



7. INTEGRATING CLIMATE CHANGE INTO ENVIRONMENTAL COMPLIANCE

— Location · Month Year



GLOBAL ENVIRONMENTAL
MANAGEMENT SUPPORT

INTEGRATING CLIMATE CHANGE INTO ENVIRONMENTAL COMPLIANCE

Learning Objectives

1. Map the Climate Risk Management (CRM) Process
2. Distinguish and Define
 - a) Vulnerability
 - b) Mitigation
 - c) Adaptation



MANDATE FOR CLIMATE-RESILIENT INTERNATIONAL DEVELOPMENT: EXECUTIVE ORDER 13677

“Today, I’m directing our federal agencies to begin factoring climate resilience into our international development programs and investments.”

President Barack Obama, September 23, 2014



EXECUTIVE ORDER 13677 MANDATES

Incorporate climate-resilience considerations into decision-making by:

- **Assessing and evaluating climate-related risks** to and vulnerabilities in agency strategies, planning, programs, projects, investments, overseas facilities, and related funding decisions, ...
- As appropriate, **adjusting strategies, planning, programs, projects, investments,** and related funding decisions



USAID EO 13677 IMPLEMENTATION PLAN

- **October 1, 2015:**
Climate risk screening required for new strategies
- **October 1, 2016:**
Climate risk management required for all new projects and activities



CLIMATE CHANGE TERMINOLOGY

- **Adaptation** is the adjustment in systems in response to actual or expected climatic stimuli or their effects
 - Process of examining and understanding vulnerabilities
 - Responding in some way to reduce vulnerability, build resilience
- **Vulnerability** is the degree to which systems are likely to be harmed by adverse impacts of climate change stress, which is a function of:
 - Exposure
 - Sensitivity
 - Adaptive capacity
- **Mitigation** is reducing, removing and sequestering greenhouse gas emissions

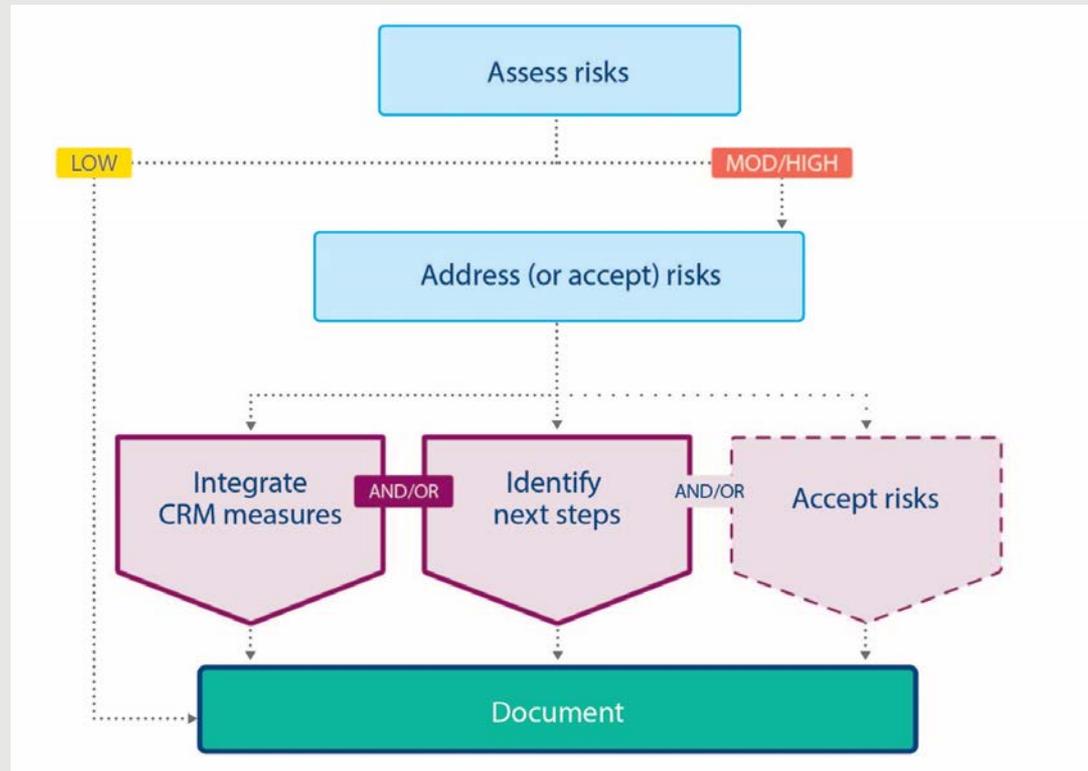


WHAT IS CLIMATE RISK MANAGEMENT?

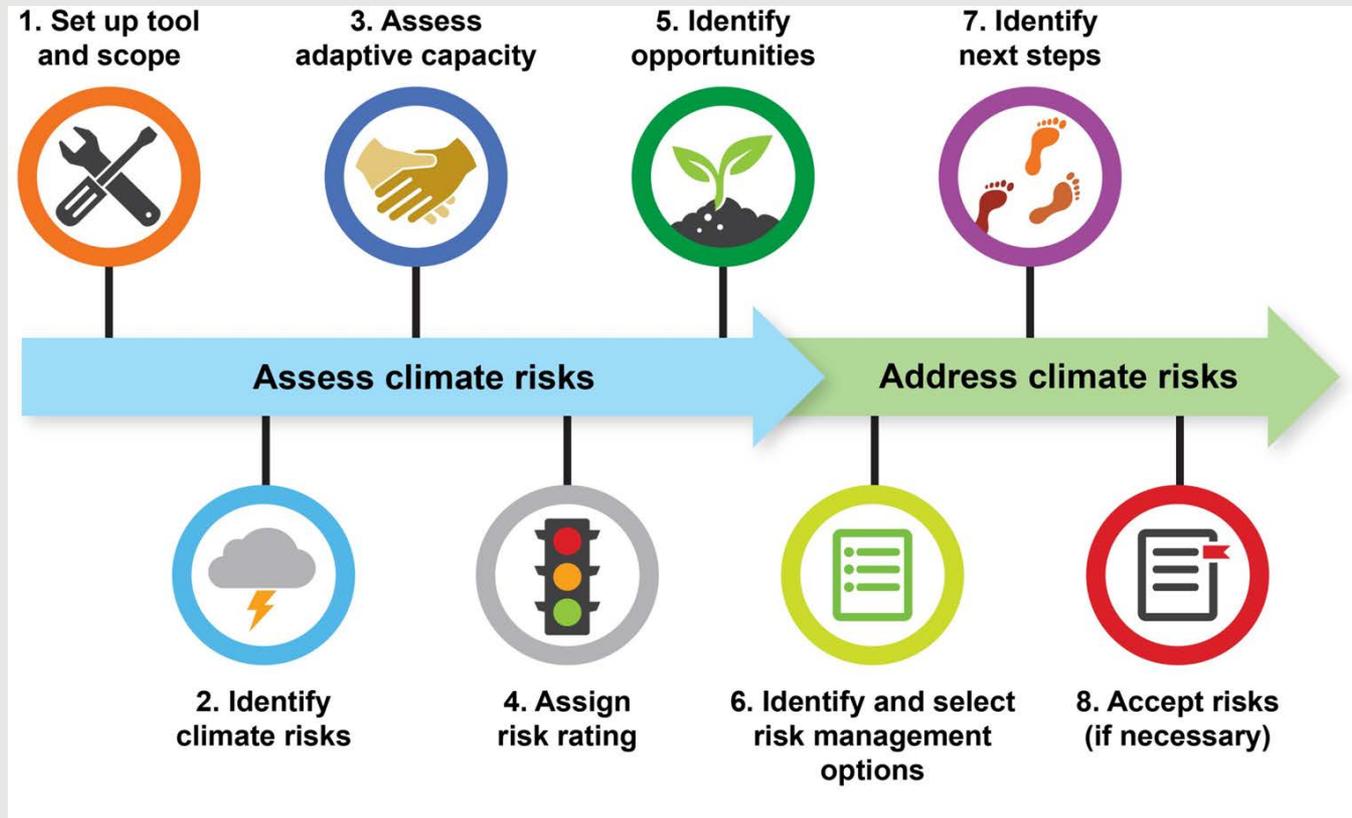


In developing countries,
CLIMATE CHANGE
threatens development objectives and human wellbeing.

WHAT IS CLIMATE RISK MANAGEMENT?



CLIMATE RISK SCREENING & MANAGEMENT TOOLS

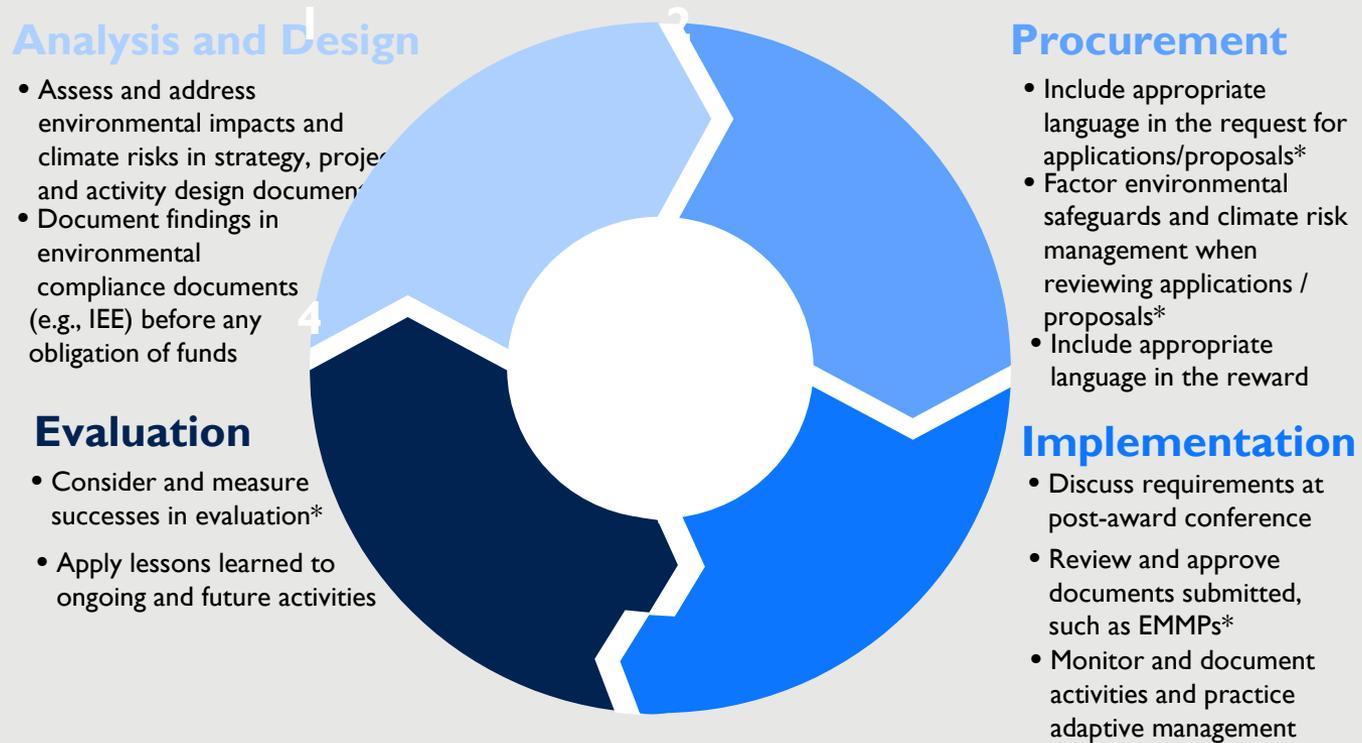


CLIMATE RISK MANAGEMENT PROJECT TABLE

TO BE INCLUDED IN ENVIRONMENTAL COMPLIANCE ANALYSIS (E.G., IEE)

Defined or Anticipated Project Elements (Purpose/ Sub-purpose, Areas of Focus, or Activities/Mechanisms, etc.)	Climate Risks List all risks related to the project elements identified through either the strategy- or project-level climate risk assessment.	Risk Rating Low/ Moderate/ High	How Risks Addressed at Project Level Describe how risks have been addressed at the project level. If a decision has been made to accept the risk briefly explain why.	Risks Addressed or Further Analysis to be Conducted in Activity Design/ Implementation Describe CRM measures to be integrated into activity design or implementation, including additional analysis, if applicable.	Opportunities to Strengthen Climate Resilience Describe any opportunities to achieve multiple development objectives by integrating climate resilience or mitigation measures
Improving livestock productivity	Heat stress due to increasing temperatures	High	Target support to more heat tolerant sheep/goats rather than cattle		Drought early warning systems (with DRR or S&T programs).
	Mortality from increasingly frequent/severe drought	High		Improve fodder storage/banking strategies Improve access to insurance	Conflict prevention with DG programs as water becomes more scarce. Leverage the government's increasing focus on climate change adaptation and agricultural extension.
	Loss of livestock due to sea level rise and storm surge	Low (upland focus areas)	NA	NA	

USAID LIFE OF ACTIVITY – ENVIRONMENTAL SAFEGUARDS AND CRM MILESTONES



* As appropriate (ex. activities that have “conditions” in the IEE, in the case of high or moderate climate risk, etc.)

Integrating Climate Change Into Environmental Compliance

CLIMATE RISK MANAGEMENT RESOURCES

- **Climate risk profiles**
 - Country and region specific
 - Summarize existing information on current and projected climate conditions
- **Greenhouse gas emissions fact sheets**
- **Climate Risk Screening and Management Tool**
 - One each for strategy, project, and activity design
- **Sector-specific annexes to the Climate Risk Screening and Management Tool**
- **Climate Integration Leads**
- **Climate Risk Management Facilitators**
 - Including regional and pillar bureau teams



Available at: <https://pages.usaid.gov/E3/GCC/climate-risk-management>

NOT JUST CRM: MORE CLIMATE CONSIDERATIONS FOR ENVIRONMENTAL COMPLIANCE ANALYSES

Section	Climate Considerations
Baseline	Include discussion on climate stressors (e.g., flooding and changes in water availability) and how they might affect baselines conditions
Impacts	Discuss impacts to project from climate change, and project's impacts on climate change
Mitigation	Describe which mitigation measures address climate change adaptation or mitigation (reducing greenhouse gas emissions)

CLIMATE RISK SCREENING FOR PAKISTAN PAD

Table I: Project-Level Climate Risk Management Summary Table

Defined or Anticipated Project Elements (Purpose/ Sub-purpose, Areas of Focus, or Activities/Mechanisms, etc.)	Climate Risks List all risks related to the Project elements identified through either the Strategy or Project level climate risk assessment.	Risk Rating Low/ Moderate/ High	How Risks Will be Addressed at Project Level Describe how risks have been addressed at the Project Level. If a decision has been made to accept the risk briefly explain why.	Recommendations of how Risks could be Addressed or Further Analysis to be Conducted in Activity Design/ Implementation Describe how risks will be addressed in Activity design or implementation or further considerations to be taken at that time. Describe additional analysis to be conducted at activity level, if needed.	Recommended Opportunities to Strengthen Climate Resilience Describe any potentially positive climate change impacts related to the Project's area of focus or any opportunities to achieve multiple development objectives by integrating climate resilience measures
<i>Cross cutting: Increasing Pakistani capacity to adapt to climate change</i>	Overall potential impacts from climate change	High	<ul style="list-style-type: none"> Develop an activity that focuses specifically to support a national and provincial level water management policy. Despite very limited progress in the sphere water governance in Pakistan, the issue is considered an area of paramount importance. Without good governance of water, water scarcity issues will become dire. 	<ul style="list-style-type: none"> Conduct further analysis of climate impacts to horticulture value chains (VC), livestock, water resources Support holistic policy for water management (USDA water dialogue), including conducting further analysis of climate impacts to energy and other interdependent systems and integrate vulnerabilities into water management that supports agriculture Increase adaptive capacity of farmers, including through producer cooperatives, expanding access to technologies and markets, etc. Climate-resilient low emissions agriculture practices integrated into all approaches 	A rational water policy could help municipal and industrial areas improve their water productivity and reduce effluence.

GETTING IT RIGHT: ADAPTING TO CLIMATE CHANGE IN INDIA

- Agricultural areas in India suffering from lack of rain and dry soil as result of global climate change
- With USAID support, farmers in some Indian villages learned to dig small ponds—*dobhas*—to capture and store monsoon rainwater for crop irrigation during dry months
- Increased paddy yield—“five times bigger” according to one farmer



EXAMPLES OF DEVELOPMENT-ENVIRONMENT SUCCESSES AND FAILURES

- About 13,000 farmers in Punjab use these sensors and have cumulatively saved 21 billion liters of water and 3.6 million kilowatt hours of energy
- With a USAID-supported mobile app, farmers use phones to access weather and crop updates, critical information as climate change alters familiar weather patterns
- Mobile app is also used to teach farmers about planting techniques that eliminate need for flood irrigation and conserve water



HOW IS THIS ENVIRONMENTAL?

- To help farmers with water efficiency, USAID is promoting an affordable soil moisture sensor. This \$8 device enables farmers to monitor soil dryness and determine water need for



DEVELOPMENT BEST PRACTICES: DESIGNING FOR CLIMATE CHANGE

ENVIRONMENTAL APPLICATIONS

Climate change impacts projects

Climate change will affect future baseline conditions

Projects must be designed to be **ROBUST** to these conditions

Projects impact climate change

While individual projects are rarely significant contributors to global climate change, climate change is driven by the sum of many small actions

Even small-scale projects should seek to reduce greenhouse gas emissions/increase sequestration and reduce climate vulnerability in the local area in a manner consistent with their development objectives

THIS IS USAID POLICY!

per EO 13677 & ADS 201

SCREENING UNDER 22 CFR 216: CLIMATE RISK SCREENING

- Climate risk screening must be incorporated into the environmental review process for RCE, IEE, and EAs, per agency requirement EO 13677
- Climate is considered at every step
 - Baseline characterization
 - Project description
 - Impact assessment
 - Mitigation design



RCE (AND IEE) MUST INCORPORATE CLIMATE RISK SCREENING

- New Agency requirements per EO 13677 for climate risk screening apply to preparation of RCEs and IEEs

TASKS/ DEFINED OR ILLUSTRATIVE INTERVENTIONS	CLIMATE RISKS List key risks related to the defined/illustrative interventions identified in the screening and additional assessment.	RISK RATING Low/ Moderate/ High	HOW RISKS ARE ADDRESSED Describe how risks have been addressed in activity design and/or additional steps that will be taken in implementation. If you chose to accept the risk, briefly explain why.	OPPORTUNITIES TO STRENGTHEN CLIMATE RESILIENCE Describe any opportunities to achieve multiple development objectives by integrating climate resilience or mitigation measures.
<i>Task 1: Support local water utility sustainability</i>	<i>Lack of raw water to extend water to new customers due to shifting precipitation patterns</i>	<i>High</i>	<i>Support utility efforts to put in place infiltration wells in catchment areas</i>	<i>Consider building to withstand 500-year storms</i>
	<i>Storm surge may damage utility infrastructure in coastal areas</i>	<i>Moderate</i>	<i>Work with utilities to survey infrastructure to fully assess risk in target districts</i>	
<i>Task 2: Support small scale non-utility water systems</i>	<i>Infrastructure may be damaged by storm surge</i>	<i>Moderate</i>	<i>Accept. Most vulnerable populations without access to water are in low lying delta areas.</i>	<i>Consider building to withstand 500-year storms</i>