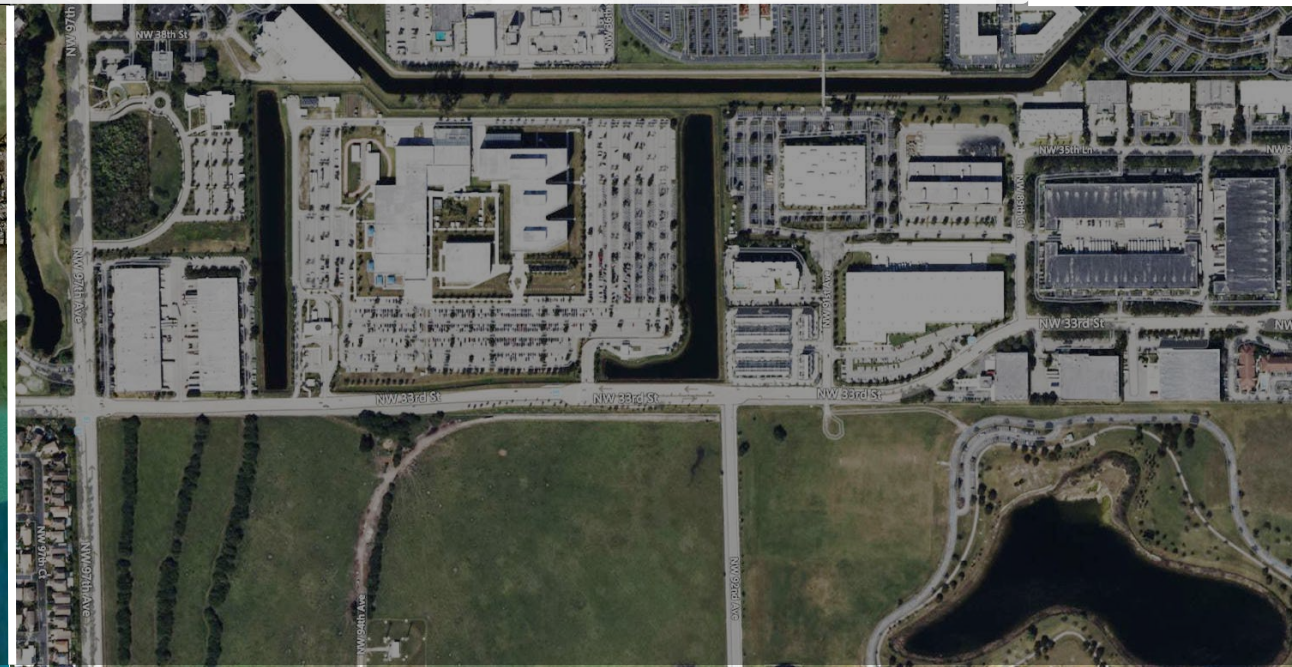




South Florida Military Installation Resilience Review



MIRR GRANT: PROJECT PURPOSE



U.S. Department of Defense
Office of Local Defense
Community Cooperation

The purpose of the MIRR is to identify the risks, hazards, and vulnerabilities of concern as it relates to the ability of the military to carry out its missions on the installation that could be mitigated through investments and solutions *outside the fence line in the community.*

ADAPTATION: LEADING WITH MISSION ASSURANCE

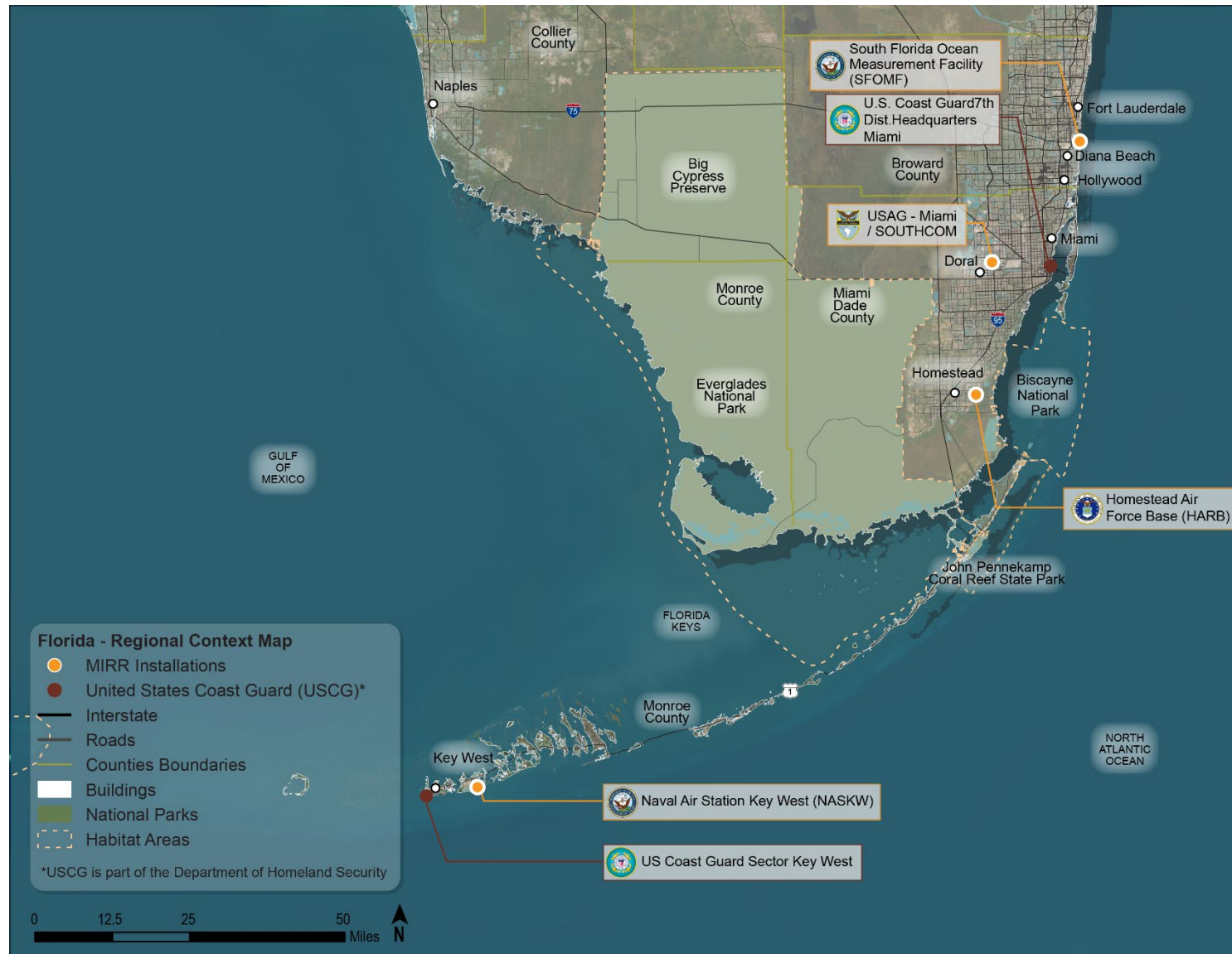
Protect and preserve military readiness and defense capabilities through funded interventions to supporting infrastructure



Improve the public health, safety and general welfare of those living and working at or near the installations through implementable, maintainable interventions

Increase public awareness of the military missions through closer communications and interventions that are integrated with ongoing community resilience planning

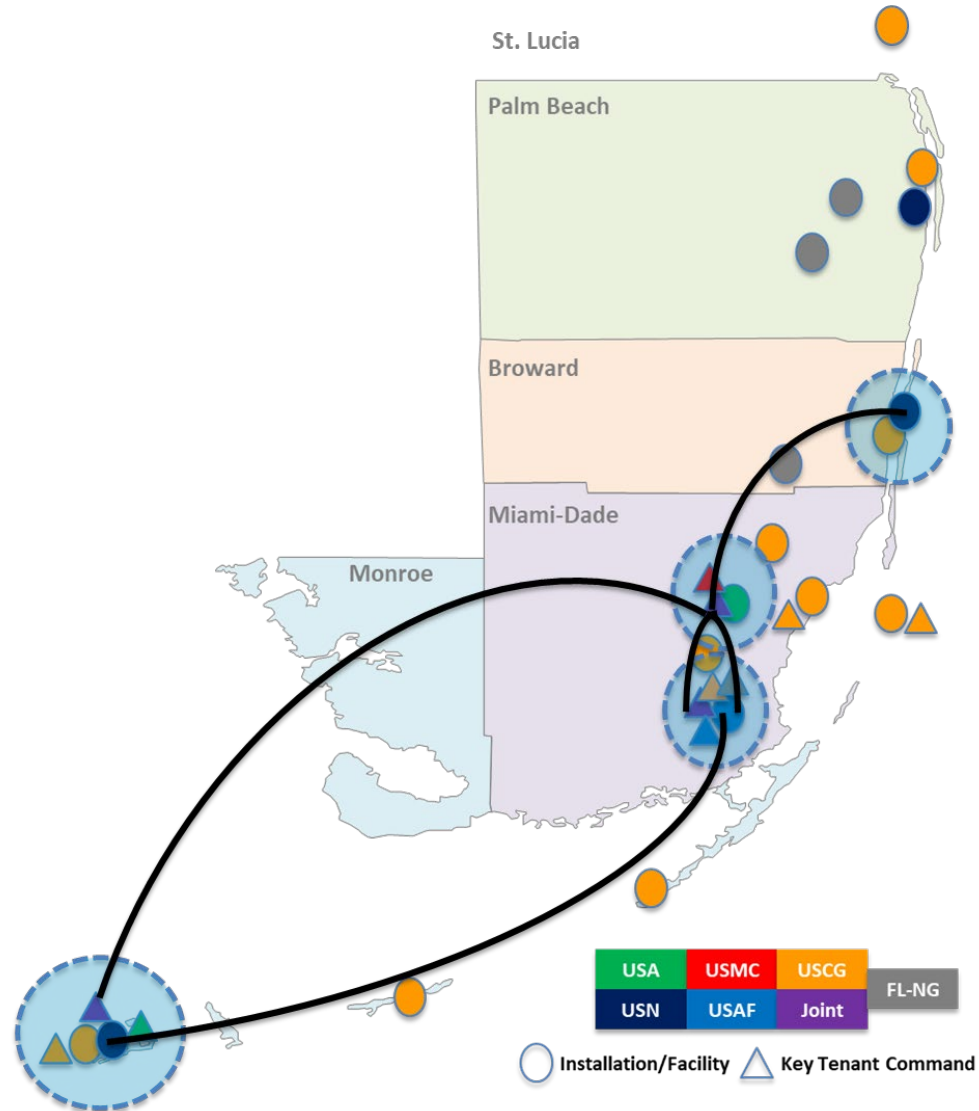
STUDY AREAS



RECOMMENDATION: DoD consider regional approach and methodology for future MIRRs to address mission assurance at the regional level

REGIONAL OVERVIEW

INTERDEPENDENCIES AND COMMON ISSUES

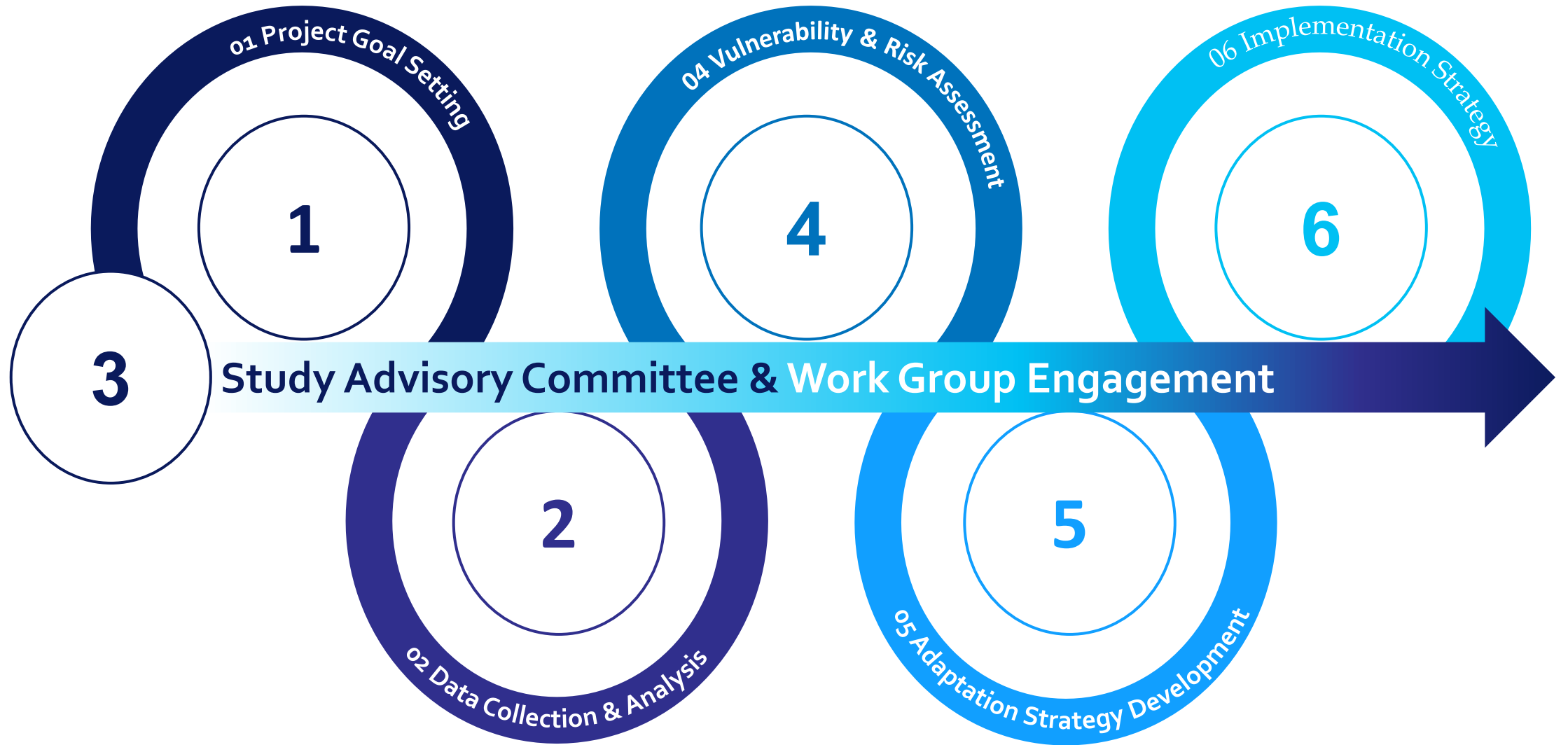


MUTUALLY CONNECTED INTERDEPENDENCIES

- Tenant Commands
- Missions
- Communications
- Operations Support

(NOTE: Not depicted but USCG adds significant complexity to this interconnected network)

PROJECT SCOPE OVERVIEW



ADAPTATION STRATEGY



SOUTH FLORIDA MILITARY RESILIENCE STRATEGY *Mission Assurance through Community Resilience*

STEP 1

MIRR-DEFINED UNIFIED
RESILIENCE ASSESSMENT
METHODOLOGY

STEP 2

DATA COLLECTION AND
VULNERABILITY
ASSESSMENT

STEP 3

PLANNING
GUIDELINES

STEP 4

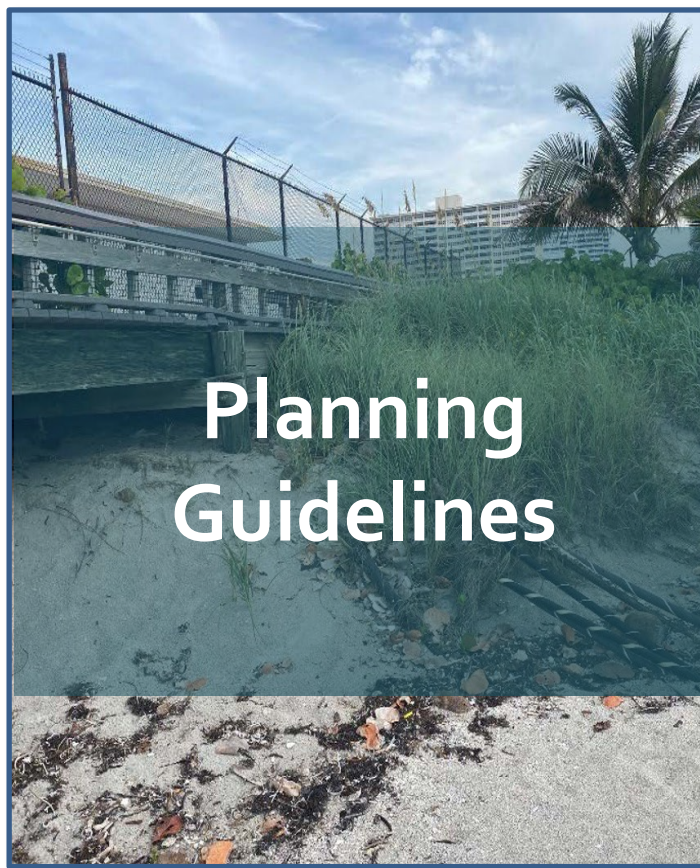
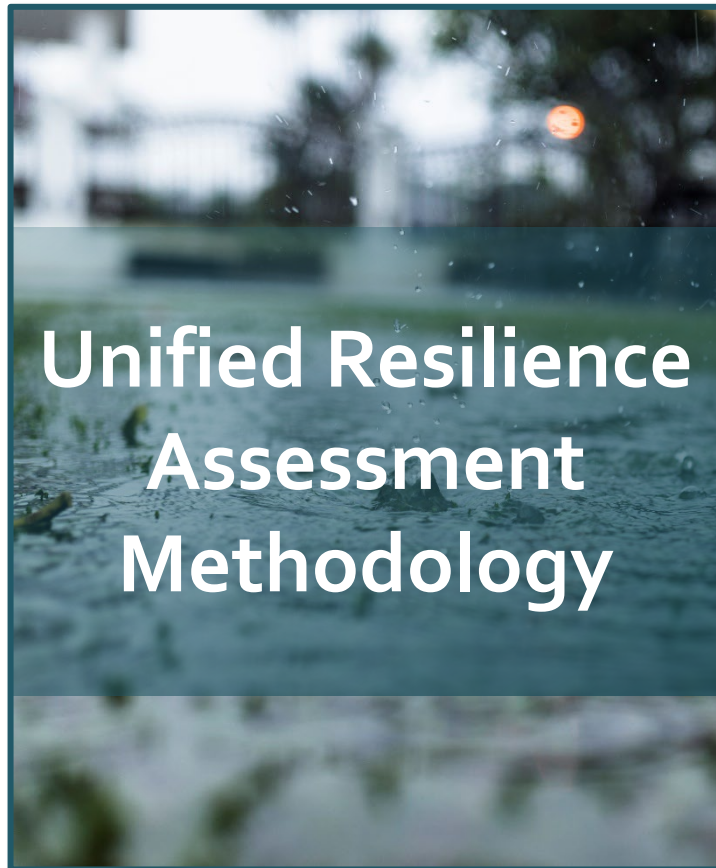
ADAPTATION

STEP 5

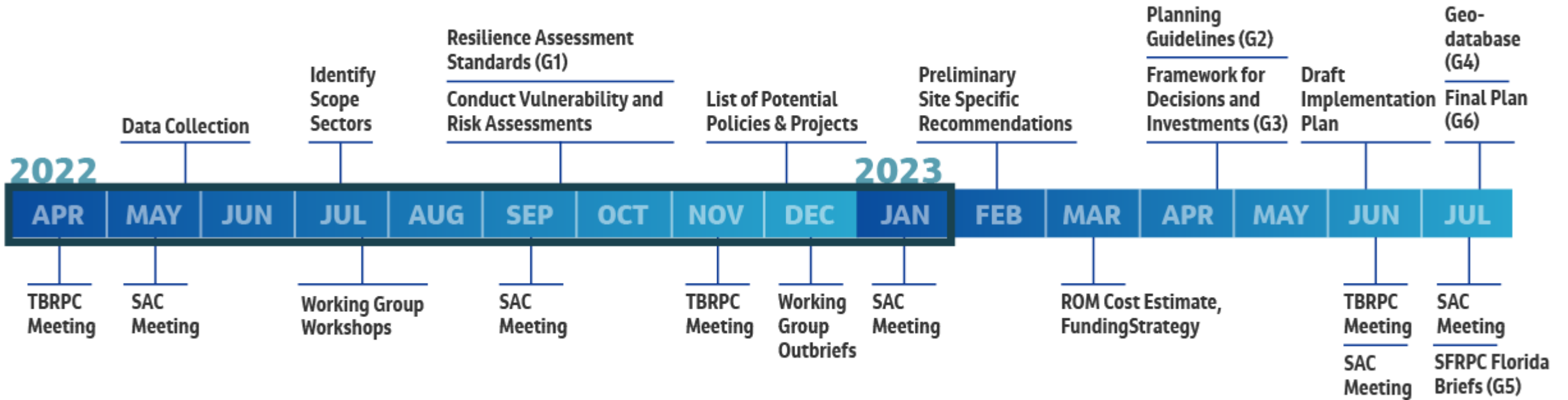
IMPLEMENTATION

ADAPTATION STRATEGY

Adaptation Tools Developed



PROJECT TIMELINE



STAKEHOLDER ENGAGEMENT: STUDY ADVISORY COMMITTEE



-  Department Of Defense Headquarters
-  State Elected Officials
-  County Resilience Leaders
-  City Officials
-  State of Florida Resilience Office
-  US Congress
-  Local Elected Officials
-  Community Partners & Media
-  Service Providers
-  Economic Development Leaders

South Florida Regional Planning Council

STAKEHOLDER ENGAGEMENT: WORKING GROUPS



STAKEHOLDER WORKSHOP INPUT

COMMON VULNERABILITIES

	Common Vulnerabilities												
	Stress											Shock	
	Dependencies		Transportation		Power	Climate Change		Housing/Zoning		Ecosystems		Disaster	
	Lack of fuel (post-disaster)	Supply chain	Road flooding	Single entrance access points	Electric supply	Extreme heat	Sea level rise	Encroachment	Housing costs	Shoreline erosion	Invasive species damage	Turkey Point nuclear incident	Runway/road flooding
SFOMF													
Core Mission Asset (Underwater Cables)										X			
All Others			X	X	X	X	X	X		X	X		X
USAG													
Core Mission Asset (C3 - Command Control Communications)					X								
All Others	X		X			X		X	X			X	
HARB													
Core Mission Asset (Airfield)													X
All Others	X		X		X	X	X	X	X			X	
NASKW													
Core Mission Asset (Airfield)							X			X			X
All Others	X	X	X	X	X	X		X	X	X	X		



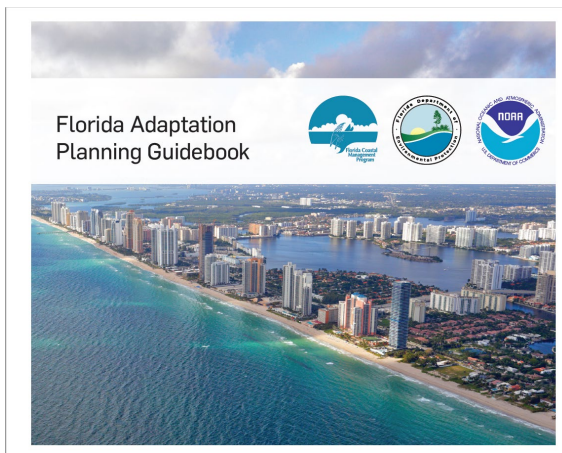
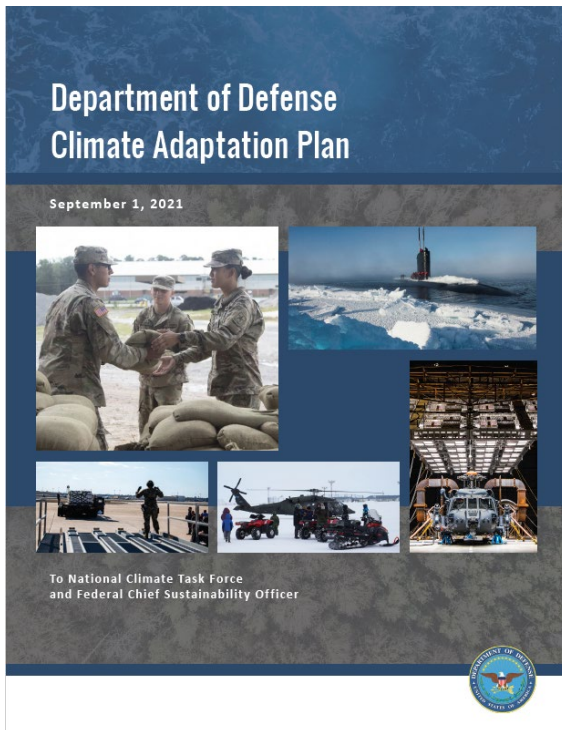
UNIFIED RESILIENCE ASSESSMENT AND ADAPTATION METHODOLOGY



Why?

- **Recognized Need to Align & Coordinate Civilian/Military Community Resilience Efforts**
- **Unique Assets & Mission Interdependencies**
 - South Florida Ocean Measurement Facility (SFOMF)
 - USAG-Miami / U.S. Southern Command HQ
 - Homestead Air Reserve Base (HARB)
 - Naval Air Station Key West (NASKW)
 - U.S. Coast Guard Stations Ft. Lauderdale & Key West
- **State, Local & DoD Partnership**
 - Florida Defense Support Task Force
 - Office of Local Defense Community Cooperation
- **Regional Council Model Replication**
 - Tampa Bay RPC – MacDill AFB, ongoing
 - Emerald Coast RPC – NW Region; P-Cola-Tyndall, new
 - East Central Florida RPC, pending
 - Northeast Florida RPC, pending

UNIFIED RESILIENCE ASSESSMENT AND ADAPTATION METHODOLOGY



Actions

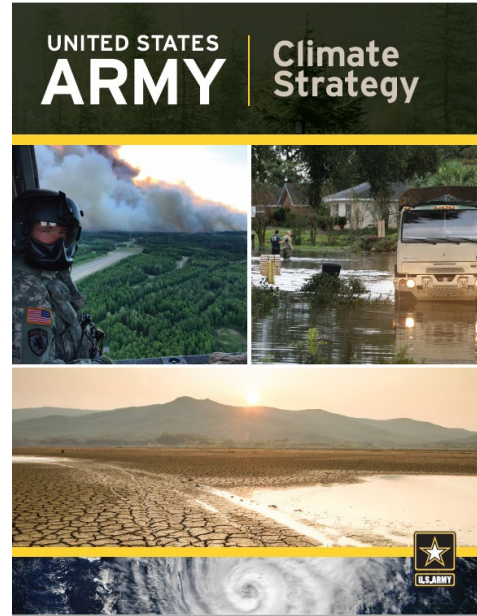
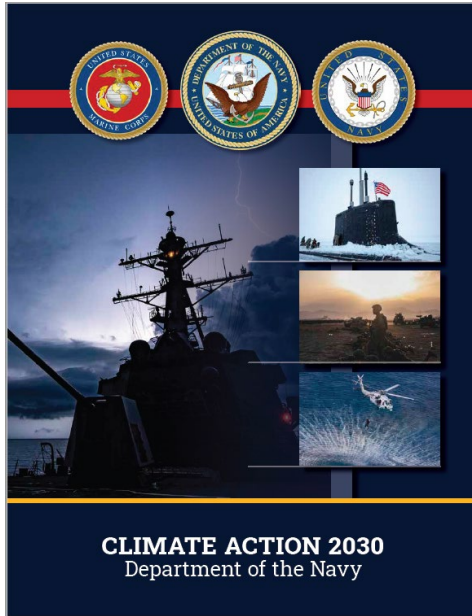
- Alignment with state vulnerability assessment guidance for future funding eligibility.
- Inclusion of requirements for federal funding eligibility
- Alignment with DoD Climate Vulnerability Assessment Tool. (DCAT)

- Compare local government policy, performance standards, and DoD design standards (UFC), and recommend most stringent standards be utilized
- Recommend DoD installations adopt the most stringent design standards *inside the fenceline*

- Alignment with DoD SLR Database (SERDP).
- Alignment with South Florida Compact Climate Change Unified SLR Projections.
- Inclusion of NOAA (SLR) Projections for 2040 and 2070 (state compliance).

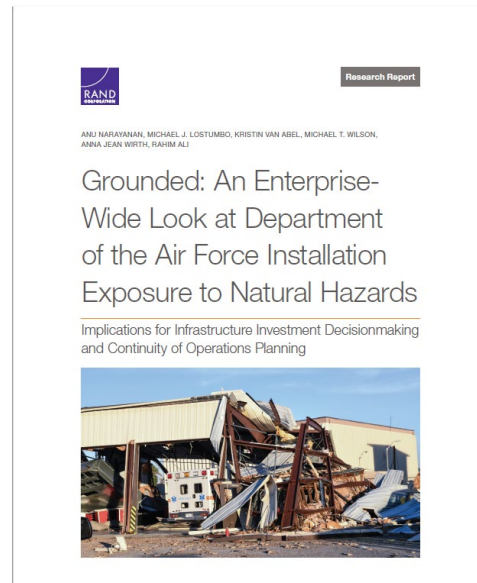
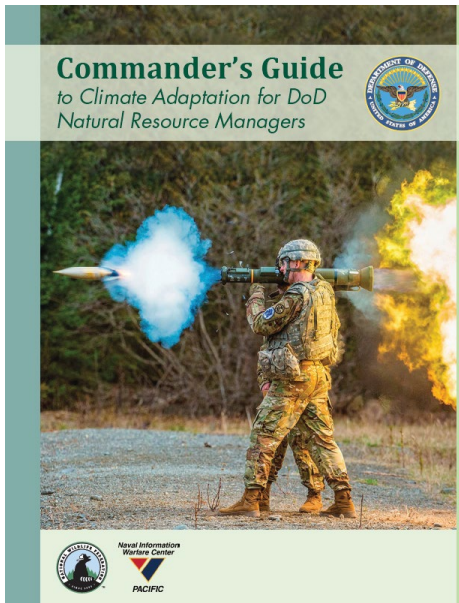
- Review of Federal and US DoD Building Requirements and individual installation guidelines

UNIFIED RESILIENCE ASSESSMENT AND ADAPTATION METHODOLOGY



Outcomes

- Alignment with State Grant Funding Requirements
- Alignment with DoD Action Plans & Climate Strategies, and Recommendations for policy upgrades at the installation level
- Agreement among Stakeholders on the Definitions and Process used to compile a Unified Standard
- **Regional Installations are more resilient**

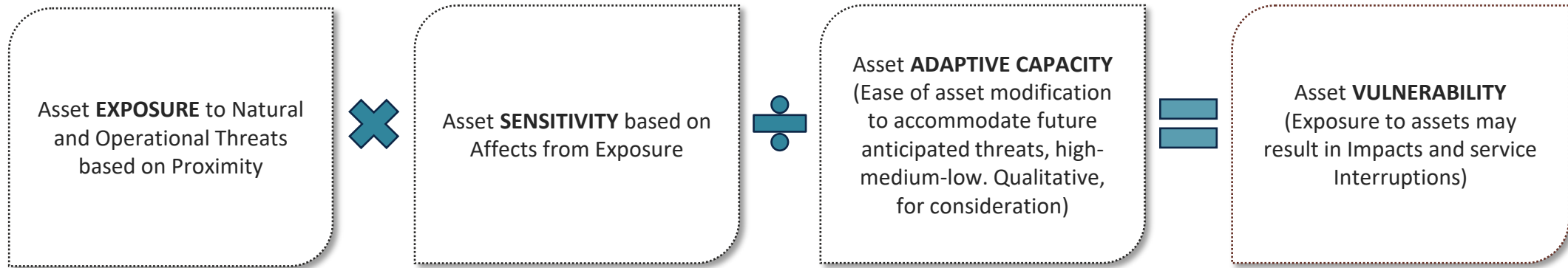




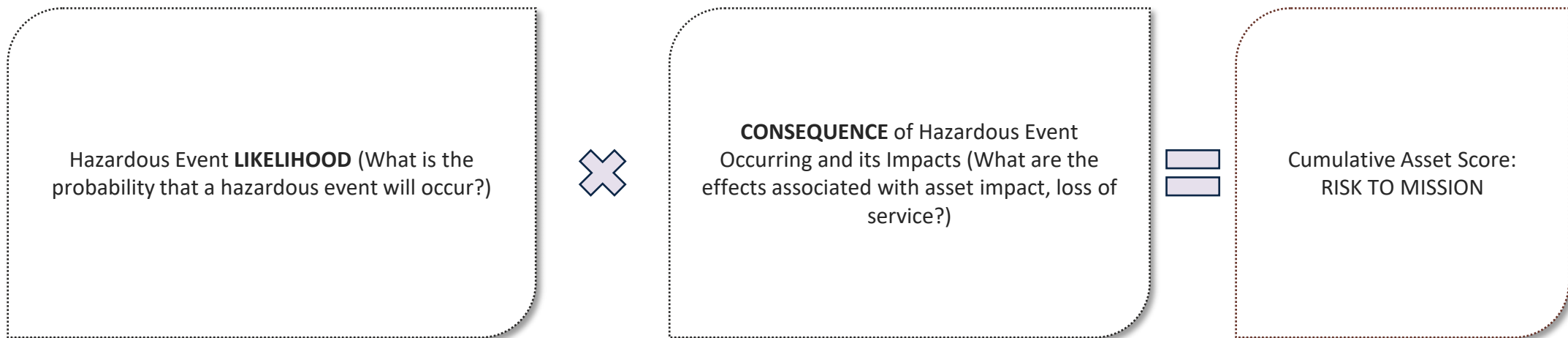
Christina Miskis, Principal Planner



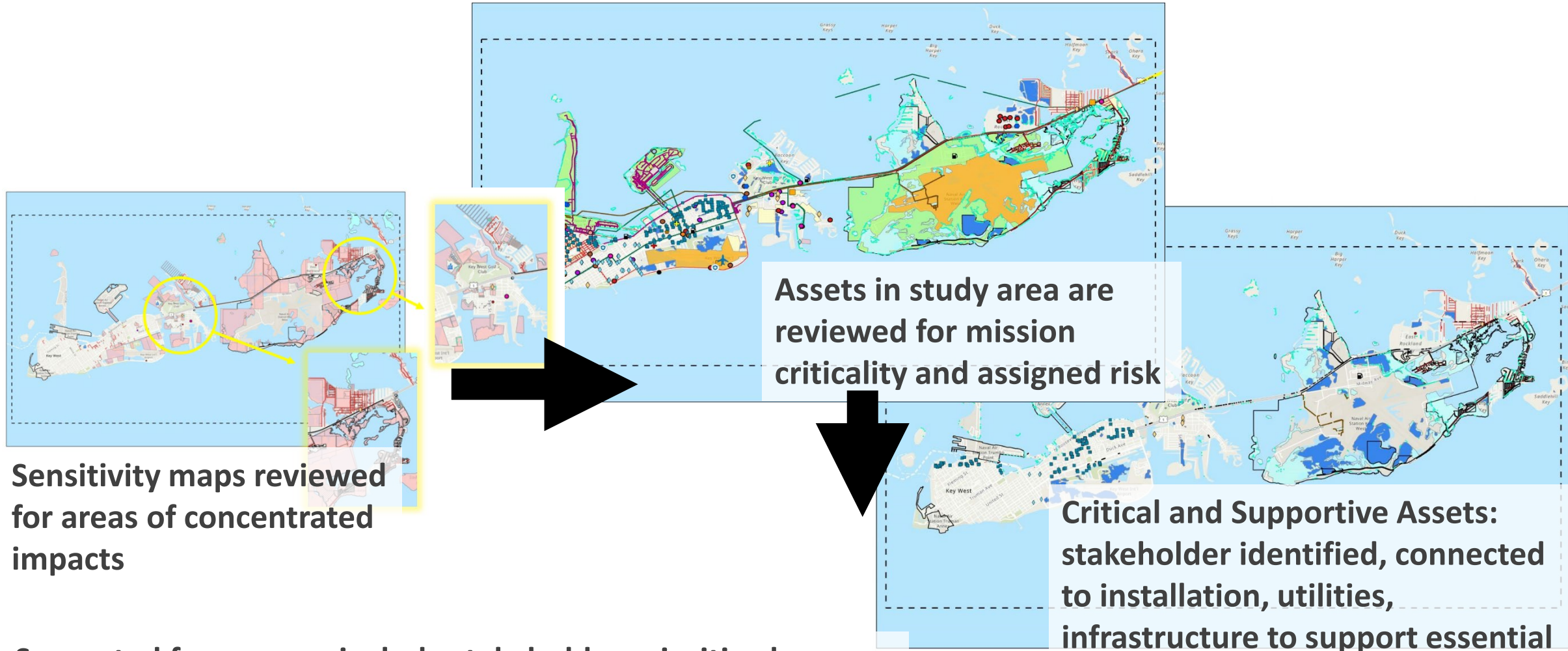
DETERMINING VULNERABILITY & RISK IN A STATE APPROVED PROCESS



Once vulnerable assets are identified, a risk score is calculated for those vulnerable assets.

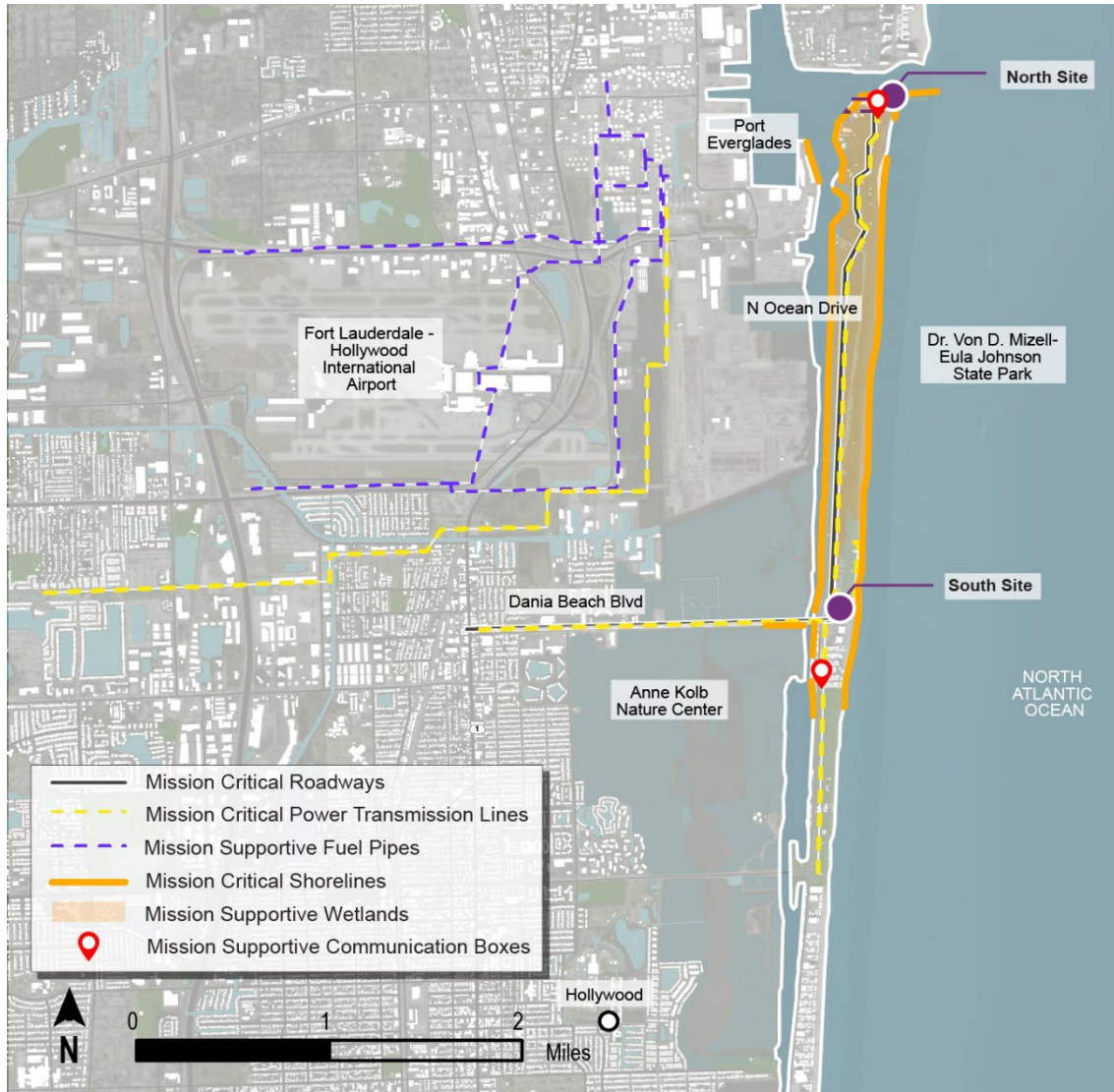


OUTPUT: FOCUS AREAS FOR ADAPTATION



Suggested focus areas include stakeholder prioritized vulnerabilities, dense concentrations of critical infrastructure at high risk and areas of concentrated impacts

SFOMF PRIORITIZED VULNERABILITIES



Primary Mission Critical Assets

- ❑ Beach shoreline protecting underwater cables, south of inlet/jetty: **Erosion, Lack of maintenance**

Secondary Mission Critical Assets

- ❑ N Ocean Drive road segment: **Tidal flooding, Storm surge, and SLR**
- ❑ Seawall and jetty adjacent to facility: **Erosion**
- ❑ Power transmission lines: **High Wind Speed**

Mission Supportive Assets

- ❑ Communication junction boxes on Franklin Street: **Aging Infrastructure**
- ❑ Shorelines south and east of installation: **Erosion**
- ❑ Wetlands and stormwater canal between sites: **Increased Inundation**
- ❑ Fuel infrastructure (not assessed)

Additional Known Vulnerabilities

- ❑ Potential encroachment: **City Parking Expansion**
- ❑ Potential encroachment and equipment damage: **Anchor Drops**
- ❑ Less clean, clear water: **Increased Water Traffic, Dredging**

SFOMF ADAPTATION + MITIGATION PROJECTS



Project	ROM Cost	Funding Available
<p>JP Joint Participation Agreement</p> <ul style="list-style-type: none"> ❑ Leverage ongoing positive relationships by creating a Joint Participation Agreement among the naval installation, USCG, FAU, NSU, the state park, Dania Beach, Hollywood, and Broward County to advocate for mutually beneficial changes in policy and implementation 	NE	<ul style="list-style-type: none"> • Building Resilience Infrastructure and Communities (BRIC) • National Coastal Resilience Fund (NCRF) • Climate Resilience Regional Challenge
<p>A Shoreline Protection</p> <ul style="list-style-type: none"> ❑ Beach and shoreline renourishment on a consistent basis and habitat restoration ❑ Advocate for additional anti-anchor buoys near cables ❑ Elevated walkway to create levee and keep public away from cables ❑ Create habitat and better public beach away from cables ❑ Reconstruct jetty and seawall exposed to erosion along the inlet to higher design standards ❑ Beach renourishment south of Jetty 	\$11.3M for all project components Additional costs dependent upon length of public beach improvements	<ul style="list-style-type: none"> • Transformational Habitat Restoration and Coastal Resilience • Section 103 CAP - Beach Erosion and Hurricane and Storm Damage Reduction • National Coastal Resilience Fund (NCRF) • Climate Resilience Regional Challenge

SFOMF ADAPTATION + MITIGATION PROJECTS



Project	ROM Cost	Funding Available
<p>B Roadway Improvements</p> <ul style="list-style-type: none"> <input type="checkbox"/> Apply to FDOT for priority status for lifting and widening roads <input type="checkbox"/> Designate as State Facility of Importance, ARA to maintain Ocean Drive <input type="checkbox"/> Perform landscape survey and maintenance plan for wetlands <input type="checkbox"/> Elevate and crown Ocean Drive, add 5-foot-wide pedestrian/cyclist lane <input type="checkbox"/> Create bioswales from new topography <input type="checkbox"/> Design landscape restoration plan for wetlands <input type="checkbox"/> Elevate public parking lot and designate as emergency parking location 	<p>\$12M for lifting and widening roads \$430/sy for bioswales and wetlands restoration</p>	<ul style="list-style-type: none"> • PROTECT • (Formula and Competitive Discretionary programs) • Building Resilient Infrastructure and Communities (BRIC) • Defense Access Roads
<p>C Utilities</p> <ul style="list-style-type: none"> <input type="checkbox"/> Apply to AT&T for priority status and improvement infrastructure to reduce disruptions during emergencies <input type="checkbox"/> Communications equipment replacement and hardening <input type="checkbox"/> Identify and elevate/harden critical transformers <input type="checkbox"/> Harden/underground distributions system from FPL substation to installation <input type="checkbox"/> Hardening and/or elevating ground transformers 	<p>\$15k to elevate ground transformers</p>	<ul style="list-style-type: none"> • Building Resilient Infrastructure and Communities (BRIC)

SOUTH FLORIDA OCEAN MEASUREMENT FACILITY: FUNDING, RECOMMENDATIONS, + PARTNERS



Funding Strategy

Recommendations to the Installation

- Review Emergency evacuation policy and evacuation vehicles
- Establish alternative strategies and paths forward for communication providers

Phase 2 Implementation Partners

- SFOMF
- City of Dania Beach
- FAU Seatech
- Nova University
- Anne Kolb Nature Center
- Florida State Parks
- USCG Station Fort Lauderdale
- Port Everglades
- EWN
- TNC