

Congresswoman Elaine G. Luria Testimony Before the House Select Committee on the Climate Crisis

In Coastal Virginia, climate change is not a problem for tomorrow; it is one we face every day. As the Select Committee considers policy recommendations, I hope your work will prioritize national security, clean energy, and resilient communities.

National Security

The Department of Defense's 2019 *Report on the Effects of a Changing Climate* found that 60 of the 79 highest priority military installations in the U.S. are or will be at risk of recurrent flooding, 48 are or will be at risk of drought, and 43 are or will be at risk of wildfires as a result of climate change.¹

Coastal Virginia is at particular risk. The report finds "Navy Region Mid-Atlantic and the greater Hampton Roads area is one of the most vulnerable to flooding military operational installation areas in the United States,"² and identifies Naval Station Norfolk, Joint Base Langley-Eustis, and Naval Air Station Oceana as at high risk for recurrent flooding. One study found that, by mid-century, the main road to Naval Station Norfolk will flood at high tide *every day*.³ Further research shows that major military installations in the U.S. will face an average of more than a month of additional days with heat indexes above 100°F.⁴ Military readiness will suffer if our service members cannot safely get to or from base or conduct training exercises.

In addition to its visible impacts on our military installations, climate change also fosters global political instability. Studies have indicated that weather events associated with climate change may have contributed to the start of the Arab Spring⁵ and the Syrian Civil War.⁶ A recent comprehensive study in the journal *Nature* found that climate change has already contributed to armed conflicts over the past half century, and that "intensifying climate change is estimated to increase future risk of conflict" through factors such as drought, flooding, and resource scarcity.⁷ Mitigating these threats would reduce the need to send our service members into harm's way.

¹ Department of Defense. *Report on Effects of a Changing Climate to the Department of Defense*. Media.defense.gov. <https://media.defense.gov/2019/Jan/29/2002084200/-1/-1/1/CLIMATE-CHANGE-REPORT-2019.PDF>

² Ibid.

³ Atinkson, Larry P., Tal Ezer, and Elizabeth Smith. "Sea Level Rise and Flooding Risk in Virginia." *Sea Grant Law and Policy Journal*. Odu.edu. https://digitalcommons.odu.edu/cgi/viewcontent.cgi?article=1116&context=ccpo_pubs

⁴ Dahl, Kristy. "US Military on the Front Lines of Extreme Heat." Blog.ucusa.org. https://blog.ucusa.org/kristy-dahl/military-extreme-heat?_ga=2.170567335.68016399.1573770532-1952043407.1567086713

⁵ Perez, Ines. "Climate Change and Rising Food Prices Heightened Arab Spring." *Scientific American*. Scientificamerican.com. <https://www.scientificamerican.com/article/climate-change-and-rising-food-prices-heightened-arab-spring/>

⁶ Kelly, Colin P., Shahrzad Mohtadi, Mark A. Cane, Richard Seager, and Yochanan Kushnir. "Climate Change in the Fertile Crescent and Implications of the Recent Syrian Drought." *Proceedings of the National Academies of Sciences*. <https://www.pnas.org/content/112/11/3241>

⁷ Mach, Katharine J., et al. "Climate as a Risk Factor for Armed Conflict." *Nature*. Nature.com. <https://www.nature.com/articles/s41586-019-1300-6>

To address these risks, the Committee’s recommendations should require DOD to consider climate change at all stages of planning and decision-making. I was troubled by recent reporting that the Navy dismantled its task force dedicated to climate planning.⁸ Instead of ramping down such efforts, DOD should establish similar task forces within each service branch as well as a dedicated team of civilian climate experts to advise DOD senior leadership. Additionally, as the world’s single largest institutional greenhouse gas producer,⁹ the Committee should recommend that DOD be required to implement a plan to significantly reduce emissions by 2050.

Clean Energy

We must reduce all net greenhouse gas emissions within the U.S. to zero by 2050 at the latest. Clear and consistent market-based rules, coupled with robust investments in carbon-free energy technologies, will cut pollution and make the U.S. the world leader in the 21st century clean economy. Coastal Virginia is uniquely positioned to flourish as we transition to clean energy. By 2026, the waters off Virginia Beach could host the largest offshore wind project in the nation.¹⁰ The Committee should build on this momentum by including recommendations for extending and expanding tax credits for clean energy generation, energy efficiency, and battery storage.

The Committee’s recommendations for clean energy legislation should include nuclear power as part of the solution. As a former nuclear engineer in the Navy, I know that nuclear power, when deployed safely and responsibly, can play a key role in decarbonizing our economy. Modeling performed by the Massachusetts Institute of Technology has found that nuclear energy can dramatically reduce the cost of deep decarbonization by providing a constant flow of power that can complement the more intermittent power generated by wind and solar.¹¹ Nuclear power also has the potential to reduce emissions from the difficult-to-decarbonize industrial sector.¹²

Resilient Communities

Our transition to clean energy must be coupled with investments in communities facing the brunt of climate change impacts. State and local governments in coastal communities throughout the U.S., including in Coastal Virginia, cannot bear the costs of sea level rise alone.

Hampton Roads is experiencing the fastest rate of sea level rise of any region along the East Coast.¹³ A study commissioned by the City of Virginia Beach found that the cost of

⁸Athey, Philip. “Navy Quietly Shut Down Climate Change Task Force.” ENews.net.

<https://www.eenews.net/greenwire/2019/08/07/stories/1060877355>

⁹ Crawford, Neta C. “Pentagon Fuel Use, Climate Change, and the Costs of War.” Watson.brown.edu.

<https://watson.brown.edu/costsofwar/files/cow/imcc/papers/2019/Pentagon%20Fuel%20Use%2C%20Climate%20Change%20and%20the%20Costs%20of%20War%20Final.pdf>

¹⁰ Ress, Dave. “Dominion Wants to Build The Nation’s Largest Offshore Wind Farm Near Virginia Beach.” *The Virginian Pilot*. Pilotonline.com. <https://www.pilotonline.com/business/dp-nw-dominion-offshore-20190919-uuxqtqkwkijagxj7sb323vbjgb4-story.html>

¹¹ Massachusetts Institute of Technology. *The Future of Nuclear Energy in a Carbon-Constrained World*. Energy.mit.edu. <http://energy.mit.edu/wp-content/uploads/2018/09/The-Future-of-Nuclear-Energy-in-a-Carbon-Constrained-World.pdf>

¹² Cunliff, Colin. “An Innovation Agenda for Hard-to-Decarbonize Energy Sectors.” *Issues in Science and Technology*. Issues.org. <https://issues.org/an-innovation-agenda-for-hard-to-decarbonize-energy-sectors/>

¹³ National Oceanic and Atmospheric Administration Office for Coastal Management. “Hampton Roads’ Sea Level Rise Adaptation Advances on Multiple Fronts.” Coast.noaa.gov. <https://coast.noaa.gov/states/stories/sea-level-rise-adaptation-advances-on-multiple-fronts.html>

infrastructure to combat sea level rise could be up to \$3.8 billion.¹⁴ A separate study has found that the cost just of building sea walls in the Hampton Roads area will be over \$4.6 billion.¹⁵

Communities in Coastal Virginia are stepping up to meet this challenge. Norfolk has proposed over \$1 billion to fight sea level rise and Virginia Beach plans to spend \$450 million in stormwater projects over the next five years.¹⁶ All cities within the region participate in the Hampton Roads Planning District Commission, which is coordinating long-term sea level rise planning through 2100.¹⁷

Although local communities are doing their part, only the federal government has the resources, expertise, and legal authority to address sea level rise and other climate effects in a comprehensive manner. This Committee should support policies to dramatically increase investment in the Federal Emergency Management Agency (FEMA)'s pre-disaster mitigation funding and consider additional financing solutions such as revolving loan funds for resiliency projects. While these initiatives will involve substantial up-front costs, building resiliency can deliver taxpayers a return of up to six-to-one in averted disaster losses.¹⁸

The Committee should also consider ways to improve information sharing about sea level rise and recurrent flooding. This could be accomplished by strengthening the mandates of the federal agencies conducting oceanic and sea level rise research, including the National Oceanic and Atmospheric Administration (NOAA), the National Aeronautics and Space Administration (NASA), and FEMA, to ensure that they are effectively sharing data and analysis with local governments and communities threatened by flooding.

Conclusion

I thank the Committee for providing the opportunity for all Members to share solutions and stories of how climate change affects their communities. I look forward to working with the Committee to develop policies that support coastal communities, safeguard our national security, and position the United States to become the world leader of the clean energy economy.

¹⁴ Coutu, Peter. "Sea level Rise Could Cost Virginia Beach Billions of Dollars, Study Says." *The Virginian Pilot*. Pilotonline.com. https://www.pilotonline.com/news/environment/article_54a6f7be-19cc-11e9-a249-237d551545f7.html

¹⁵ Hafner, Katherine. "Seawalls to Fight to Rising Waters in Hampton Roads Would Cost More Than \$4.6 Billion, Says Nationwide Study." *The Daily Press*. Dailypress.com. <https://www.dailypress.com/news/vp-nw-seawall-cost-0621-20190620-story.html>

¹⁶ Sea Level Rise.org. "Virginia's Sea Level is Rising." Sealevlerise.org. <https://sealevelrise.org/states/virginia/>

¹⁷ Hampton Roads Planning District Commission. "Region Adopts Sea Level Rise Planning Policy." Hrpdcva.gov. <https://www.hrpdcva.gov/news/article/october/24/2018/region-adopts-sea-level-rise-planning-policy>

¹⁸ National Institute of Building Sciences. "Natural Hazard Mitigation Saves Study." Nibs.com. <https://www.nibs.org/page/mitigationsaves>