

Near-Term Imperatives for Comprehensive Climate Policy

SilverLining's Recommendations for the Biden-Harris Administration Plan for Climate Change and Environmental Justice



December 2020

Climate change poses near-term risks to safety that are not adequately understood and are not addressed by measures for reducing greenhouse gases alone. Climate impacts already cause substantial suffering, with the greatest impacts on society's most vulnerable. These impacts are projected to escalate, risking "tipping points" for catastrophic abrupt changes in the next few decades, before even the most aggressive CO₂ mitigation measures would take effect.

To keep people safe and ecosystems stable while the world transitions to a carbon-neutral economy, it may be necessary to reduce warming *in the next few decades*. This requires a climate portfolio extending beyond CO₂ mitigation and removal, to address powerful short-lived warming agents and warming itself.

SilverLining recommends the following policies to enhance international cooperation, increase national security, and strengthen domestic policy on climate change and climate intervention.

International Cooperation

- Rejoin the Paris Agreement, ratify the Kigali Amendment, and reaffirm international commitment more generally to climate safety
- Call for an IPCC expert meeting on near-term abrupt change risks and rapid climate interventions and shepherd a future IPCC Special Report
- Support assessment of solar climate intervention by the Montreal Protocol
- Expand international access to climate models, data sets, and computing to accelerate scientific cooperation, particularly for research in climate intervention
- Facilitate engagement by developing countries in scientific research on climate intervention
- Support international efforts to reduce short-lived climate forcers

National Security

- Include climate change as part of the National Security portfolio
- Significantly expand DOD climate and weather observation and prediction capabilities to secure infrastructure, fortify operations, and support readiness
- Increase collaboration and information sharing with civilian science agencies in climate and weather observation and prediction
- Drive toward 5-year assessment of solar climate interventions to prevent strategic surprise and respond to international efforts

We applaud the Biden-Harris administration for its profound commitment to climate change and environmental justice and bold plans for addressing them. We offer our recommendations to aid in that effort.

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Domestic Policy Priorities

1. Substantially increase investments in climate research and earth system prediction
 - Weather and climate prediction, including a possible "Operation Warp Speed" for climate prediction
 - Observations, including investment in "shovel-ready" programs and enhanced operational capabilities to monitor key systems (e.g., Arctic, hurricanes)
 - Advance warning systems for abrupt changes, with an immediate focus on permafrost and development of a model for other abrupt changes
 - Evaluation of natural climate experiments, including observation and study of the climate effects of COVID-19, wildfires, and volcanoes
 - Expansion of computing for climate research, including overall capacity, acceleration of cloud and exascale computing, and enhancements to the technology workforce
2. Establish a national climate intervention research effort to assess the benefits and risks of methods to reduce warming rapidly
 - Build toward capabilities for assessment of solar climate interventions within 5 years, accelerating relevant research efforts in NOAA, DOE, NSF, NASA, and other agencies
 - Establish an interagency effort, with NOAA as lead agency for assessment and coordination through the USGCRP
 - Promote international cooperation and access to scientific tools and data
 - Increase scientific research capacity within vulnerable communities
 - Promote engagement of women and minorities in climate intervention research
 - Support public engagement through agency and interagency programs
3. Prioritize emissions reductions with the potential for substantial mitigation to reduce warming and/or projected GHG emissions in the next 10-20 years
 - Methane from natural gas, agriculture, and waste
 - HFCs, other ozone depleting substances, and black carbon
 - Greenhouse gas removal, including industrial, biological, and mineralization approaches
 - Refrigeration and air-conditioning
 - Data centers and computing

"It's the number one issue facing humanity."

- Joe Biden on climate change, 10/24/2020

"Warming climate poses enormous risks to people and ecosystems within the next 10 to 30 years, and the world does not have sufficient options available to ensure human safety and protection of critical infrastructure."

- SilverLining's 2019 Ensuring a Safe Climate Report

Read the full recommendations at www.silverlining.ngo
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