G7 members, the foreign ministers of the G7 reiterated their commitment to prioritize prevention of climate fragility risks including taking steps to integrate climate-fragility considerations across their national governments.

Against this background, adelphi has partnered with the Institute for Global Environmental Strategies (IGES) to facilitate a broader discussion on climate-fragility risks in Japan and reflect and discuss the findings of the G7 report and its implications and relevance for Japan. As a first step, adelphi and IGES jointly organised two expert workshops in June 2016. The first workshop took place on June 14, 2016 and brought together 31 Japanese and international experts as well as government representatives. It was followed by a workshop on June 16, 2016 with 15 participants from Japanese civil society and a symposium at the 8th International Forum for Sustainable Asia and the Pacific in Yokohama on July 12, 2016 with over 100 participants. These events focused on identifying climate-fragility risks for Japan and the region and ways to address these risks.

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In addition, adelphi and IGES are jointly publishing a series of five policy papers on climate-fragility risks in Japan. These short papers focus on different issues to contextualize the global discourse on the topic and show its relevance for Japan. The papers are available in English and Japanese.

This paper focuses on the foreign policy implications of climate-fragility risks for Japan.

Redefining and contextualising Japan's climate-fragility risks

Global warming is a fundamental threat to the environment, people's livelihoods and development. As a reaction to this fundamental threat, all nations have committed to reduce carbon emissions. Likewise, preparing for the consequences of climate change and taking actions to avoid and reduce climate risks and their impacts on fragility are an obligation for all members of the international community.

Japan is no exception in this regard. It is likely to experience a wide range of climate impacts including more frequent heatwaves, more intense rain and stronger typhoons, all of which could have drastic effects, including on the well-being of its people, public health, water availability and the environment. Cognizant of the urgency of these risks, the Government of Japan has identified the following areas as most at risk in years and decades to come:²

- Agriculture, Forests/Forestry, Fisheries
- Water/Water resources
- Ecosystems
- Natural Disasters/Coastal Areas
- Human Health
- Industrial/Economic Activities
- Life of Citizens and Urban Life

Yet, as is evident, global warming and its negative effects know no borders. Today climate risks arise as a result of conditions both inside and outside a country's borders. As globalization intensifies, our understanding of climate-fragility risks must go beyond national borders. A global trading country like Japan is a case in point. The country needs to consider risks beyond its borders, as risks affecting other countries could affect Japan and vice versa. This simple fact applies to all countries, big and small. A redefinition of climate-fragility risks in a broader context is therefore necessary for all countries.

This paper focuses on three cases in its attempt to redefine Japan's perception of climate-fragility risks. These are food supply and virtual water, fishing in international waters, and the Himalayan region.

Food supply and virtual water

As Japan, a country of scarce farmland, developed and globalized its economy, it had to import large amounts of resources from abroad, particularly food and agricultural products. Japan imports about 60% of what it eats on a calorie basis from abroad. Cereals, wheat and maize are mainly imported from the US, Australia and Brazil. In addition, Japan is one of the largest importers of meat in the world. It is the world's top importer of pork and the second largest importer of beef and chicken.³

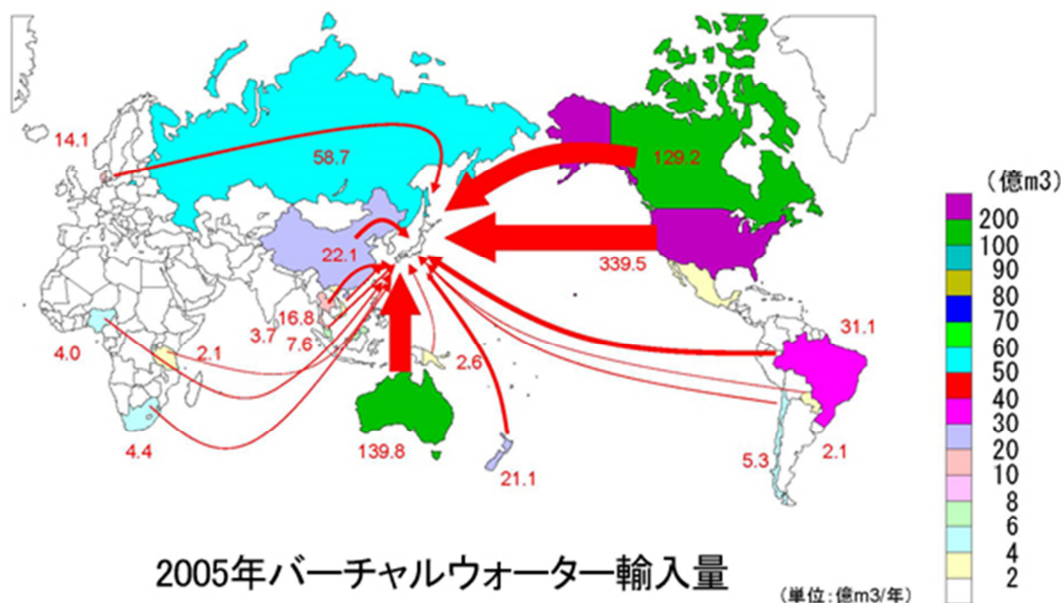
² *National Plan for Adaptation to the Impacts of Climate Change* adopted by the Cabinet of Ministers on 27 November 2015, <http://www.env.go.jp/earth/ondanka/tekiou/adaptationplansummary.pdf>.

³ Gasparatos, A. and T. Gadda 2010. "Tokyo Drifts from Seafood to Meat Eating", United Nations University, <http://ourworld.unu.edu/en/tokyo-drifts-from-seafood-to-meat-eating>.

Any country which imports such a large amount of its food supply from abroad is also consuming large quantities of water resources of those exporting countries. In particular, Japan's increasing meat consumption requires enormous quantities of water in food producing countries. This water use is called "virtual water" and it underlines how concerns over the impact of climate change on global food production and on global water availability should be shared by Japan.⁴

The increasing use of virtual water is taking place as water scarcity is worsening around the world. If there were a climate change-induced disruption of food production in exporting countries, the resulting impacts could be devastating.⁵ How global warming affects agricultural production in other countries is, therefore, a serious climate-fragility risk for Japan. The seriousness of this challenge is only increasing as emerging economies with their improving purchasing capacities worldwide are joining the global competition for limited resources such as water and land.

How much virtual water is Japan importing from abroad in 2005?



出所: 輸入量 工業製品 通商白書 (2005年)
 農畜産物 JETRO貿易統計 (2005年)、財務省貿易統計 (2005年)
 水消費原単位 工業製品 三宅らによる2000年工業統計の値を使用
 農産物 佐藤による2000年の日本の単位収量からの値を使用
 丸太 木材需給表等より算定した値を使用

Relationship between Japan and the world's water.

Source: Oki, T. 2012.; <http://www.waterforum.jp/jpn/2012/suibou/doc/s-2.pdf>; Unit: 100 million cubic meters per year.

⁴ Oki, T.; M. Sato, A. Kawamura, M. Miyake, S. Kanae and K. Musiake 2003. "Virtual water trade to Japan and in the world", in: Hoekstra, A.Y. (ed.). Virtual Water Trade. Proceedings of the International Expert Meeting on Virtual Water Trade, Value of Water Research Report Series No 12, 221-235.

⁵ Iceland, C.; B. Otto and R. Waite 2016. "As Clouds Head for the Poles, Time to Prepare for Food and Water Shocks", World Resources Institute's Blog, 25 July 2016, <http://www.wri.org/blog/2016/07/clouds-head-poles-time-prepare-food-and-water-shocks>.

Fishing in international waters

Japan is a fishing nation and has the world's third largest per capita fish consumption⁶. Although Japan has less than 2% of the world's population, it is the second largest importer of fish and fishery products and accounts for about 4% of global marine fisheries catch⁷. Yet, Japan's fishing culture is in danger partly because of global warming and growing and fiercer competition amongst nations for decreasing fisheries resources.

In all of its traditional fishing areas, Japanese fishermen are catching decreasing amounts of fish. And this trend is expected to continue with estimated decreases in catches of coastal fish species by as much as 70% by 2100. What is even more alarming is the fact that researchers still have to determine what is likely to happen to fish stocks under the impact of climate change.⁸ However, experts largely agree that multiple factors will have negative impacts on fisheries such as increasing sea-surface temperatures, changing flows of ocean currents, changing availability of phytoplankton and increasing coral bleaching. In addition, rising acidity of the oceans as they absorb more carbon dioxide will increasingly come into play over the next century.

This is happening in the context of growing competition over fishing grounds. For example, Japanese fishing vessels are increasingly outnumbered by Chinese vessels in the East China Sea as China's own demand for seafood is growing.⁹ The same applies to the Republic of Korea and most other Asian countries. Thus, it is no exaggeration to conclude that the entire Asia-Pacific region is set for a growing scramble over depleting fish stocks, posing another serious climate-fragility risk for Japan.

Implications of catastrophic climate change in Asian countries

The science and policy community have long discussed the possible risks arising from the melting of Himalayan glaciers that could affect large parts of Asia. These risks could have significant implications for the foreign policy of Japan from a solidarity standpoint. Melting glaciers are filling up lakes in Bhutan, increasing the risks of glacial lake outburst floods which could affect tens of thousands of people. In the worst case, multiple lakes could burst at the same time and unleash a catastrophic torrent of water through Bhutan. Such outbursts would not only devastate Bhutan but also effect countries downstream, for example by provoking floods in neighbouring India and Bangladesh.

However, glacial lake outburst floods are only one of the big climate risks in the Himalayas. In addition to these sudden onset disasters, climate change will also have grave long-term impacts. Himalayan glaciers, the world's second-largest source of fresh water after the polar ice caps, are receding at a rate of 30 to 60 meters a decade. This will impact seven of the continent's major rivers, including the Yangtze, Ganges, Indus and Mekong, upon which 1.3 billion people depend for their livelihoods. The scale of 1.3 billion Asian people being affected by water stress due to global warming cannot leave an insular Japan without uneasiness.

⁶ FAO 2016. "The State of World Fisheries and Aquaculture. Contributing to Food Security and Nutrition for all", Rome.

⁷ Ibid.; World Bank 2016. Population data, <http://data.worldbank.org/indicator/SP.POP.TOTL?view=map>.

⁸ Popescu, I. and T. Ogushi 2013. "Fisheries in Japan", European Parliament Note, [http://www.europarl.europa.eu/RegData/etudes/note/join/2014/529044/IPOL-PECH_NT\(2014\)529044_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/note/join/2014/529044/IPOL-PECH_NT(2014)529044_EN.pdf).

⁹ Noguchi, Y. 2016. "Japan trawlers driven out of East China Sea by Chinese boats", The Asia Shimbun, 4 July 2016, <http://www.asahi.com/ajw/articles/AJ201607040001.html>.

Contrary to the previous two examples, floods in the Himalayas are a kind of climate-fragility risk that Japan should deal with head-on from the position of humanitarian solidarity. This is why the government of Japan is actively engaging in providing Bhutan with crucial assistance. A system for “Early Warning on Floods” caused by global warming will crucially link the country to a global weather information network for the first time.

Redefining the scope of action for foreign policy

By broadening the understanding of climate-fragility risk beyond a country’s borders, national actions against climate change become more relevant to foreign policy. This is particularly important in the case in Japan, since policy makers consider almost all current and foreseeable climate-fragility risks to be basically manageable and containable within certain tolerable levels and there is a national consensus to invest and mobilize resources as these risks emerge and increase at the national level.

Rather than implementing individual adaptation actions based on risk assessments that are confined to the national level, countries can develop new perspectives for international cooperation.

Redefining and assessing climate-fragility risks in their broader regional and global context improves our understanding of risks by including emerging security risks, such as increasing resource competition. In addition, it underlines the urgency and need to increase our climate actions. Foreign policy will have to rise to these challenges. For example, diplomacy will have to play its role in negotiating the equitable sharing of diminishing resources. The fishing issues in and around Japanese waters are a case in point. International public law will play increasingly important roles in dealing with those negotiations.

A new way to deal with climate-fragility risks of vulnerable countries

In view of the importance and urgency of climate-fragility risks, particularly for the most vulnerable countries, the G7 cannot continue with business as usual. It must develop new and innovative ways and approaches that work alongside established approaches, such as holding international conferences. This paper proposes a new and concrete way for the G7 countries to increase the effectiveness of their cooperation with countries affected by fragility and conflict. In order to address climate-fragility risks directly, G7 countries have to cooperate more closely among themselves and with affected countries. Long-term engagement and partnerships to increase the resilience of affected countries against a broad range of shocks and stressors (including but not limited to climate change and fragility) is one of the most effective ways to achieve this.

These long-term resilience partnerships would start by focusing on one or a group of partner countries and establishing permanent joint committees in the capitals of the partner countries. These permanent joint committees would bring together G7 ambassadors, representatives of the host government, civil society and international donor organizations such as the World Bank. They would meet regularly to discuss climate-fragility risks of the host country and map out how those risks can be dealt with through joint collaboration. This approach could help to ensure that G7 assistance fits with the needs of the host government and local realities while avoiding the duplication of activities. At the same time, this kind of engagement would help the G7 to gain more experience and knowledge in addressing climate-fragility risks. Most importantly, these partnerships would have a long time horizon of 10-20 years and thus help to build the trust between G7 and the partner governments necessary to embark on much-needed reforms.

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Design: Steffen Kalauch and adelphi

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The climate diplomacy initiative is supported by a grant from the German Federal Foreign Office.