Department of Ocean and Coastal Science
Center for Computation & Technology

Response to Dear Colleague Letter:
NSF Intent to Restructure Critical Weather Infrastructure
Faculty of Louisiana State University

Dear NSF folks-

Thank you for soliciting feedback on this issue.

I'm writing to express my views on the proposed reorganization of NCAR.

I am writing from the CMIP Community meeting in Kyoto, where many of the NCAR Climate and Global Dynamics leadership with expertise in Earth System Science are in attendance. These scientists represent some of the greatest minds in the world, and are leaders at the international scale, with extensive expertise and 100's of person-years of working together to understand how climate works, both within NCAR and globally. Dismantling this institution is incredibly short sighted, and will diminish our standing as an international leader in climate science, ocean science, atmospheric science, impacts assessment, and a myriad of other dimensions. Clearly at this moment when we are spending enormous amounts of money on war, we can find the relatively small amount of funds needed to keep this critical institution going. NCAR's immense benefit to both the US and the world should remain a priority, and not be thrown away lightly. NCAR is a beacon of enlightenment and progress, a national treasure that should be protected.

As a former postdoc at NCAR, and as a person who now sends students to work with NCAR, collaborates with them and uses their resources extensively in my work, the role of this institution is enormous in workforce development, both here in the US and globally. There is no replacement. My training there has enabled me to have a career with an international impact, as an expert in translating Earth system and ocean model projections into fisheries impacts, both working with the Fisheries Model Intercomparison Project, an international group of fisheries modelers, for which I am an Earth system model coordinator, and working with NOAA fisheries, where I am working with the National Marine Fisheries directorate to design best practices to go from Earth system models to fisheries management. The number and diversity of scientific disciplines working together at NCAR and my training within that community is precisely what has enabled me to have the career and impact that I am having. I would never have got here without having been trained in that unique environment.

Further, the Community Earth System Model (CESM), developed at NCAR, is the only open-source community based global Earth system model, used for applications throughout geological and historical time and into the future, applications that are critical to national and international needs and basic science. As an open-source model, CESM has a large community of users around the world that contribute to its development and use it for various applications. I myself have used it in my lab to look at ocean plankton responses to the K-Pg asteroid impact, and how Marine Cloud Brightening might mitigate coral reef bleaching, research efforts that would not have been possible without strong support of NCAR scientists and software engineers. Dismantling the team that creates CESM, and all of the institutional knowledge they possess, is not something that can be farmed off to other agencies or universities, as it is fundamentally synergistic. NCAR is not replaceable.

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In conclusion, I strongly oppose any dismantling, relocating or fragmenting of NCAR. NSF-NCAR is a beacon of scientific achievement in the United States, housing an irreplicable community of expertise in Earth system science and modeling, including atmospheric, oceanic, climate, land, and ice modeling, computational methods, supercomputer architecture, and scientific communication, as well as workforce development for early career researchers. NSF-NCAR is one of the most respected science centers in the world, a research engine and nexus we should be proud of and preserve for the next generation.

Sincerely,

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