

PROPOSED: NATIONAL ARCTIC ICE RESTORATION INITIATIVE (NAIRI) PLAN EXECUTIVE SUMMARY

Stanley Farkas, PhD; Steven Zornetzer, PhD; Tony Strawa, PhD; Philip Russell, PhD; Gary Latshaw, PhD

Global warming (GW) is causing a dramatic shrinking in Arctic sea ice, land ice, and snow. A National Oceanic and Atmospheric Administration (NOAA) study reports that the Arctic has warmed more than twice as fast as the rest of the planet, due to a phenomenon known as Arctic Amplification. Arctic warming also drives the thawing of permafrost releasing greenhouse gasses (GHG) from the Arctic land and shallow seabed off the Siberian coast that further accelerates global warming. With loss of sea ice left unchecked, global warming will soon exceed the 1.5°C (2.7°F) target set by the UN Intergovernmental Panel on Climate Change for 2100, resulting in food and water shortages, damage to infrastructures and the environment, mass human migrations, and destabilization of governments, all threatening U.S. national security interests at home and abroad.

U.S. national security at home is at risk because of extreme weather patterns and sea level rise linked to Arctic warming impacting our agriculture, infrastructure, and economy. The balance of power in the Arctic region is in transition as Russia is pursuing resource exploitation and shipping in the region. China is also showing increased interest in the region. On the other hand, U.S. military installations and facilities in the Arctic are at risk of significant infrastructure damage resulting from erosion, thawing permafrost, and rising sea levels.

We believe the U.S. urgently needs a mitigation strategy focused on preservation and restoration of summer Arctic sea ice to prevent the effects of a warming Arctic from reaching a tipping point. This White Paper proposes to the Biden-Harris Administration that the U.S. establish, in the spirit of a coordinated "whole-of-government approach", a multi-agency effort for an applied R&D program called the "National Arctic Ice Restoration Initiative" (NAIRI). NAIRI is designed to better understand Arctic climate processes and develop approaches to help preserve and restore Arctic sea ice. Further, we believe the U.S. should take the lead in developing and coordinating an international response to mitigate Arctic sea-ice loss and its accelerant effect upon global warming (GW) and the climate change crisis. The DoD identifies GW as a threat multiplier. Annual funding for NAIRI would notionally be at 2021 levels of appropriate elements of participating Agency budgets **augmented** by an aggregated total of \$283M over 5 years. (Please note: this budget is updated from the recent publication "Strawa, A. et al. Arctic Ice Loss Threatens National Security: A Path Forward. Orbis. 10 Aug 2020").

Doing nothing to stop the continued warming of the Arctic and the devastating consequences to the world, at home, and to our National security is not an option.

Contact: stan@securethefuture2100.org