Expert Elicitation for Climate Policy Impact Analysis for China

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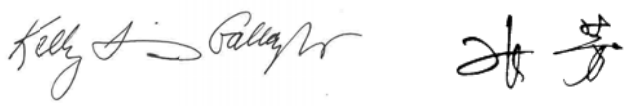
Dear expert:

Thank you for agreeing to participate in our expert elicitation about the impacts of climate policy in China. The aim of the study is to determine the estimated impact of China's existing and planned policies, as well as additional policies that might needed to meet or beat China's targets under the 2015 Paris Agreement on Climate Change (see Appendix A). Your expertise is highly valued and we greatly appreciate your time.

You are requested to attempt to answer these questions in writing and return them to us by email in two weeks (by May 15th). After receiving your survey response (by email to kelly.gallagher@tufts.edu or fang.zhang@tufts.edu), Prof. Kelly Sims Gallagher and/or Dr. Fang Zhang may follow up to clarify your answers. Professor Gallagher leads the Climate Policy Lab at the Center for International Environment and Resource Policy at The Fletcher School, Tufts University. Dr. Zhang is a research fellow in the Climate Policy Lab.

This expert elicitation is one of multiple methodologies will be used to conduct the analysis. We will conduct an independent analysis of all the data collected using different methods, and then publish a discussion paper. We will send the discussion paper to you for feedback, and ultimately plan to submit a final paper to a peer-reviewed journal. Your name will be listed at the end of the report as one of the experts consulted, but your name will not be identified specifically with any single answer. If you would prefer to be listed anonymously, please check off the box in question 2.

Thank you again for taking the time to participate in this expert elicitation.



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Questions

1. Please provide your name, title, and affiliation.

2. Would you prefer to be listed anonymously as a expert?
    a. Yes ☐
    b. No ☐

3. Using a scale of 1-10 where 1 is “easy” and 10 is “almost impossible”, please estimate how difficult you believe it will be for China to achieve the targets set by China in its Nationally-Determined Contribution (NDC) by 2030 (please see Appendix A for the list of targets). Please explain why you believe each target will be easy or difficult.

    a. Peaking carbon dioxide emissions around 2030 _____

    b. Peaking early (well advance of 2030) _____

    c. Lowering carbon dioxide emissions per unit of GDP by 60% to 65% from the 2005 level _____

    d. Increasing the share of non-fossil fuels in primary energy consumption to around 20% _____

    e. Increasing the forest stock volume by around 4.5 billion cubic meters on the 2005 level _____

4. Based on your expertise, what year do you predict that China’s carbon dioxide emissions will peak will occur (your best guess is fine)? Why?

5. Do you predict that China’s emissions will plateau (peak but not decline)? If so, for how many years do you expect there to be a plateau? Why?

6. In Appendix B, a simplified list of China's major national policies on climate change has been provided. Please choose from this list the top five policies that you believe have been most impactful in already reducing carbon dioxide emissions in China, and please rank them in terms of most effective to least effective. If a policy you believe has been highly effective (worthy of being in the top 5) that is not on the list, please write it in.

    a. Most effective policy:

    b. 2nd-most effective policy:

    c. 3rd-most effective policy:

    d. 4th-most effective policy:

    e. 5th-most effective policy

7. Are there any policies not included in the appendix that you believe to have substantially reduced carbon dioxide emissions, even if you would not rank them to be in the top 5? If so, please list them here, along with the years they were implemented and in force.

8. For each of the policies you listed in your answer to question 4, can you provide a quantitative estimate of the carbon dioxide emissions reductions achieved per year? Recognizing this is a difficult question, please answer it however you can (e.g. as a percentage from a base year, as a reduction from business-as-usual, as an absolute reduction in millions of tons of CO_2/year)? Please specify your timeframe. If there is a source for your data, please provide it accordingly. The goal of this question is to begin to quantitatively estimate the impacts of different policies.

	Estimated quantitative impact of policy		
		Units (e.g. million tons CO_2, percentage reduction, kWh, GW capacity, or other)	**Year(s)**
Most effective policy			
2nd most effective policy			
3rd most effective policy			
4th most effective			

policy			
5th most effective policy			

9. Of the top five policies you have identified above, do you believe there is potential overlap or redundancy among them, and if so, how much?

10. Of any of the policies you have identified above, do you believe there will be a significant discrepancy between the reductions achieved in theory versus in practice? For each policy, please provide the percentage of policy impact lost through implementation. Your answer does not need to be quantitatively precise, so please use the options provided below:

	Percentage of theoretical emission reduction impact lost during practical implementation process				
	0-20% loss	**20-40% loss**	**40-60% loss**	**60-80% loss**	**80-100% loss**
Most effective policy					
2nd most effective policy					
3rd most effective policy					
4th most effective policy					
5th most effective policy					

11. Do you believe that the policy gap between the climate policies that currently exist and those that would be required to achieve China's goal to peak emissions by 2030 is:

    a. Very large, almost impossible to overcome with new and additional policies
    b. Large, can overcome with serious and deliberate effort
    c. Medium, achievable with modest effort to fix existing or implement new policies
    d. Small, very easy to achieve with existing policies

12. Which existing policies do you believe could be improved to achieve greater emissions reductions through revision or different means of implementation? Why? For each policy you recommend revising, what specific changes would you recommend that the Chinese government make to these policies to improve the likelihood that China will achieve its climate targets?

13. Which new and additional policies would you recommend to the Chinese government in order for China to achieve its climate targets, and why? Please rank them in order of likely effectiveness?

14. Which national Chinese climate policies would you recommend be eliminated because they are either ineffective from a mitigation point of view or too expensive in terms of cost-benefit analysis.

15. The Chinese NDC targets are primarily focused on mitigation of carbon dioxide emissions. Do you see potential for mitigation for other greenhouse gases? If so, which specific policies would you recommend be considered by the Chinese government?

16. Do you have any specific suggestions for how the Chinese government could achieve synergies between mitigation and adaptation/resilience policies?

17. Do you observe any tensions between mitigation and adaptation policies in China?

Appendix A

In 2014, China first announced its intended nationally determined contribution (INDC) for the Paris Agreement on Climate Change in the context of a joint announcement between President Barack Obama and President Xi Jinping. It later formalized its commitment through its submission to the UN Framework Convention on Climate Change.[1] The key commitments are excerpted from the submission below:

> "Based on its national circumstances, development stage, sustainable development strategy and international responsibility, China has nationally determined its actions by 2030 as follows:
>
> - To achieve the peaking of carbon dioxide emissions around 2030 and making best efforts to peak early;
> - To lower carbon dioxide emissions per unit of GDP by 60% to 65% from the 2005 level;
> - To increase the share of non-fossil fuels in primary energy consumption to around 20%; and
> - To increase the forest stock volume by around 4.5 billion cubic meters on the 2005 level.
>
> Moreover, China will continue to proactively adapt to climate change by enhancing mechanisms and capacities to effectively defend against climate change risks in key areas such as agriculture, forestry and water resources, as well as in cities, coastal and ecologically vulnerable areas and to progressively strengthen early warning and emergency response systems and disaster prevention and reduction mechanisms."

[1] The formal submission is available at this link: http://www4.unfccc.int/Submissions/INDC/Published%20Documents/China/1/China's%20INDC%20-%20on%2030%20June%202015.pdf