

Regional Resilience Primer



INSTITUTE FOR
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About The Institute For Sustainable Communities

Since its founding in 1991 by former Vermont Governor Madeleine Kunin, ISC has led 103 transformative, community-driven projects in 30 countries. ISC specializes in developing and delivering highly successful training and technical assistance programs that improve the effectiveness of communities, their leaders, and the institutions that support them.

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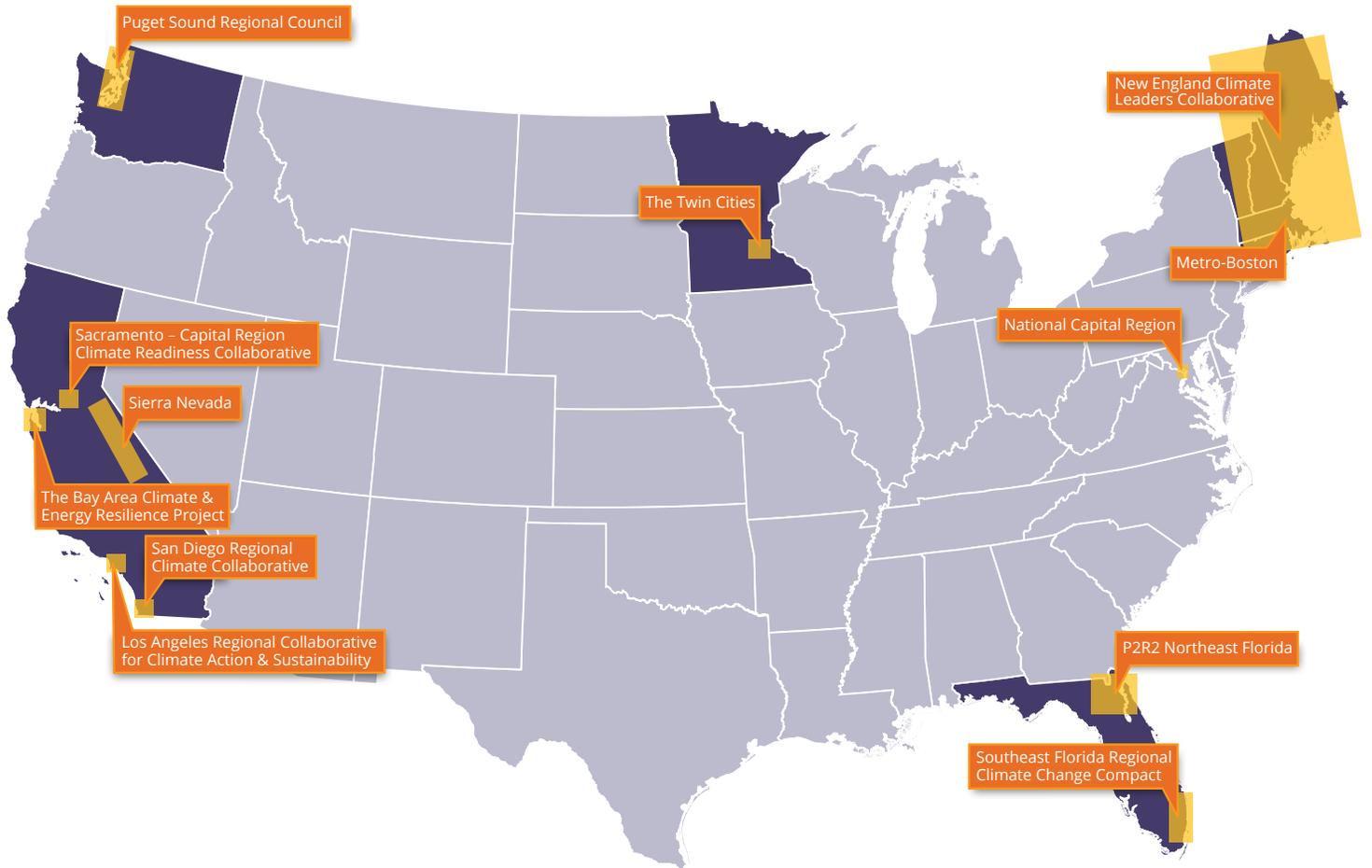
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REGIONAL RESILIENCE EFFORTS



Local leaders representing these efforts participated in the *Think Regionally, Act Resiliently* workshop in Alexandria, VA, October 2014.

INTRODUCTION

75%
of global CO₂
emissions come from
urban areas

Climate-related issues
do not stop and start at
human-drawn municipal or
county borders

Regional approaches to climate challenges are a powerful, effective way to catalyze local action, build community and climate resilience, and connect, strengthen and support local leaders. At the Institute for Sustainable Communities (ISC), we have spent the past four years focusing on regional efforts in the United States. This is the first of several publications designed to share our understanding of the critical components of successful regional approaches, what's happened to date, and the promising practices we've seen as we work with regional climate change adaptation partners throughout the US.

With the rise of climate-related disasters, governments, the private sector, NGOs and citizens are taking actions to adapt to new vulnerabilities and to increase resilience. Cities hold a legacy of climate planning, stemming first from their efforts to mitigate (reduce) greenhouse gas emissions. These early efforts were largely a response to the role of cities in global emissions: urbanized areas account for nearly 75% of global CO₂ emissions.¹ Yet, just as cities account for the majority of emissions, they also bear most of their impacts. The impetus for climate adaptation and resilience in cities stems largely from their vulnerable locations, including proximity to coastal areas and major rivers, the large supplies of food, water and energy that they require, large concentrations of vulnerable populations, and expansive and expensive infrastructure assets that face severe climate risks.

As the local adaptation movement grew, and extreme events like Hurricane Sandy laid bare the scale of our vulnerabilities, the Obama Administration and a number of states began to develop their adaptation measures for the assets they manage and sought to increase technical assistance offerings to local governments to do the same. An early challenge to federal and state efforts was how best to provide technical assistance to the large number of local governments nationally (over 5,000 counties and over 19,500 municipalities). Further, state and local officials recognized that each level of government provides local infrastructure funding that should be integrated with local climate considerations. As local efforts intersected with state and federal initiatives, the unique challenges of working across jurisdictions on climate adaptation have become increasingly apparent.

¹ UNEP: <http://www.unep.org/resourceefficiency/Policy/ResourceEfficientCities/FocusAreas/CitiesandClimateChange/tabid/101665/Default.aspx>



The problem is a simple one: climate-related issues do not stop and start at human-drawn municipal or county borders.

These challenges are evident in how federal adaptation policy has evolved during the Obama Administration. As the Council on Environmental Quality (CEQ) – Interagency Adaptation Task Force said in its 2010 report to the President:

“[a]daptation requires coordination across multiple sectors, geographical scales, and levels of government . . . Because impacts, vulnerability, and needs vary by region and locale, adaptation will be most effective when driven by local or regional risks and needs.”

Around the time of the 2010 CEQ report, regional approaches to climate adaptation independently appeared in three major metropolitan regions of the United States: Southeast Florida, Los Angeles, and San Diego. Sacramento and the San Francisco Bay Area followed closely behind to make the five earliest instances of regional resilience integration. Each effort represented a separately constructed experiment in regional collaboration designed to leverage individual efforts of single jurisdictions to understand vulnerabilities, and develop climate adaptation strategies. These regional forerunners caught the attention of state and federal governments. The President’s State, Local and Tribal Leaders Task Force on Climate Preparedness and Resilience reported in 2014 that:

“Regional organizations [...] have developed partnerships and programs that cater to unique regional attributes, natural systems, policy frameworks, governance structures and political realities. For this reason, the Federal Government should work more actively within these existing and emerging frameworks to support resilience and preparedness efforts, while supporting the development of regional frameworks in parts of the country that may not currently have such structures in place. Federal agencies should increase participation with regional organizations and partners and help build capacity to develop best practices and programs tailored to the unique regional impacts of climate change.”

Over the past four years, the Institute for Sustainable Communities (ISC) has worked with an innovative group of local government leaders from Southeast Florida’s Broward, Miami-Dade, Monroe and Palm Beach Counties to develop and implement the Southeast Florida Regional Climate Change Compact. In 2012, four regional collaboratives in California (the San Diego Climate Collaborative, the Los Angeles Regional Collaborative, the Bay Area Project on Energy and Climate, and the Sacramento Capital Region Collaborative) met to advance regional climate governance in a USDN-funded Breakthrough Convening facilitated by ISC. And in October 2014, ISC brought together a strong group of local leaders from twelve regions (the five mentioned above, plus seven additional emerging collaboratives; see list page 8) for the first time to share promising practices and advance the field overall.



ISC believes that the regional approach to resilience is one of the most effective tools at our disposal as we prepare for the future impacts of climate change

In our work with these diverse regional initiatives, ISC has come to believe that the regional approach to resilience is one of the most effective tools at our disposal as we prepare for the future impacts of climate change. It allows for highly customized approaches to location-specific challenges, while simultaneously maintaining an economy of scale critical to conserving ever-diminishing resources.

We found that key benefits of working regionally on climate adaptation include:

- **Coordination of Shared Ecosystem Services.** Ecosystem services include provisional services (e.g., clean water supply, soil health), regulatory services (e.g., erosion and flood control), and cultural services (e.g., recreation, sense of place). These services span entire bioregions and connect urban areas and the surrounding landscape. Analysis of vulnerabilities of ecosystem services and measures to protect them can only exist at the regional scale.
- **Leveraged Local, State, and Federal Resources.** Pooling resources can enable significant investments that otherwise would not be possible. In the Los Angeles Regional Collaborative (LARC) case, local governments co-funded SLR inundation mapping and regional climate science downscaling. The Southeast Florida Compact provided a centralized conduit through which several federal, state and regional agencies provided climate vulnerability data that enabled local governments to analyze vulnerability down to the parcel level.
- **Expanded Convening Power.** Regional collaboration provides a platform for locally relevant stakeholders to coordinate efforts and resources. The Southeast Florida Compact enabled a coordinated response to an extreme beach erosion event triggered by Hurricane Sandy in late 2012. Coordinated regional adaptation strategies harmonize adaptation response and help avoid actions that may benefit one area at the cost of their neighbor – easily the case in shoreline adjustments associated with SLR.
- **Increased Capacity.** Resources and expertise of larger, better-funded local governments and stakeholders can be shared with smaller outlying communities with much smaller tax bases. This, in turn, fosters stronger resilience networks that can better diffuse proven policy innovations and help people learn from neighboring jurisdictions' experience.
- **Platforms for Mainstreaming.** Many adaptation practitioners advocate for the “mainstreaming” of climate adaptation into existing local government planning and budgeting processes, yet in many metro areas such processes do not exist.² Regional climate collaboratives can create regional processes in which regional climate adaptation can be mainstreamed.

KEY BENEFITS:

² Friend and Jarvie (2014) “Beyond Mainstreaming: Reframing Governance for Urban Climate Resilience” International Association for Urban Climate. Issue 52: June 2014. pp 14-18 Online link here: <http://accrrn.net/resources/beyond-mainstreaming-reframing-governance-urban-climate-resilience>

Yet, we have also learned that regionalism – especially as it has been applied in land use planning and economic development – is quite difficult. Key challenges include:

KEY CHALLENGES:

- **Defining Shared Value Propositions and Goals.** Regional climate initiatives require shared goals across a range of regional stakeholders, including local philanthropy, business and the nonprofit community. These groups are not always aligned in mission and politics, and in some cases may not fully understand how climate risks impact their missions. Regions that invest in stakeholder engagement will build broader consensus and achieve buy-in, which will pay dividends in the longer term. Regional collaboration only works when it is in service to identified shared values and goals.
- **Investing in Long-Term Strategies.** Most regional climate goals require long-term strategies that span election terms. To be successful, short term results and early wins need to be communicated to build trust, recognize champions, and make efforts tangible to the public.
- **Respecting Local Authority.** Regional approaches should not replace climate adaptation efforts of individual jurisdictions. Rather, local governments should benefit from shared resources in ways that build their own capacity, as each jurisdiction will be responsible for implementing regional strategies locally. Striking this balance is critical to avoid loss of local autonomy in decision-making and the trust of partners.
- **Complexity and Scale.** Moving to a regional approach to climate problems means that there are larger and more complex systems and relationships to deal with. Nowhere is this more apparent than in the amount of stakeholders that regional collaboratives have. Even while these collaboratives are in startup mode, they should be considering community engagement and equity implications of their decisions.

Early Examples

Throughout this report, we feature profiles of the twelve collaborative groups that met in Alexandria in October, 2014. Some of the regional collaboratives, such as the Southeast Florida Compact, have been working together for over six years and are starting to move toward the next level of maturity: creating a legal entity. Others, such as the Puget Sound, are in an earlier stage of development. By sharing the governance structures, key local challenges, and guiding principles of each of these early adopters, we hope to provide useful guidance to other local leaders considering a regional approach.

This document draws on ISC's collective experience to date in working with regional climate initiatives. Our core principle is that regional resilience efforts should emerge naturally from each place and therefore may differ markedly in design, as do the efforts profiled in this report. One size doesn't fit all, but regions can learn a great deal from one another to advance and accelerate this emerging and vital approach to climate adaptation. 



Bay Area Climate and Energy Resilience Project



The Bay Area Climate & Energy Resilience Project

The Bay Area Climate & Energy Resilience Project (BACERP) is a network of more than 300 public, private, and nonprofit stakeholders in the nine-county, 101 city San Francisco Bay Area. BACERP is a project of the Bay Area Joint Policy Committee (four regional public agencies) and is funded by the Joint Policy Committee (JPC), the Kresge Foundation, and the San Francisco Foundation.

BACERP's primary purpose is to support and enhance the climate adaptation efforts of the region's 101 cities, nine counties, four regional agencies, hundreds of special districts, and other organizations. The collaborative is focused on specific actions that will help these Bay Area efforts to move forward in a more efficient and powerful manner. BACERP's activities have included inventories of key climate projects, two assessments of needs (regional and county-level), special reports on equity, governance and other issues, and a series of workshops/webinars.

Over the past three years, the BACERP network has produced needs assessments based on interviews with hundreds of climate stakeholders at the county and regional levels, reports that inventory and describe the leading climate projects in the region, a series of regional workshops (serving 100+ participants each) for networking, education, and problem-solving, a series of webinars on climate governance, hazard mitigation planning, coastal planning tools, and other topics.

These activities and products has supported, directly and indirectly, a number of successful climate initiatives around the region. More than 50 Bay Area jurisdictions have completed climate action plans for GHG reduction (a few newer plans have also included adaptation). Plan Bay Area, a set of strategies to reduce transportation/land use GHGs, was approved in 2014. The Bay Area Air Quality Management District is constructing a Regional Climate Protection Strategy to move the region towards the state's GHG goal for 2050 – 80% below 1990 levels. At the regional level, more than 60 distinct Bay Area adaptation projects are underway to assess sea level rise, extreme storms, water supply, heat and other climate impacts.

50

Bay Area jurisdictions have completed climate action plans for GHG reduction

101
MUNICIPALITIES

9
COUNTIES

BACERP also founded the Climate Readiness Institute – a Bay Area-focused collaboration of academics (UC Berkeley, Stanford, UC Davis, and Lawrence Berkeley National Laboratory) with climate leaders from the government, nonprofit, and private sectors.

What They're Doing Now

Currently, a group of Bay Area stakeholders are designing a new regional collaborative, the Alliance for Climate Resilience (ACR), that will build on the BACERP network by housing the higher level network coordination responsibilities while the Climate Readiness Institute develops training workshops and coordinated research. It is projected that ACR will be funded and operational later in 2015.



Kartik Ramanathan

New England Climate Leaders Collaborative

A map of the New England region, showing the outlines of Connecticut, Massachusetts, New Hampshire, Rhode Island, and Vermont. The five states are highlighted in a yellowish-gold color. An orange callout box with white text points to the highlighted area.

New England Climate Leaders Collaborative

The New England Climate Leaders Collaborative is a recently organized group of New England governmental and nongovernmental leaders that seek to partner across state borders in order to help communities across the region become resilient to the impacts from global climate change. The collaborative represents five New England states: Connecticut, Massachusetts, New Hampshire, Rhode Island, and Vermont. These states have a combined area of 36,232 square miles and an estimated population of 13.3 million in 2010. Most of the population is located along the coast, where sea level rise and storm surge are major concerns. In watersheds across New England, increased precipitation levels and an uptick in both the frequency and severity of storms is causing increased river flooding and erosion.

The collaborative creates an opportunity to share resources and ideas and scale up activity across a small region more rapidly than could be accomplished by the individual states working alone. The genesis of this effort was an invitational Climate Leaders' Summit organized by EPA Region I in November 2013, in Providence, Rhode Island. The Summit attendees reached a strong consensus that an ongoing New England-wide initiative could help tackle those challenges and foster changes at all levels of government to support the region's long term climate preparedness and resilience.

The following winter, EPA followed up on the event by establishing six action teams. Each team is led by two champions who indicated their interest in leadership at the November Summit and by an EPA representative. EPA also formed a Steering Committee made up of climate and sustainability program managers from the six New England States. The intent is to develop collective plans, services and actions that will advance the region's resilience to all climate impacts, with a special focus on the biggest climate risks in New England: riverine flooding, coastal sea level rise, and coastal storm surge.

What They're Working On Now

Already, under this new effort, EPA Region I has launched an inventory of work across New England related to vulnerability assessment and resilience planning. The database can be used to search for successful communication plans, utilized and needed data, best practices, case studies, funding sources and partnerships, and tools used by communities. ISC is also partnering with state environment commissioners to build state-level collaboration to support local initiatives, connect state initiatives and advocate for more coordinated federal action.



Photo courtesy of JD, www.flickr.com

Los Angeles Regional Collaborative for Climate Action & Sustainability

The Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC) is a membership organization fostering a network of local and regional decision-makers in the Los Angeles County region to perform climate mitigation and adaptation work using cutting edge research on local climate impacts and information management systems. LARC is a collaborative organization, based on the principles of dialogue and shared purpose. It is housed at the UCLA Institute of the Environment and Sustainability (IoES). It receives logistical support from the IoES, but is governed by the LARC Governing Board, an elected body of LARC Members.

LARC is the sole climate collaborative in the LA region and its network is a cross-section of climate practitioners and decision-makers including academia, cities, LA County, regional agencies, nonprofits and businesses. Recognizing the need for cross-jurisdictional collaboration within the large and diverse LA County region, LARC coordinates climate resiliency efforts with land use, transportation, infrastructure, energy, water, public health, emergency response, and resource management partners. LARC serves as a convening body to ensure consistency of performance, collaboration among decision-

makers and practitioners, and coordination of climate action efforts for the LA region as a whole. Both within its membership and with policy-makers in the region at large, LARC facilitates the exchange of information, including cutting-edge and locally relevant climate research initiatives, best practices in policy development, information management systems, and education efforts.

In fall 2013, LARC embarked upon a three year initiative to create the regional Framework for Climate Action. As a clearinghouse of climate research, data, and policy guidance, the Framework is uniting the work of regional entities into one landscape, building a resource for decision-makers and practitioners in the region, to help them mitigate the causes of climate change and prepare for its impacts and, ultimately, creating a resilient and healthy LA. This Framework brings together many of LARC's earlier initiatives, including a federally-funded simulation of downscaled climate change projections, a study on sea level rise and storm surge modeling, and an interactive energy atlas that would map energy consumption



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MUNICIPALITIES
IN LOS ANGELES COUNTY

across the region. The Framework will also include a comprehensive survey of existing localized climate and sustainability research, information, practices, ordinances, policies and guidelines, called the *State of the Region*.

What They're Working on Now

LARC is currently working on a new organizational structure that would allow them to support LA County governments more effectively. As many of the resilience collaboratives around the country are struggling with similar questions of governance and structure, LARC is considering a unique approach. Rather than form a 501(c)3 nonprofit organization, which would put them in direct competition with many climate-focused nonprofits in the region, they are looking to agricultural cooperative extension as a model as a model that would enable them to use their expertise, and that of the broader UCLA community, to the benefit of area governments.



OCTOBER 2014: HIGHLIGHTS

“The Plenary helped introduce us to some mature and maturing efforts at multiple scales which allowed us to see some common themes as well as enable me to identify, quickly, individuals that I wanted to talk with.”

– Participant

Think Resiliently, Act Regionally, one of ISC’s signature Sustainable Communities Leadership Academy workshops, was held in Alexandria Virginia late 2014.

The workshop brought together twelve teams from across the United States attended:

- The Bay Area Climate & Energy Resilience Project
- New England Climate Leaders Collaborative
- Los Angeles Regional Collaborative for Climate Action & Sustainability (LARC)
- Metro-Boston
- National Capital Region
- P2R2 Northeast Florida
- Puget Sound Regional Council
- Sacramento – Capital Region Climate Readiness Collaborative
- San Diego Regional Climate Collaborative
- Sierra Nevada
- Southeast Florida Regional Climate Change Compact
- The Twin Cities

These teams represented both established regional resilience collaboratives and those just getting started.



“Putting regionalism in a historical and political framework will help tremendously in how we design the focus, composition and workplan for a federal-regional partnership that we’re trying to create.”

– Participant

“Really appreciated the ‘thought partners’ and experts you brought in for discussion, as well as the dedicated time to work within our team. The design – focused on teams – helps build capacity, collaboration and relationships. Overall, a HUGE help for our region.”

– Participant

The three-day event featured a blend of interactive panel discussions and small-group working sessions focused on key challenges, including the following topics:

- Forming and sustaining regional resilience collaboratives from an organizational perspective – what can we learn from the diverse models currently operating within the US?
- Assessing and protecting a regional communications environment – how to collaborate for regional scale public engagement and communications.
- Leveraging regional assets effectively for state and federal technical assistance and other resources.
- Federal perspectives on the emerging role of regional collaboratives.
- Models for implementation of regional adaptation strategies across multiple jurisdictions within a region.
- Integrating adaptation and mitigation policy at the regional scale.
- Financing regional scale climate adaptation strategies.
- Monitoring & evaluation at the regional scale.

Some highlights from the workshop agenda:

- Working with the Military in Your Region
- Whole Community Engagement to Build Resilience Strategies
- Nonprofits as Partners for Regional Resilience
- Working with the Emergency Management & Hazard Mitigation Community in Your Region
- Coordinating Regional Advocacy at the State and Federal Levels
- Applying Cultural Cognition to Regional Communications Strategies 



Harriet Tregoning, Director of HUD’s Office of Economic Resilience, took part in a plenary on federal perspectives with Matthew Dalbey, Director – EPA Office of Sustainable Communities and Michael McCormick, Deputy Associate Director for Climate Preparedness, Council on Environmental Quality, Executive Office of the President.

Metro Boston



The Metro Mayors Coalition’s (MMC), formed in 2001 by the Metropolitan Area Planning Council (MAPC), is a groundbreaking coalition of 14 mayors and town managers in the inner-core of the Metro Boston Region. The jurisdictions that these mayors and town managers represent include a population of over 1.3 million, many of whom live in coastal areas. Metro Mayors has become an effective vehicle to address common issues confronting urban core governments such as climate resilience, and has made significant strides in overcoming the obstacles that hampered past attempts at inter-local cooperation.

MAPC’s \$4 million Sustainable Communities Regional Planning grant from HUD enabled the MMC and its partners to advance local planning efforts, state and regional policy work, and produce new research and regional plans that serve as a blueprint for future development and preservation, including the Regional Climate Change Adaptation Strategy (RCCAS). The RCCAS will guide the MMC climate preparedness efforts, including working with municipalities to implement best practices for climate hazard, preparation response, helping all levels of government make infrastructure more resilient, and confronting the impacts of climate change and natural disasters on vulnerable populations.



The impetus for MMC’s new focus on climate resilience can be traced back to Hurricane Sandy and the severe damage it inflicted upon the region in 2012. On the second-year anniversary of the storm, Boston’s Mayor Martin Walsh announced the City of Boston’s plan to host a regional summit to better prepare for the impacts of climate change and to coordinate a regional approach with MAPC via the Coalition. In November of 2014, MAPC hosted and facilitated a newly developed MMC Climate Preparedness Working Group, tasked with planning the Summit. ISC provided guidance to MMC’s resilience efforts at key points during their summit planning process. At the October 2014 *Think Resiliently, Act Regionally* and the March 2015 *Climate and Economic Resilience* Sustainable Communities leadership academies, ISC helped Metro Boston teams refine their communications approach towards skeptical policy-makers and the public in advance of their summit.

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INDIVIDUAL CITIES & TOWNS

What They're Doing Now

In May of 2015, the MMC held their Climate Preparedness Summit and launched a new climate preparedness taskforce to coordinate intergovernmental efforts to identify and address vulnerabilities in the region's critical infrastructure. The half-day summit convened the 13 member mayors of the Coalition, state government officials and other relevant stakeholders for a discussion on climate preparedness for the Metro Boston area with the purpose of producing a shared preparedness policy agenda for the region. The launch of the taskforce coincided with the signing of the Metro Boston Climate Preparedness Commitment by all 14 mayors and town managers, in which they pledged to work together to prepare the region for climate change and to continue reducing greenhouse gas emissions. With assistance from ISC, MMC is currently building the capacity of its jurisdictions to produce their own climate vulnerability assessments that would inform future resilience actions.



National Capital Region



The Metropolitan Washington Council of Governments (MWCOG) is an independent, nonprofit association that brings area leaders together to address major regional issues in the District of Columbia, suburban Maryland and Northern Virginia, an area with a population of almost five million with an additional 1.6 million moving to the region by 2040. In the metropolitan Washington region, the average annual temperature has risen about 4°F. Sea level has risen almost 10 inches over the past 80 years. This warming is driving changes in the frequency and intensity of extreme weather events.

MWCOG's Climate, Energy and Environment Policy Committee (CEEPC) was created by the association's board in 2009 as its principal policy advisor on climate change and other environmental issues, and will coordinate the region's resilience collaborative.

Membership on the CEEPC includes representatives from MWCOG's 22 member governments, state agencies, state legislatures, the Air and Climate Public Advisory Committee, federal agencies, utilities, environmental organizations, business organizations, and academics. CEEPC recognized that the region needed a more formal structure to bring relevant regional stakeholders together and called for the development of a Metropolitan Washington Resiliency Network.

MWCOG just completed a yearlong collaborative climate resilience planning process with NASA, federal agencies, the District of Columbia, Arlington, and Alexandria. As part of this project, NASA developed downscaled regional climate information that COG and other stakeholders will use to inform resiliency initiatives moving forward. NASA also developed similar downscaled climate information for NASA centers around the country to work on resiliency.

5

MILLION PEOPLE

1.6

MILLION MOVING TO THE
REGION BY 2040

ISC's *Think Resiliently, Act Regionally* provided a platform for MWCOG staff and other regional actors to meet in person – a first for some of them – and begin to develop a concept for a regional collaborative in the National Capital Region. Since their participation in that leadership academy and also ISC's May 2015 *Climate and Economic Resilience*, MWCOG has begun work on creating a regional climate resiliency network, developing a persuasive business case for resiliency, and determining the actual measures necessary to protect crucial public infrastructure.

What They're Working On Now

MWCOG is working to capitalize on the relationships built at the two ISC leadership academies by reconvening some members of the teams that attended each event to develop a shared vision for what resilience would look like in the National Capital Region. They are also looking to their counterparts across the country and assembling an inventory of best practices in regional resilience.



P2R2 Northeast Florida

With 140 miles of coastline and five barrier islands boasting some of the state's most magnificent, pristine beaches, Northeast Florida is "Florida's First Coast," and is vulnerable to sea level rise. Jacksonville in Duval County is the major urban center, boasting a mix of industrial manufacturing, transportation, financial services, healthcare, and military employment. Jacksonville accounts for almost 55% of the region's population and is the employment hub for several other communities in the region.



The goal of Northeast Florida's Public/Private Regional Resiliency (P2R2) Committee is to develop a regional strategy that will incentivize population and private development to locate outside of areas vulnerable to the effects of sea level rise. The P2R2 Committee consists of private sector leaders who are willing to participate but not currently advocates of mitigation or adaptation. P2R2 is a committee of the Northeast Florida Regional Council (NEFRC) and was convened pursuant to an action item in the NEFRC's Regional Action Plan on Sea Level Rise.

In response to an action item in the region's 50-year vision, *First Coast Vision*, the Regional Action Plan was created to look at the potential impacts of sea level rise on Northeast Florida. Using estimates for sea level rise, the committee developed policy recommendations for local governments in October 2013. These recommendations became the Regional Action Plan.

Develop a regional strategy that will incentivize population and private development to locate outside of areas vulnerable to the effects of sea level rise.

The Regional Action Plan resulted in a unique opportunity to generate grassroots civic engagement and volunteers from the business community. This outpouring of civic engagement from citizens and the business community is the collaborative currently operating in Northeast Florida, the Public/Private Regional Resiliency (P2R2) Committee. Thanks to guidance from Dan Kahan of Yale University at ISC's *Think Resiliently, Act Regionally*, the P2R2 team developed an approach that relies less on discussing the causes of sea level rise and instead focuses on making a clear business case for taking action. Though P2R2 is younger than many other similar collaboratives, they have already established themselves as leaders in engaging the business community around resilience.

What They're Working on Now

At *Think Resiliently, Act Regionally*, Dan Kahan reminded participating teams that “good leaders lead.” Inspired by this message, the P2R2 committee completed the first phase of their work plan – originally meant to last one year - in only six months. They launched Phase Two in May of 2015 at a gathering of 60 area rotary clubs, where they communicated who they are, why climate change is a threat to the economy, and what actions they plan on taking to address it.



Photo courtesy of Mark Kortum, www.jlckr.com

FORMS OF REGIONALISM

Successful regional entities are given, or develop, the necessary authority to influence policies, programs and public attitudes.

While the concept of regional approaches to climate issues is relatively new, regionalism has been used in the past to address other challenges. The successes and challenges of regional entities and structures can help guide new efforts to develop regional climate solutions.

The following section explores the different types of regional authority, governance models, and other key ingredients that influence the impact a regional entity may have.

Forms of Regionalism

Regionalism in the United States has evolved since the late 1800s and can take many forms. It can be a loose collaboration, a contractual arrangement or a legal entity. The first half of the twentieth century witnessed a burst of regional activity as cities grew, suburbs developed, and governments realized that many issues required action beyond that of a single jurisdiction but separate from the state. Regional entities are typically established to coordinate planning across jurisdictions in order to ensure the efficient use of public funds, to manage infrastructure and other types of systems or network planning, and/or to give local governments a stronger political voice in their dealings with the state or federal governments.

One of the more common regional governance structures is the **special purpose authority** focused on a specific geography or issue such as regional airport, water or transit authorities. These regional authorities or commissions are enabled and resourced by federal or state governments who delegate to them a clear planning, management, and regulatory role often even including the ability to tax or raise their own revenues. Some regional agencies were created through federal statutes, such as the Appalachian Regional Commission and the Tennessee Valley Authority, both created by Congress to address economic growth and development. Federal law also established **Metropolitan Planning Organizations** (MPOs) in the 1960s for regions over 50,000 with populations to coordinate long-range transportation planning as a condition of receiving federal funding. Today there are more than 400 MPOs nationwide, over half of which are part of a larger regional planning agency.³

³ Transportation for America (2014). The Innovative MPO: Smart Planning, Strong Communities. Washington, DC: Transportation for America

These regional planning agencies or **Councils of Government** (COGs) are another common regional governance model. They are established when local governments formally agree to work together on a set of issues through a compact, a memorandum of understanding or other formal structure. Over 500 regional councils exist in 47 states, covering 90% of the nation's local governments.⁴ Regional planning agencies and COGs may play more of an advisory than authority role. They exist to address common functions across jurisdictions and provide a unified voice on issues that cross traditional smaller-scale boundaries. The set of issues they address varies by region, but may include waste management, transportation planning, economic planning, stormwater management, or health and human services.

Informal regional structures also exist and can be seen in such examples as a metropolitan mayors caucus or a joint policy committee created to collaborate across regional entities. These can be civic collaboratives that work with and sometimes include governmental partners, or they may work outside of government serving as a voice to influence public policies and investments. Some regions have many regional structures, while in others, an MPO may be the only regional entity.

Denver, Colorado is one metropolitan example where all of these different types of regional entities exist simultaneously. The Denver Council of Governments (DRCOG) is comprised of local elected officials representing almost 60 cities and counties.⁵ DRCOG plays a formal regional planning function as delegated by both state and federal authorities for transportation, aging and planning. Two of the region's special purpose authorities are the Regional Transit Authority and Denver Regional Air Quality Council. Important civic collaboratives also exist including Mile High Connects and the Metro Denver Economic Development Corporation (Metro Denver). Mile High Connects is a broad partnership that includes strong involvement by philanthropic organizations in addition to public and private sector agencies with a focus on better coordinating housing, jobs, schools and transit policies.⁶ Metro Denver, on the other hand, is comprised of more than 70 public sector economic development groups to focus on regional economic competitiveness.⁷

For more information:
milehighconnects.org



Working at the regional level requires coordination between local, state and federal governments. This can happen through formal processes such as enabling legislation or official memorandums of understanding between local governments, or it can occur more informally through self-designated regional agencies or collaboratives. To be successful in their impact, however, regional structures require authority to be delegated or ceded allowing them to engage in this developing space. 

4 Kathryn A. Foster, Chapter Three in *Regional Planning in America: Practice and Prospect* (2011), Chapter Three in *Regional Planning in America: Practice and Prospect*. Cambridge, MA: Lincoln Land Institute of Land Policy; Seltzer, E. and Carbonell, A (editors).

5 For more information about DRCOG see <https://drcog.org/about-drcog/about-drcog>

6 For more information on Mile High Connects see <http://milehighconnects.org/>

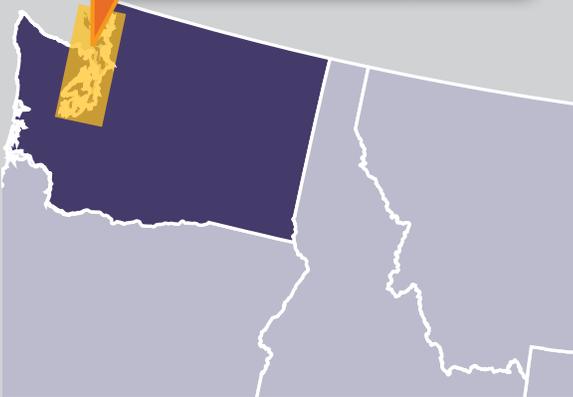
7 For more information on Metro Denver Economic Development Corporation see <http://www.metrodenver.org/#>



Puget Sound Regional Council

The regional climate collaborative in the central Puget Sound represents organizations that have experience working on climate change issues, from a variety of mitigation and adaptation perspectives including: Puget Sound Regional Council (PSRC), City of Seattle, Snohomish County Department of Emergency Management, University of Washington, Port of Seattle, King County and Pierce County. Puget Sound is a large salt water system of many estuaries, fed by highly seasonal freshwater from the Olympic and Cascade mountain watersheds. The most significant climatic changes projected for the Pacific Northwest will be increase in base sea level and high tides, increase in average temperatures, minimum temperatures, and the frequency and duration of extreme heat events, reductions in snowpack and shifts in the timing of stream flow, wetter winters, drier summers, and more extreme precipitation events.

Puget Sound Regional Council



The PSRC, the City of Seattle, King County and the Port of Seattle have been leaders in the effort to reduce emissions leading to climate change and incorporating such mitigation activities in their respective planning processes. The University of Washington has

done extensive research and analytical work on the impacts of climate change in the region and in Washington State, and is supporting the adaptation planning efforts of cities, counties, tribes, and transit agencies around Puget Sound. The collaborative's vision for the future is to bring together key government, academic, and business stakeholders to begin addressing resiliency more effectively in planning activities and identify key shared implementation needs. Seeking opportunities to align planning around common data sets and management strategies will facilitate long-range regional planning, coordination across agencies, and community engagement.

What They're Working On Now

The Puget Sound Regional Council on Climate Resiliency hopes to begin addressing the unique issues facing the region from climate change, including changes in sea level rise, temperature, and precipitation and their impacts on infrastructure, emergency response, economic development, health, and quality of life. After attending the *Think Resiliently, Act Regionally* workshop, the PSRC and its partners begin to think about their overall goals as well as the formal structure and makeup of their collaborative. Currently, they are working with ISC to develop a governance structure that reflects the intricacies of regional politics and to lay out an agenda for resiliency action.



Sacramento – Capital Region Climate Readiness Collaborative



The idea for the Capital Region Climate Readiness Collaborative (CRC) initially formed after the National Climate Adaptation Forum in 2013 and conversations with representatives from San Diego, Los Angeles, and the Bay Area, who were all developing their own regional climate adaptation groups. Realizing that inland California faced different impacts and worked in a different economic and political context than coastal communities, local representatives decided to form the CRC to bring a new, unique voice to the table of the statewide Alliance of Regional Collaboratives on Climate Adaptation (ARCCA). The collaborative steering committee consists of representatives from the Metropolitan Air Quality Management District, the regional council of governments, UC Davis, the Local Government Commission, and local utilities.

The CRC represents California's Capital Region, located at the confluence of the American and Sacramento Rivers, between the Delta and the Sierra Nevada foothills. Agriculture is a key

economic driver for many communities; the region's prime farmland produces direct output worth \$1.66 billion, which is exported across the US and the world. Key climate impacts include wildfire, river flooding, vulnerable infrastructure, public health, deteriorating air quality, and vulnerabilities in water and energy supply. Many of these impacts will impact the agricultural economy and agricultural communities. Sacramento has the second-highest flood risk in the US. The region plays a crucial role in delivering water to the highly-productive Central Valley and highly-populated Southern California, but much of its water infrastructure, including 11,000 miles of levees, is vulnerable to climate change.

Prime farmland produces
direct output worth

\$1.66 BILLION

The CRC has convened several stakeholder engagement meetings on key regional climate impacts, conducted a needs assessment of local water agencies, and participated in exchanges with the statewide collaborative of regional adaptation organizations. The collaborative has multiple goals, including: providing a regional forum for interested organizations; increasing regional support and coordination on climate adaptation action and initiatives; working together to identify and obtain funding, leverage resources and opportunities, and avoid duplication; developing a common understanding of regional vulnerabilities; helping to identify regional priorities and information and capacity needs; and sharing information and best practices.

2nd HIGHEST FLOOD RISK IN THE US

What They're Working on Now

The CRC has been working closely with the Sierra Nevada region's climate collaborative (page, 34) on shared climate impacts since the two teams attended ISC's *Think Resiliently, Act Regionally*. At that same event, the CRC learned how others around the country are integrating adaptation into other regional planning processes. As a result, they are now working to include adaptation considerations in their decennial transportation plan update.



San Diego Regional Climate Collaborative



The San Diego region is world-renowned for its mild climate and world-class beaches that span more than 70 miles of coastline. The region is home to a diverse population of more than 3.1 million people, larger than that of 20 individual states, and is expected to grow by approximately one million more by 2050. Water and energy resources are precious, as the region imports most of its water (approximately 85 percent) and energy. The region faces various critical challenges from a changing climate including droughts hotter and more humid heat waves, less frequent but more intense rainfall, extreme high tides and winter storms resulting in more frequent and widespread coastal flooding, increased wildfire risk, and threatened coastline habitats.

Founded in 2012, the San Diego Regional Climate Collaborative is a network of public agencies that share expertise, leverage resources, and advance comprehensive solutions to facilitate climate change planning. By partnering with academia, nonprofit organizations, and business/community leaders, the collaborative works to raise the profile of regional leadership. The vision is to elevate the San Diego region as a leader in addressing climate change through local comprehensive solutions that ensure a vibrant economy and healthy environment.

The overall goals of the Climate Collaborative are to:

- Support regional efforts and advance comprehensive solutions to reduce greenhouse gas emissions and prepare for local climate change impacts.
- Expand the membership and effectiveness of the Climate Collaborative.
- Communicate about the leadership of the Climate Collaborative and the San Diego region to local, state, and national leaders, peers, and funding institutions.
- Build capacity within San Diego regional public agencies through networking, training and partnerships with academic institutions, businesses, and nonprofits.

The collaborative does not have statutory authority, but aims to build the capacity of agencies within their existing jurisdiction to respond to climate change both as individual agencies and in coordination with each other.

What They're Working on Now

Through a partnership with the San Diego foundation, the San Diego Regional Climate Collaborative is offering \$200,000 in grants to support the climate change work of area local governments. In an effort to promote crosscutting solutions, priority will be given to those projects that involve more than one government department. The grants are meant to address the challenges detailed in the collaboratives 2014 report *San Diego, 2050 is Calling. How Will We Answer?*, which brings together science-based information and practical solutions to detail the risks that climate change poses to the San Diego region.



Photo courtesy of Chad McDonald, www.flickr.com

REGIONAL APPROACHES TO CLIMATE ISSUES

Early federal actions on climate adaptation in the United States provided science products and technical assistance to state and local governments, but the scale and quantity of adaptation activities at the local level limited the amount of tailored assistance state and federal agencies could provide. Many regional resilience efforts arose, in part, from a desire to overcome this issue by creating new platforms to leverage and coordinate federal resources.

In Southeast Florida, for example, multiple counties and other entities completed separate sea level rise (SLR) projections, and when compared on a single graph, the projections were not well aligned despite the technically sound process used to generate them. The newly formed Compact commissioned a technical advisory committee (containing many of the same local scientists who had helped generate the individual county level projections) to develop a consensus set of SLR projections. The Compact was then able to enlist state and federal technical expertise as part of this joint process, which greatly advanced local communications and federal advocacy efforts.

Coordinating local and federal resources early enables regional collaboratives to leverage even more resources in the long-term. In Southeast Florida, locally based state and federal agency staff offered early in-kind support to the Compact working groups that formulated key strategies in the Regional Climate Action Plan. This helped secure funding via a [NOAA Project of Special Merit](#) and Federal Highway Administration grants to more closely examine the vulnerability of [regional transportation infrastructure](#). The [San Diego Regional Collaborative](#) successfully engaged locally based federal resources to secure technical assistance to incorporate climate impacts into a multi-jurisdictional hazard mitigation plan. The Bay Area Climate & Energy Resilience Project published an impressive [Bay Area Climate Asset Map](#) that details over 100 Bay Area climate initiatives in the public, private and nonprofit sectors, and is being used to better leverage and align local resources.

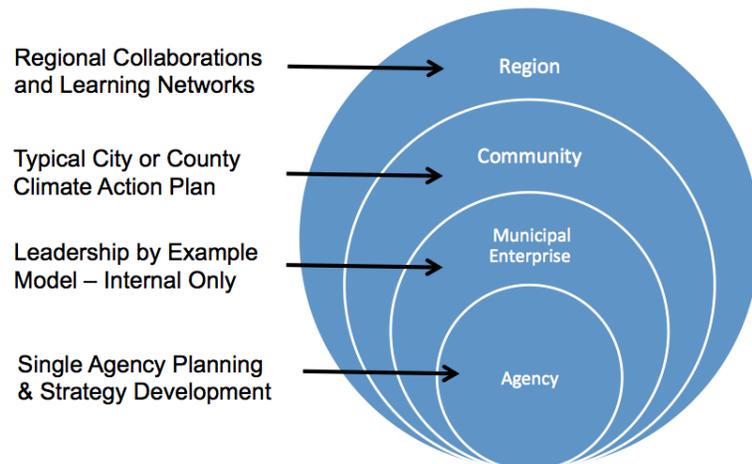


The best regional climate approach is one that preserves local authority and autonomy.

In recent years, federal policy has more actively incorporated climate considerations into the use of locally-applied federal funds. In late January, 2015, President Obama signed an [Executive Order](#) that updated guidelines for the design, siting and construction of federal, federally-funded and federally-permitted projects. While the implementing guidance provided by FEMA is still in draft form, this EO signals a major shift in federal funding that will certainly align with and aid local government resilience initiatives.

In California, a state with five regional collaboratives, Governor Jerry Brown's administration and the collaboratives are working together via the [Alliance of Regional Collaboratives for Climate Adaptation](#) (ARCCA) as a means of better aligning state agency resources with activities underway among the individual collaboratives.

This trend of federal and state focus on local resilience initiatives appears to be gaining momentum, spurred directly by the growing presence of regional climate initiatives. As this type of approach grows in popularity, those regional climate initiatives must continue to grow and evolve in terms of how they coordinate with their representative members, area stakeholders and the general public.



The principal building block of local government climate planning is the climate action plan. These plans are typically scaled for individual jurisdictions. While that approach fits neatly with local governance, it misses the reality of political geography in larger metropolitan regions. For example, Metro-Boston includes 101 individual cities and towns, Los Angeles County is home to 88 municipalities and the four counties of Southeast Florida contain 108 municipalities.

The best regional climate approach is one that preserves local authority and autonomy exemplified by these plans. This allows issues requiring broader collaboration to more easily receive the greater attention and resources which they merit.

Networks typically follow a path from “connectivity networks,” to “alignment networks,” to “production networks.”

A regional collaboration is best suited to address regionally-scaled problems, coordinate advocacy to higher levels of government and leverage existing resources for greater effect on regional climate challenges. This is why LARC began as an initiative to coordinate local management needs with the interests of local researchers, or the early formation of the Southeast Florida Compact was catalyzed by working with the region’s Congressional delegation to make sense of differing county sea level impact projections and priorities for federal funding.

Regardless of their origins, regional collaboratives are also networks, and evolve as such. As Pete Plastrik of the Innovation Network for Communities observes, networks typically follow a path from “connectivity networks,” to “alignment networks,” to “production networks.”⁸ Regional collaboratives often begin by simply connecting people and institutions in a metro region that are working on adaptation. More mature alignment networks find additional common ground through shared strategies and projects. Over time these connections progress toward the “production” mode through shared activities such as sharing climate science and regional planning studies. Mature networks maintain characteristics of network stages simultaneously, and maintain flexibility as shared goals and strategies evolve.

For example, the Southeast Florida Compact began efforts by connecting county legislative policy staff for joint advocacy and technical staff charged with producing a regional-scale analysis of emissions and vulnerabilities in parallel. These early efforts matured into a Regional Climate Action Plan. In the San Diego region, the Regional Climate Collaborative arose “to be a network for public agencies that serve the San Diego region by sharing expertise, leveraging resources, and advancing comprehensive solutions to facilitate climate change planning.” In the Sacramento Capital Region Collaborative case, the earliest efforts in building the regional collaborative have been to connect various actors with an interest in climate change adaptation.

As networks continue to mature, their engagement and communications efforts also grow in depth and strength. In initial stages, regional efforts often begin at the local government level. But as planning and implementation proceeds, it becomes more and more important to use a combination of stakeholder outreach and community engagement to widen the partnership and engage with stakeholders from the community, nonprofit and private sectors.⁹

8 Plastrik, Pete; Taylor, Madeleine: Net Gains: A Handbook for Network Builders Seeking Social Change, <http://networkimpact.org/downloads/NetGainsHandbookVersion1.pdf>

9 *Better Plans for Better Places -- Austin Spotlight* <http://betterplansbetterplaces.iscvt.org/#austin>

Kif Scheuer, Climate Change Program Director at the Local Government Commission, noted at ISC's Alexandria workshop that **all regional collaboratives must eventually consider how to become "a thing," a legal entity – with a bank account – through which resources can flow to localities.**

Community engagement is a discrete part of a stakeholder engagement process that takes place while developing and executing resilience measures. It differs from outreach in that community engagement is typically an interactive dialogue in which all parties have opportunities to shape the process and outcomes. The work to prepare for climate change could maintain or exacerbate existing levels of inequality unless it proactively engages everyone in the process. Effective community engagement brings disenfranchised or historically marginalized populations into the conversation and is therefore a critical component of equitable planning.¹⁰

While difficult, this type of community engagement is essential for successful long-term resilience because sustained implementation requires diverse buy-in and participation. Over 25 years of practice, ISC has determined a robust multi-stakeholder engagement that is thoughtfully designed, structured, and well-facilitated from beginning to end yields the best results.

However, each regional collaborative will need to make its own decisions about who is engaged, and at what point in the process to engage, based on their own unique circumstances. ISC is developing a dedicated guidance document outlining best practices in communications and community engagement for regional collaboratives.

Growing Up

Each collaborative follows a path that is reflective of local circumstances. They must also be relatively fluid to deal with a rapidly changing political and climate landscape. While this uniqueness is the greatest strength of these regional efforts, even often partially why they exist, it can create difficulties for federal and state agencies, which require consistency in order to effectively dole out resources and technical support. As regional collaboratives mature, they typically develop a need to formalize their network in order to obtain external resources and establish legitimacy as a regional convener.

Kif Scheuer, Climate Change Program Director at the Local Government Commission, noted at ISC's Alexandria workshop that all regional collaboratives must eventually consider how to become "a thing," a legal entity – with a bank account – through which resources can flow to localities.

ISC is currently examining cases of resilience regionalism to provide common frameworks and solutions to help the wide array of regional climate organizations cropping up to fill the resilience gap to better access to funding from federal and state agencies, private foundations, and other potential sources of revenue. This information should allow for more rapid adoption of lessons learned and help avoid common mistakes and pitfalls. 

¹⁰ Better Plans for Better Places – Seattle & Puget Sound Spotlight <http://betterplansbetterplaces.isvt.org/#seattle>



Sierra CAMP – Climate Adaptation & Mitigation Partnership



The Sierra Nevada and southern Cascade is a resource-rich region, covering all or part of 22 counties, and serves as California's principal watershed, supplying up to two-thirds of the state's developed water supply for urban areas

The Sierra Climate Adaptation and Mitigation Partnership (Sierra CAMP) formed to reduce the burden of climate change on communities and ecosystems throughout the Sierra Nevada. The Sierra Nevada and southern Cascade is a resource-rich region, covering all or part of 22 counties, and serves as California's principal watershed, supplying up to two-thirds of the state's developed water supply for urban areas including San Francisco, the San Joaquin Valley, the central coast and southern California and one-third of California's rich agricultural land. The region's forests store enough carbon to offset the annual CO₂ emissions of 108 coal-fired power plants. However, with decreased snow pack, continued drought, wildfires, and higher temperatures predicted as the new normal, the collaborative is looking to do everything they can to connect the urban and rural areas and build resiliency.

Sierra CAMP catalyzes leaders from government, public health, business, academia, and community groups to come together – within and across market and jurisdictional boundaries – to share information and best practices, leverage efforts and resources, avoid duplication, identify critical needs and agreed-upon strategies and actions, and develop funding sources to meet those needs.

The collaborative's primary goals include: developing an inventory of Sierra Nevada climate mitigation and adaptation efforts and studies; building on existing efforts, such as the Sierra Nevada Conservancy's 2009 Sierra Nevada Climate Action Plan and others, developing and implementing a comprehensive regional framework for climate action; creating cross-jurisdictional and public-private partnerships; conducting climate risk communication, education, and outreach efforts to increase public understanding of the causes and consequences of climate change in the Sierra Nevada and its relevance to the State of California; and improving the Sierra region's access to existing funding.

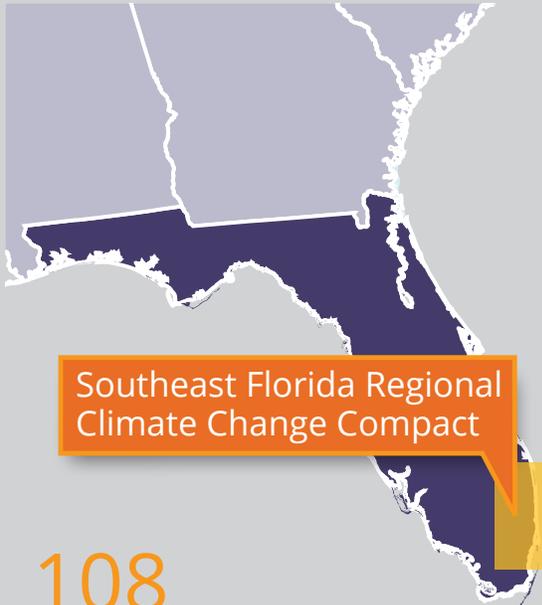
At ISC's *Think Resiliently, Act Regionally* Sierra CAMP began to forge a strong relationship with the four existing urban collaboratives in California (Resilient Sacramento, Bay Area Climate & Energy Resilience Project, Los Angeles Regional Collaborative and San Diego Climate Collaborative). In the months since that event, this relationship was formalized as the four urban collaboratives voted in Sierra CAMP as a member of the Alliance of Regional Collaboratives for Climate Adaptation (ARCCA). This will facilitate coordinated resilience actions in the rural Sierra region as well as the urban areas it supplies with water and agricultural products.

What They're Working on Now

During their team meetings at *Think Resiliently, Act Regionally*, Sierra CAMP produced – and ISC reviewed – a workplan that set goals and deadlines for their startup process. In accordance with that workplan, the collaborative has produced a draft governance structure and submitted it to members for comment via a well-attended webinar. They have also been engaged in fundraising.



Southeast Florida Regional Climate Change Compact



Southeast Florida Regional Climate Change Compact

108

MUNICIPALITIES

With an extensive coastline, low elevation, and unique geology, southeast Florida is threatened more by climate change than almost any other region of the United States.

For More Information:

southeastfloridaclimatecompact.org

The Southeast Florida Regional Climate Change Compact (Compact) was established by Palm Beach, Broward, Miami-Dade, and Monroe counties in 2010, representing a region of approximately 5.8 million full-time residents, with considerable part-time and seasonal population. With an extensive coastline, low elevation, and unique geology, southeast Florida is threatened more by climate change than almost any other region of the United States. The Compact represents a new form of regional climate collaboration designed to allow local governments to set the agenda for adaptation, while providing an efficient means to engage with state and federal agencies for technical assistance and support.

With the support of a variety of local, regional, state and federal agencies, as well as ongoing technical assistance and implementation support from ISC, the Compact developed a technical foundation for regional climate issues, including

a unified sea level rise projection, regional greenhouse gas inventory, and vulnerability analysis. These technical documents and the input of over 150 stakeholders led to the development of a Southeast Florida Regional Climate Action Plan (RCAP). Goals that stemmed from the RCAP include incorporation of climate change considerations into land use, transportation, and emergency management planning; solar development; climate change communications; incorporation of climate change into water supply plans; and Adaptation Action Areas (see below).

One notable success was legislation adopted by the Florida Legislature in 2011 creating an optional "Adaptation Action Area" (AAA) comprehensive plan designation for areas uniquely vulnerable to climate impacts to serve as a planning tool and encourage technical assistance and funding opportunities. In 2013 the Florida Department of Economic Opportunity funded the South Florida Regional Planning Council, Broward County and Fort Lauderdale to produce a local government guidebook, podcasts and a video based on the experience of the Compact partners using the AAA approach.

The input of over 150 stakeholders led to the development of a Southeast Florida Regional Climate Action Plan (RCAP).



What They're Working On Now

Currently, the Compact is working to deepen its engagement with key regional stakeholders. In 2013, 26 area mayors signed the Compact's Mayor's Pledge in order to align municipal policy goals with those of the RCAP. Compact leaders plan to similarly engage the business community, especially the real estate development and tourism industries, who exert considerable influence over Southeast Florida's vulnerable coastlines. This effort will require a nuanced balancing of property rights against the need to invest in resilient infrastructure.

The Compact's efforts are by nature long-term and require sustainable funding sources. For this reason, Compact leaders are trying to work more cooperatively with local universities, who are often competing for the same grants and working towards similar goals.



Twin Cities

The Twin Cities metropolitan area is comprised of seven counties, in which there are 186 cities and townships ranging from the two largest and most urban cities of Minneapolis and St. Paul to rural townships dominated by agricultural fields.

Aquifers, which supply 70% of the region's drinking water, are showing signs of depletion, which in turn has begun to have impacts on lakes and wetlands in the region. Population growth, development, localized water shortages, contamination, drought, and the impact of groundwater withdrawal on surface waters are affecting our future water supply. The Twin Cities region has experienced more frequent severe weather events recently. Climate change-related risks from increased temperatures and weather extremes have the potential to impact the region's quality of life, natural resources and infrastructure.

This collaborative is a relatively new effort in the Twin Cities metropolitan region. It is meant to act as a vehicle for integrating climate change strategies into local land use and development. It is structured so that all members are equal partners at the table, and has been an outgrowth of shared work on various climate initiatives at the state level, regional level, and the nonprofit sector. This effort is intended to leverage the most out of individual efforts through a shared vision (developed in state climate change plan and regional plan documents) and combined efforts at the regional scale.

While this partnership is just getting started, the Twin Cities region's Metropolitan Council has recently adopted a regional plan, *Thrive MSP 2040*, with land use policies to address the 2007 Next Generation Energy Act, which calls for a reduction in the state's greenhouse gas emissions of at least 15% by 2015 and a 30% by 2025 and 80% by 2050. This team has been assembled to leverage shared efforts to provide assistance to local governments and address issues that are specific to the metro area.



The Twin Cities

7
COUNTIES

186
CITIES & TOWNSHIPS

70%
OF DRINKING WATER
COMES FROM AQUIFERS

What They're Working on Now

ISC's *Think Resiliently, Act Regionally* demonstrated to the organizers of the Twin Cities collaborative why effective adaptation must be coordinated from the regional level, as well as, how to make that happen. Like other regional bodies, neither the Twin Cities collaborative or the Metropolitan Council are able to mandate that local governments undertake climate planning. Instead, they are following the lead of other collaboratives by taking a bottom-up approach, where local jurisdictions receive guidance and technical assistance from the regional collaborative.



WHAT'S NEXT?

Starting with this report, we will be releasing guides on how to approach the challenges and obstacles that regions face as they continue to grow and lead the way on climate resilience.

Fundamental to our approach to climate resilience and all the work we do is the recognition that crucial, creative solutions come from local action.

Our governance is based on a hierarchy of local, state, and federal layers of actors, which has proven reasonably adept at addressing local issues, and less so at dealing with challenges with a larger scale and longer-term impacts. When those potential impacts threaten different groups of people, economic sectors, and infrastructure systems, our governance structures have not proven up to the task. New approaches are required for such challenges.

Across the country and in differing ways, metropolitan regions have taken steps to address transportation, housing, environmental, economic, and other issues. More recently they have organized to begin to address climate concerns, from reducing greenhouse gas emissions, to adapting their systems to be more resilient in the face of changes. Regions are clearly the right scale to do this work, but that does not translate into easy organization and action.

Some regions have taken bold steps to formalize collaborative action, signing compacts among elected and other officials, pledging to work together on specific tasks. Others have started less formally, moving along the spectrum of network development from “connectivity” toward “production.” The most advanced have realized that to develop new funding sources they need to form legal entities, to “get a bank account and a credit card.”

ISC is here to help. We have been working on climate issues at the regional and municipal scale from the start. We understand the governance issues, civic engagement challenges, and potential rewards of these approaches – and that every region has a different context that implies varied opportunities and solutions.

We also know the value of networks. Fundamental to our approach, to climate resilience and all the work we do, is the recognition that crucial, creative solutions come from local action. By connecting the people who are creating those local solutions, we elevate “what’s possible” to amplify and replicate in other contexts. We are actively building a network of regions working on resilience, to serve this emerging practice and hopefully translate it to new regions. We know that as best

practices continue to emerge in this vital and growing field, learning together can help alleviate many of the issues and obstacles that have faced the first regions to take action toward resilience.

Starting with this report, we will be releasing guides on how to approach the challenges and obstacles that regions face as they continue to grow and lead the way on climate resilience, with topics like:

- Communications & Community Engagement
- Approaches to Assessing Vulnerability at the Regional Scale
- Developing Regional Climate Action Plans
- Implementation of Climate Action Strategies on the Regional Scale
- Regional Resilience Governance Models

We welcome your thoughts on this report and future guides. Please email Michael Crowley at mcrowley@iscvt.org with your feedback.





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