

Efforts to Adapt to Climate Change Effects: Perspectives from the DOD Action Team



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8 Nov 2021



DoD Climate Overview

- **Climate Policy/Directives, Authorities**
- **Climate Policy Implementation Reports & Tools:**
 - DoD Climate Adaptation Plan (CAP) released 7 October 2021
 - DoD Climate Risk Analysis (DCRA) released 21 October 2021
 - DOD Highlights and Examples of the CAP released 4 November 2021
 - Defense Climate Assessment Tool (DCAT) and DoD Regional Sea Level (DRSL) database
- **Next Steps**

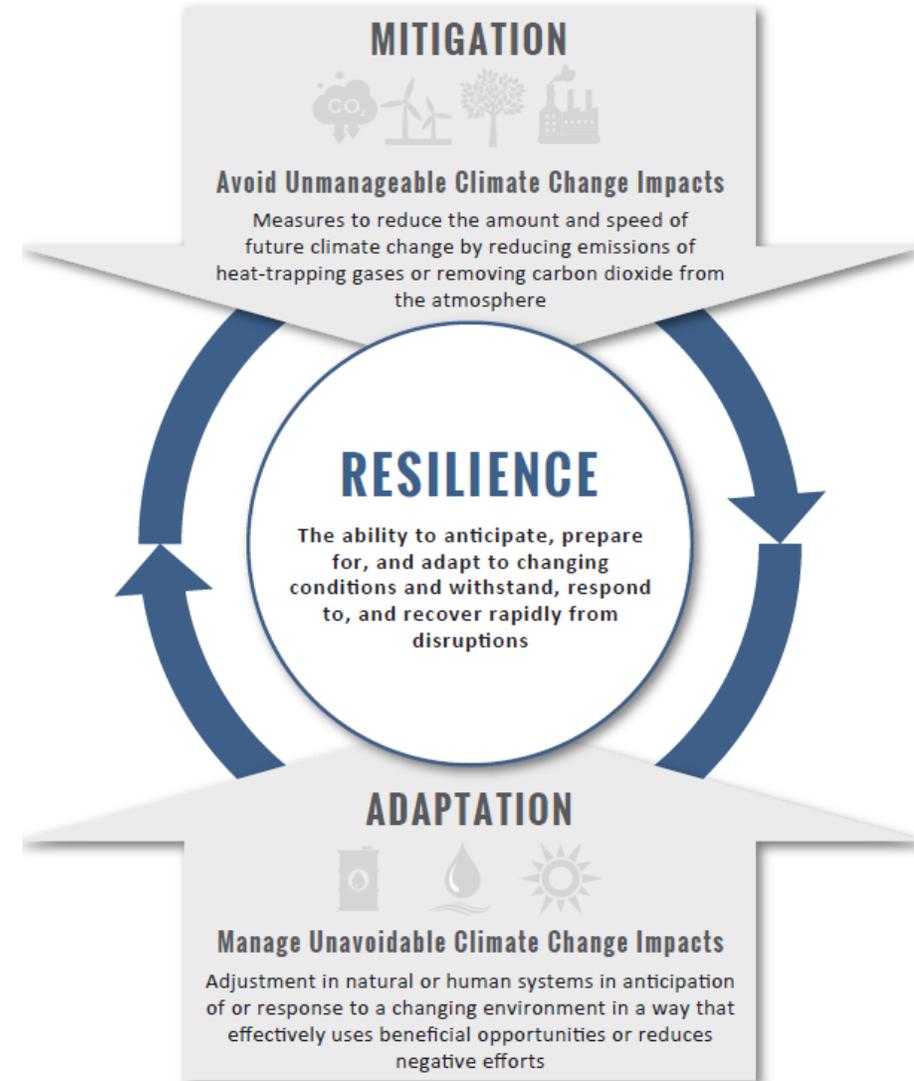
Adaptation: Adjustment in natural or human systems in anticipation of or response to a changing environment in a way that effectively uses beneficial opportunities or reduces negative efforts.

Resilience: The ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions.

— DODD 4715.21, Climate Change Adaptation and Resilience

Mitigation: Measures to reduce the amount and speed of future climate change by reducing emissions of heat-trapping gases or removing carbon dioxide from the atmosphere.

— U.S. Global Change Research Program





BLUF: DoD Climate Preparedness and Resilience

DoD Requirements, Policy and Guidance:

- DoD Quadrennial Defense Review (2014)
- DoD Climate Change Adaptation Roadmap (2014)
- DoD Directive 4715.21 Climate Change Adaptation and Resilience (2016)
- FY 18-19-20 National Defense Authorization Acts
- USD(AS) Memo Improving Defense Installation Resilience to Rising SL
- DoDD 3020.40, *Mission Assurance*
- DoD Instruction (DoDI) 4170.11, *Installation Energy Management*
- DoDI 4715.03, *Natural Resources Conservation Program*

EO 14008, Tackling the Climate Crisis at Home and Abroad, released 27 January 2021

- Emphasis on national security, climate mitigation (energy and sustainability), climate adaptation, and environmental justice
- Deliverables:
 - DoD Climate Risk Assessment 1Q22
 - DoD Climate Adaptation Plan Oct 2021

Climate Data provides input to:

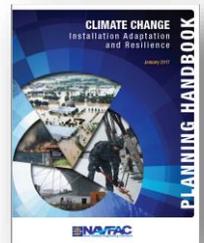
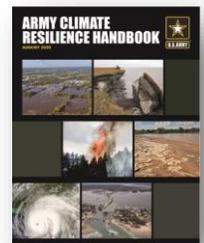
- Real Property Master Plans
- Installation Natural Resources Master Plans
- Installation Energy & Water Resilience Plans
- *Climate Adaptation for DoD Natural Resource Managers: A Guide to Incorporating Climate Considerations into Integrated Natural Resource Management Plans*
- Unified Facilities Criteria Updates

DoD Climate Assessment Tool (DCAT):

Provides screening level exposure assessments to guide further studies where mission and operations may be exposed to climate hazards, and the resulting investments in resilience measures to reduce risk

Based on best available and actionable science – USACE aggregates, integrates and translates best available science into actionable information for decision-makers

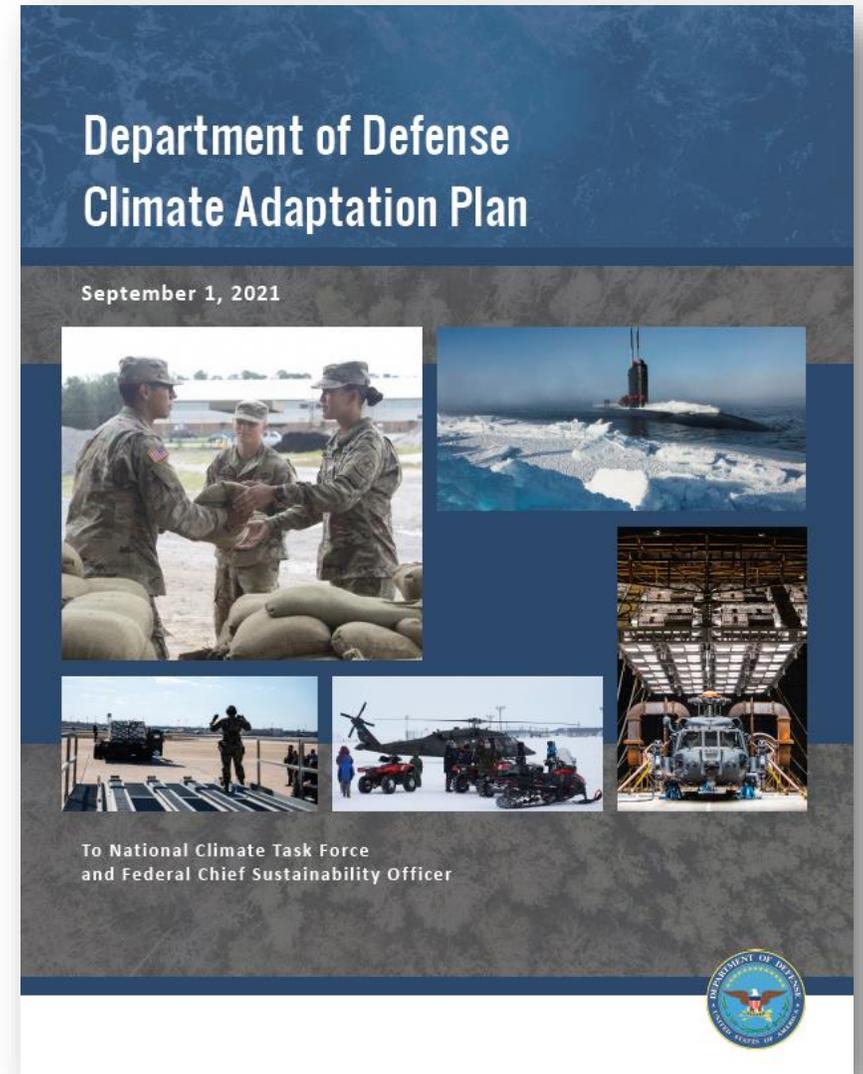
Results indicate there is no epoch-scenario under which installation exposure to climate hazards is projected to decrease





DOD Climate Adaptation Plan

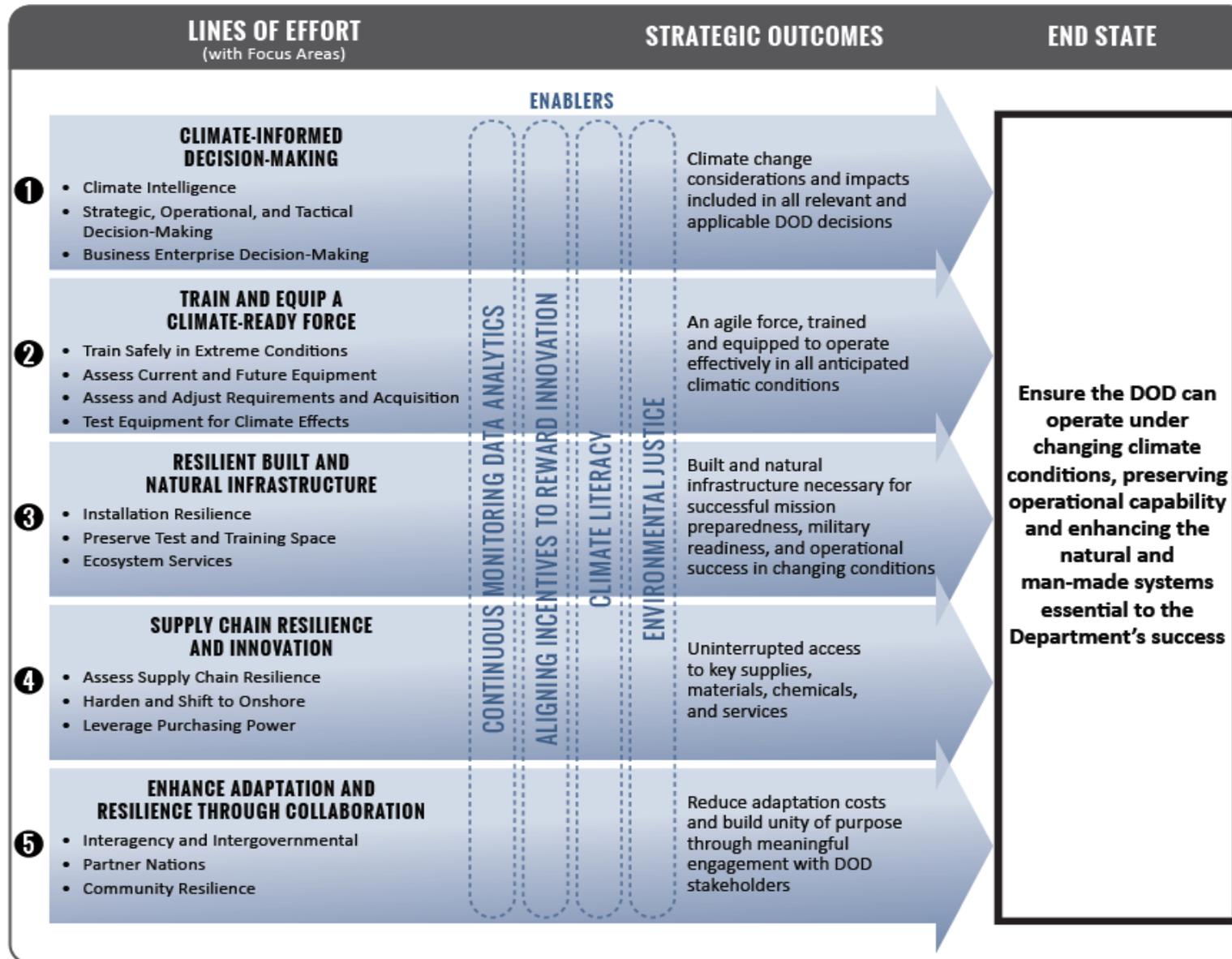
- Spurred by EO 14008, Section 211, issued 27 January 2021
- Signed by SECDEF 1 September 2021
- Released by White House 7 October 2021
- **Topline Messages:**
 - Climate change is a serious threat to our security. It impacts our missions, plans, and capabilities and must be met by ambitious, immediate action.
 - The Department is responding to climate change in two ways: adaptation to enhance resilience to the effects of climate change; and mitigation to reduce greenhouse gas (GHG) emissions.
 - The Department is showcasing its bold steps with its Climate Adaptation Plan (CAP), which is intended to drive transformative change across the entire Department.
- **DoD Climate Spotlight:**
<https://www.defense.gov/Spotlights/Tackling-the-Climate-Crisis/>



<https://media.defense.gov/2021/Oct/07/2002869699/-1/-1/0/DEPARTMENT-OF-DEFENSE-CLIMATE-ADAPTATION-PLAN-2.PDF>



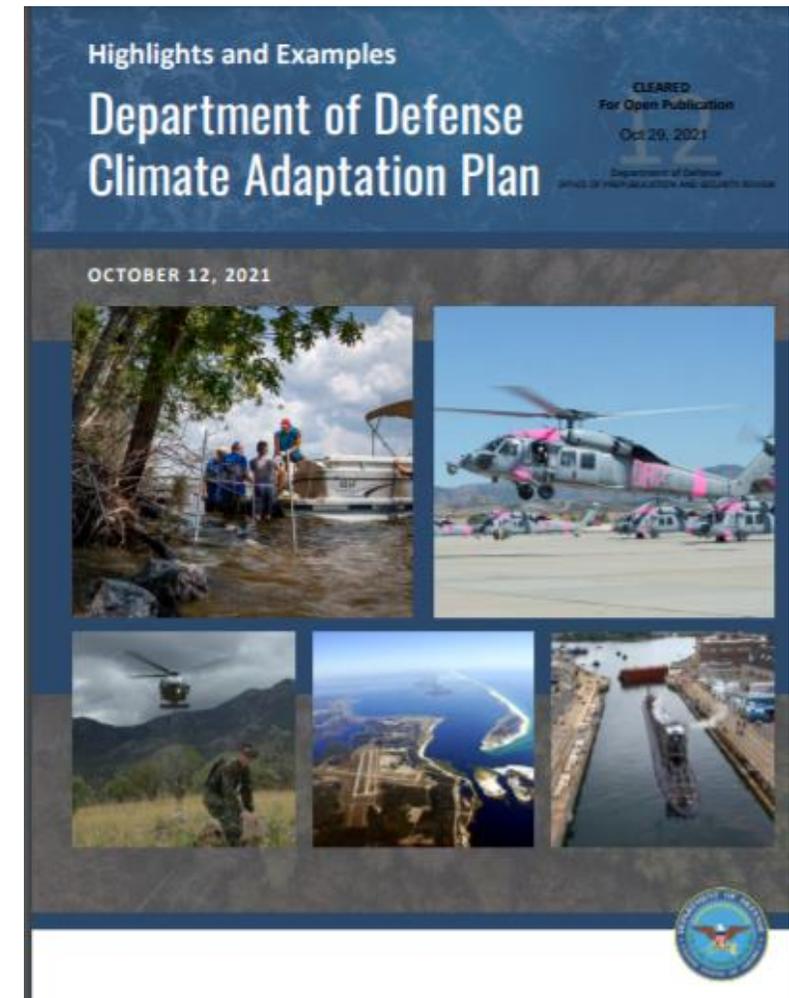
DoD Climate Adaptation Plan





DoD CAP: Highlights and Examples

- **Released by DoD 4 November 2021**
- Companion document to the Department of Defense (DOD) Climate Adaptation Plan (CAP) highlights the Department's past successes and ongoing initiatives to address climate change considerations in the Department's plans, strategies, operations, and infrastructure.
- **This companion document represents just a few examples from a larger compilation of adaptation efforts across the Department.**
- Aligned with the structure of the CAP, examples cover the five Lines of Effort (LOE)
- **DoD Climate Spotlight:**
<https://www.defense.gov/Spotlights/Tackling-the-Climate-Crisis/>



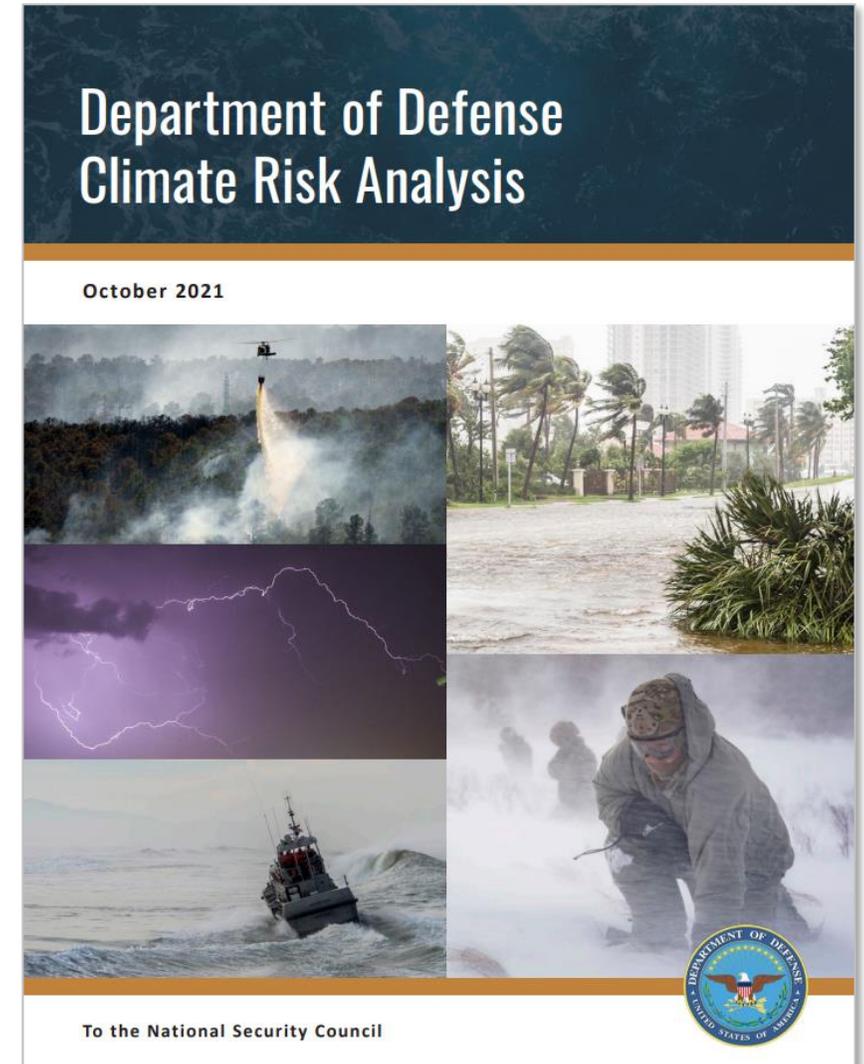
<https://media.defense.gov/2021/Nov/03/2002886171/-1/-1/0/HIGHLIGHTS-AND-EXAMPLES-FOR-DOD-CLIMATE-ADAPTATION-PLAN.PDF>



Defense Climate Risk Analysis (DCRA)

Incorporating climate change security implications across relevant DOD strategy, planning and programming documents and processes.

- **Developed by USD(Policy) per EO 14008, Section 103, issued 27 January 2021**
- **Signed by SECDEF 9 October 2021**
- **UNCLASS version released by White House 21 October 2021**
- **Topline Messages:**
 - The DoD will play a key role in many security scenarios which will be influenced by climate change.
 - Climate poses direct and compounding risks across a variety of sectors and regions.
 - Climate will be incorporated into relevant strategy, planning, and processes through DoD.
- <https://media.defense.gov/2021/Oct/21/2002877353/-1/-1/0/DOD-CLIMATE-RISK-ANALYSIS-FINAL.PDF>



<https://media.defense.gov/2021/Oct/21/2002877353/-1/-1/0/DOD-CLIMATE-RISK-ANALYSIS-FINAL.PDF>



Mitigation Related Climate Initiatives

- EO 13990: Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis
- EO 14008: Tackling the Climate Crisis at Home and Abroad
- EO 14017: America's Supply Chains
- EO 14030: Climate-Related Financial Risk
- EO (Draft) Catalyzing Clean Energy Industries and Jobs through Federal Sustainability



EO 13990: Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis

- Declares that it is essential the Federal agencies capture the social cost of greenhouse gases (SC-GHG) in decision making.
- Directs an interagency working group to establish new SC-GHG values that can be used across the Federal government and to develop associated guidance.



Process / Product A



Process/ Product B



EO 14008: Tackling the Climate Crisis at Home and Abroad

- Agencies shall consider purchasing power of the Federal Government to drive innovation,
 - and shall seek to increase the Federal Government’s resilience against supply chain disruptions.
- put the United States on a path to achieve net-zero emissions, economy-wide, by no later than 2050.
- Federal Government must drive assessment, disclosure, and mitigation of climate pollution and climate-related risks in every sector of our economy, marshaling the creativity, courage, and capital necessary to make our Nation resilient in the face of this threat.
- Instructs agencies to coordinate Climate, Environmental Justice, and Sustainability Plans.



EO 14017: America's Supply Chains

- Orders agencies to identify risks in their supply chains for critical minerals and other identified strategic materials and policy recommendations to address risks.
- Directs agencies to assess the risks posed by climate change to the availability, production, or transportation of critical goods and materials and other essential goods and materials.

Supports Supply and Chemical Transparency





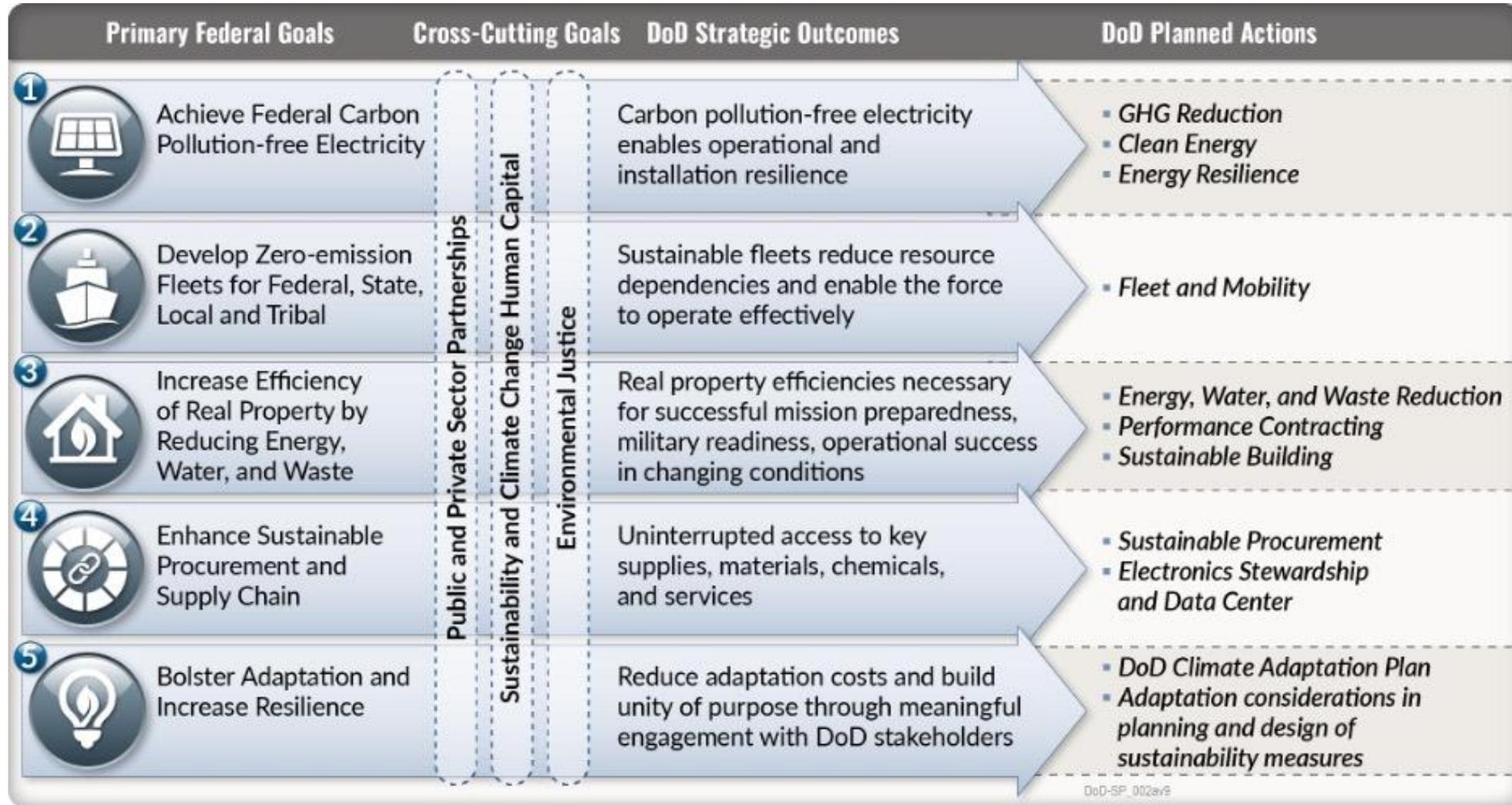
EO 14030: Climate-Related Financial Risk

- Requires that agency procurements minimize the risk of climate change.
- Requires major federal suppliers to
 - (1) disclose greenhouse gas emissions and
 - (2) disclose climate-related financial risk and
 - (3) set science-based reduction targets
- Orders agencies to consider the SC-GHG in procurement decisions and, where appropriate and feasible, give preference to bids and proposals from suppliers with a lower SC-GHG.



DRAFT Sustainability Strategy

Aligns planned actions to Federal goals



The Department's Sustainability Strategy is contained within the 2021 Sustainability Report and Implementation Plan (SRIP)



Ongoing DoD Efforts on GHGs

1. Response for Information (RFI).

- Gain input from industry on reporting GHG emissions and the best practices
- Assessing responses, to understand available information that inform further assessments.
- Includes identification of measurement and reporting tools and services, estimating tools and services, and validation services.

2. FAR Case Docket No. FAR–2021–016, Sequence No. 1,

- Advance Notice of Proposed Rulemaking, (86 FR 57404).
- Ensures agency procurements minimize the risk of climate change and consider the social cost of GHG emissions in procurement decisions is currently out for comment.

3. FAR Case Docket No. FAR 2021-15, also underway,

- Addresses requirement for major Federal suppliers to publicly disclose GHG emissions and climate-related financial risk and to set science-based reduction targets.

4. GHG Baseline Study and Pilot GHG Assessment

- Under development to support a decision logic and a reporting framework that allows DoD to identify and address GHG emissions and put in place reduction strategy.



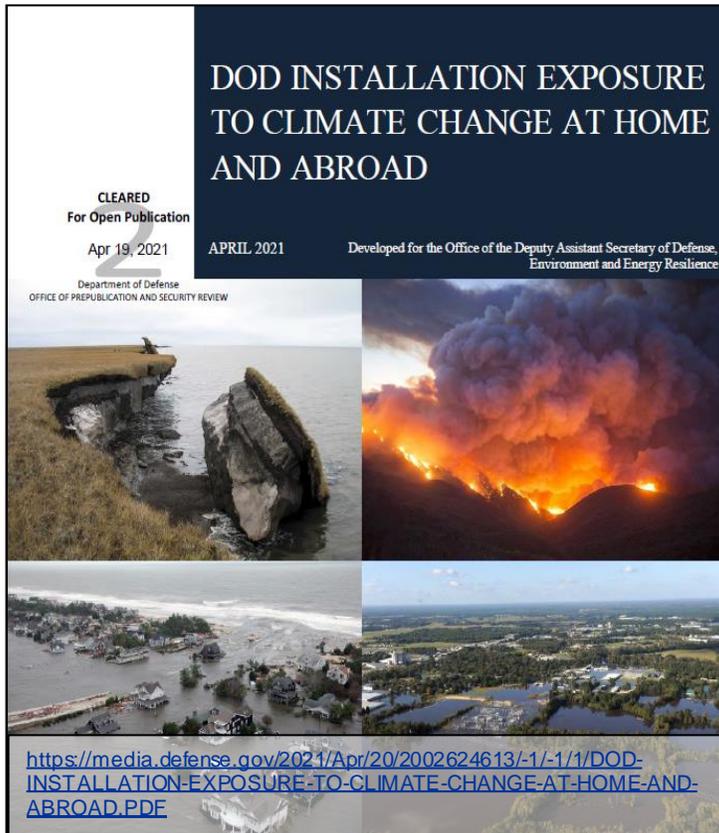
Climate Resilience Tools

- **DoD Climate Assessment Tool (DCAT)**
 - Uses data to perform consistent climate assessments and to identify installations at climate risk
 - Informs decisions about exposure to historical extreme weather and reasonably foreseeable climate effects
- **DoD Regional Sea Level Scenarios for Coastal Risk Management Database**
 - Provides scientifically-credible future sea level and extreme water level values to assist the Department in determining risk and conducting impact assessments at installations
- **These tools:**
 - Support research, analysis, and decision making at all levels in the Department about vulnerabilities to climate impacts
 - Illustrate DoD's commitment to address climate change, a “threat multiplier” and risk to our national security



DoD Climate Assessment Tool

The DoD Climate Assessment Tool (DCAT) provides regional climate information and **screening level** estimates of climate **exposure** at installations across **eight hazards**.



Heat



Wildfire



Drought



Riverine
Flooding



Coastal
Flooding



Energy Demand



Land Degradation



Extreme
Weather



Integrating Climate Resilience into Planning Processes

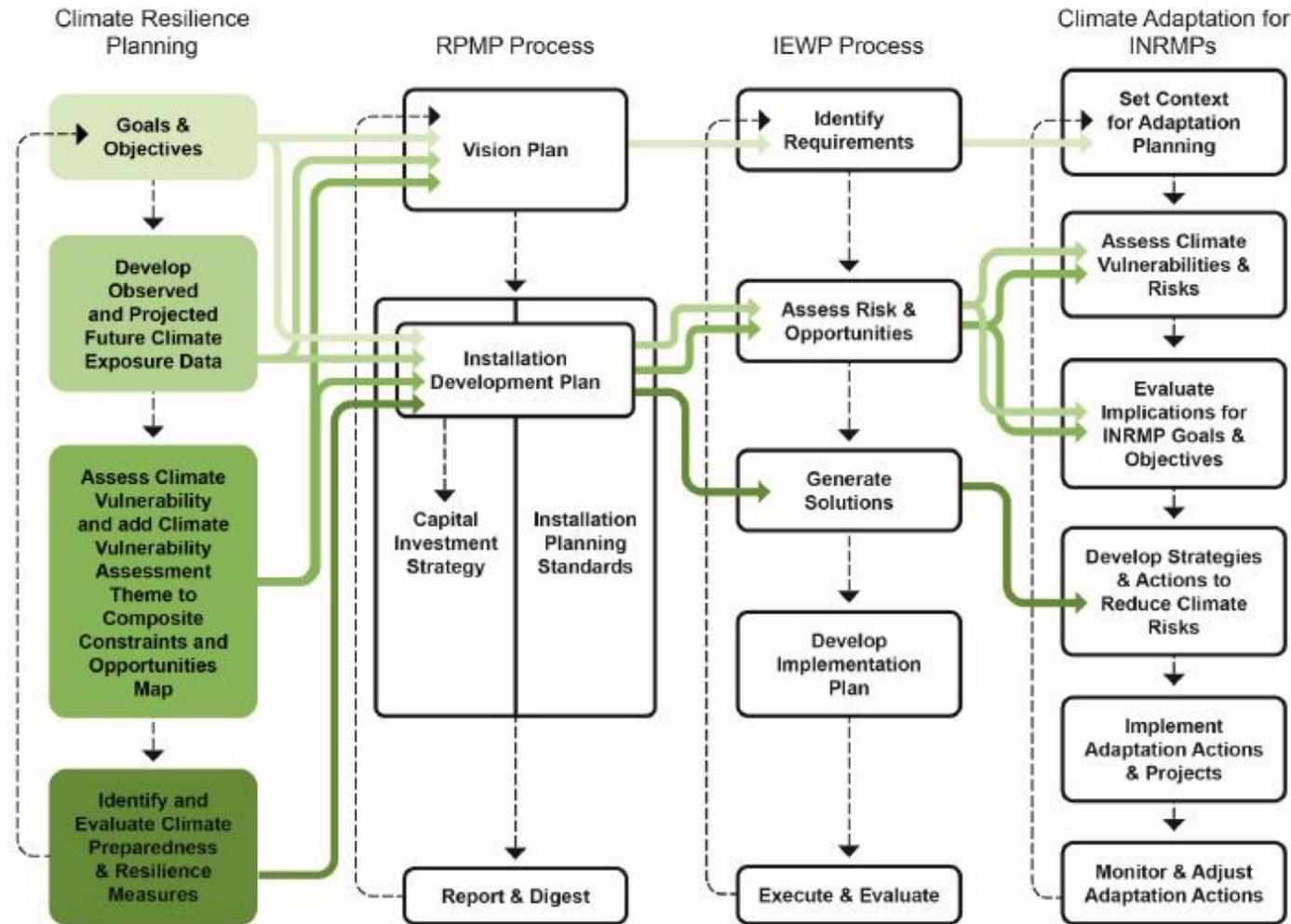


Figure 2: The climate resilience planning process is designed to bring risk-informed climate resilience planning into the RPMP process, the IEWP process, and the climate preparedness and resilience INRMP process



Next Steps

- **New EO expected – Catalyzing Clean Energy Industries and Jobs through Federal Sustainability**
- **Climate Change Initiatives Implementation Plan in FY22 will link the CAP, SRIP, DCRA, energy and water resilience, input to CEQ resilience reports, and other climate-related issues.**