

## **Knowledge and Competencies Framework for Climate Change Adaptation and Climate Resilience Professionals**

*DRAFT VERSION B. Produced by: ASAP Member Advisory Group on Professional Education.*

*Contact: Rachel Jacobson [rjacobson@adaptpros.org](mailto:rjacobson@adaptpros.org)*

### **Introduction**

**Framework Purpose:** The purpose of this framework is to articulate a standard set of foundational knowledge concepts and core competencies that are relevant and necessary, for all climate change adaptation and climate resilience professionals. The intended users for this framework are climate change adaptation and climate resilience education providers, climate change adaptation and climate resilience professionals and students, and other professionals whose role requires they address climate challenges. This framework provides a complete view of the knowledge and competencies needed to ensure that existing professionals, students, and learners of all types are prepared to effectively address climate change adaptation and climate resilience in the context of their work. The Framework is designed to articulate the baseline knowledge and competencies that are necessary for climate change adaptation and climate resilience work in any sector, field, professional role, or career phase. ASAP expects that most climate change adaptation and climate resilience professionals will require specific education and training to gain the knowledge and competencies described in this Framework, as well as education and training that is specific to their role, sector, discipline, or specialty. [However, we do intend that this framework will be relevant across and respectful in incorporating a diversity of existing fields, knowledge systems and traditions in its applications.]

**Framework Applications:** In the near term, ASAP intends to use this framework to chart pathways through existing professional education resources so that climate adaptation and climate resilience professionals seeking to gain knowledge or competencies can easily identify relevant resources. In the longer term, ideally within the next 1-3 years, ASAP intends to use this framework, in conjunction with the ASAP Code of Ethics and the ASAP Living Guide to the Principles of Climate Change Adaptation, as the foundation for offering accreditation to climate change adaptation and climate resilience education courses and programs.

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### **Foundational Knowledge**

All climate change adaptation and climate resilience professionals must possess knowledge of each of the following concepts, and must be able to effectively demonstrate that knowledge. One's professional role will dictate how they must be able to demonstrate each knowledge concept, such as by explaining the concept or the science behind it, describing solutions or examples, or explaining how the concept is connected to adaptation. One's professional role will also dictate the extent to which they must be able to put each knowledge concept into practice, such as by using a specific method to quantify, measure, assess, or visualize something related to the concept or using oral, written, or visual media to tell a story related to the concept.

<b>Climate Variability and Change</b>	Why and how climate variability and change occur
<b>Climate-Related Hazards and Impacts</b>	Why and how climate variability and change create hazards and subsequent impacts
<b>Vulnerability</b>	Why and how individuals and systems are vulnerable to climate impacts and how to decrease vulnerability by increasing adaptive capacity and reducing exposure and sensitivity
<b>Risk</b>	What constitutes risk (ie probability and consequence), how risk is impacted by individual perception and preferences, and methods for measuring risk
<b>Climate Change Adaptation and Climate Resilience</b>	What constitutes climate change adaptation and what means are available to adapt and what constitutes climate resilience and what means are available to improve climate resilience
<b>Climate Change Mitigation</b>	How to mitigate climate change (i.e. reduce greenhouse gas emissions)
<b>Systems Thinking</b>	Why and how to think in systems to address climate change
<b>Justice and Equality</b>	Why and how to achieve justice and equity by addressing climate change
<b>Change Management</b>	Why and how to effectively manage change in individuals, organizations, or systems
<b>Decision Making</b>	Theories and methods for understanding decision making in individuals, organizations and political systems

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<b>Communication</b>	The theory and methods of values-based, culturally competent communication
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**Core Competencies**

All Climate Change Adaptation and Climate Resilience Professionals must possess each core competency. Each core competency for Climate Change Adaptation and Climate Resilience Professionals requires knowledge of one or more of the concepts described above along with a set of associated skills, abilities, and attitudes, such as those listed in the right hand column of the table below. Each person need not possess every associated skill, ability, and attitude; these attributes will vary based on professional role.

<b>Using best available information</b>	Accessing best available data and information
	Accessing relevant policy information
	Facilitating knowledge co-creation and utilization
	Cultural competence, context assessment and context-based practice
	Greenhouse gas (GHG) accounting
	Managing uncertainty
	Monitoring and evaluating action
<b>Implementing cross-cutting strategies</b>	Identifying and using windows of opportunity
	Identifying opportunities for mainstreaming climate adaptation action
<b>Communicating climate adaptation concepts and needed actions</b>	Identifying audiences
	Developing framing
	Using engagement models
	Communicating nuance through appropriate language choices
<b>Building psychological strength to proactively confront change among professionals and the broader community</b>	Embracing deep uncertainty
	Dealing with loss, trauma, profound change, and renewal
	Empowering Action
	Bringing about positive emotional responses
	Psychological resilience
<b>Planning for and managing adaptation action</b>	Vision, mission, and value-statement development
	Problem orientation, identification, and framing
	Action/option identification and analysis
	Scenario development, assessment, and planning
	Determining critical thresholds

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	Capacity building (e.g. fundraising?, financing, resources, tools, technical assistance, codes, partnerships, influencing and managing political change)
	Metrics development
	Monitoring
<b>Promoting inclusive planning and action</b>	Leadership
	Creating functional teams of people
	Understanding, mapping, and building power
	Building trust, legitimacy, and social capital
	Fostering collaboration
	Cultivating stakeholder support and buy-in
	Asking thoughtful questions
	Pursuing just and equitable outcomes
	Empowering and incorporating input and decision making from frontline and marginalized communities
	Active listening
Facilitating difficult, emotion- and value-laden dialogues	
<b>Orienting efforts to achieve transformative change</b>	Framing a new narrative, championing it, and inspiring others with it
	Developing (or enabling) creativity and innovation
	Transferring and scaling lessons learned
	Recognizing and accepting the limits of previously used approaches
	Recognizing the limits of existing systems

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### **Source Material Synthesized for Framework Development**

[Robin Leichenko, Rutgers University: Climate Change Adaptation & Vulnerability](#)

[Kauneckis Syllabus](#)

[Rising to the Challenge, Together](#)

[ASAP Living Guide to the Principles of Climate Change Adaptation](#)

[Key competencies in sustainability: a reference framework for academic program development \(Wiek et al\)](#)

[Skyline College Course Outline -- Climate Resilience Community-Based Application](#)

[ACCO Suite of Certified Climate Change® Credentials](#)

[Climate Change Response Framework](#)

[Adaptation Planning and Practices training](#)

["What you need to know" online climate education series](#)

[EcoAdapt Ladder of Engagement](#)

[Climate Ready Communities; Geos Institute](#)

[The Steps to Resilience](#)

### **ASAP Member Advisory Group on Professional Education**

#### **Knowledge and Competencies Framework Subgroup Members**

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