Title:	Science Fiction or Political Reality: Considering the Global Geopolitics of
~ .	Geoengineering
Speakers:	Dr. Curtis Bell, Associate Professor of Maritime Security and Governance
	US Naval War College & Dr. Patrick Keys, Assistant Professor of Atmospheric
	Science Colorado State University
Date:	5 December 2022
Time:	1200-1315
Where:	C-138
POC:	CDR Andrea H. Cameron

Synopsis:

Climate change and unabated greenhouse gas emissions are increasing the likelihood that humanity could turn to intentional climate interventions (a.k.a. geoengineering) that are designed to reduce global temperatures. The science behind climate intervention technologies has long assumed that such an ambitious effort would require global coordination of many countries, all orchestrated by some central authority such as the United Nations. However, with geopolitical tensions rising and the estimated costs of climate intervention falling, it is now more likely than ever that a state acting alone could unilaterally change the global climate.

This Lecture of Opportunity will discuss the latest science of climate intervention, the budget and military capabilities a state would need to attempt this, and the national characteristics and geopolitical conditions that would make a country more or less likely to do this alone. The presentation will reveal that stratospheric aerosol injection---spraying small particles into the stratosphere to bounce solar radiation back into space---is now feasible and well within the budgets of dozens of states who might want to do this alone. It also considers the potential effects: improved conditions for some parts of the globe, at the steep cost of worse weather for other regions. The presenters hope to end the lecture with an open discussion of the ethical and geopolitical implications of plausible single-country climate intervention scenarios.

Resources:

https://www.pnas.org/doi/10.1073/pnas.2210036119

https://theconversation.com/solar-geoengineering-might-work-but-local-temperatures-couldkeep-rising-for-years-190638

Bios:

Dr. Curtis Bell is an Associate Professor in the International Programs Department at the U.S. Naval War College and the Director of the Maritime Security and Governance Staff Course. He is widely published on topics including maritime security, coup plotting, democratic backsliding, environmental security, and political event forecasting. Before joining the Naval War College in 2021, Curtis created Stable Seas, a non-governmental research program that specializes in multilateral cooperation at sea and the maritime activities of terrorists and other violent extremists. He has on five continents, consulting and supporting the International Maritime

Organization, United Nations on Drugs and Crime, and international maritime law enforcement agencies. His work has appeared in the *New York Times*, *Washington Post*, the *Economist*, and academic journals like *International Studies Quarterly* and *Journal of Conflict Resolution*. He earned a doctorate in political science from the University of Colorado and previously taught international relations there and at the University of Tennessee.

Dr. Patrick Keys is an Assistant Professor in the Department of Atmospheric Science at Colorado State University. His research is focused on a broad range of global challenges, including climate change impacts, cross-scale risks, and social-ecological tele-connections. He has developed modeling tools for examining terrestrial moisture recycling, aimed at leveraging geophysical insights for resource management. He also works to understand how futures methods can be used to qualitatively and quantitatively discern a sustainable path forward for society. Prior to joining CSU, Pat founded an environmental consultancy that worked with local and international partners, investigating food security in the UAE, the link between drought and conflict in sub-Saharan Africa, and climate change adaptation and mitigation in Fort Collins, Colorado. Pat has a PhD in Sustainability Science from Stockholm University, an MSc in Civil and Environmental Engineering from the University of Washington, and a BA in Biology from Willamette University.