

# OVERVIEW

## Your Community Toolbox for Leading in a Changing Climate

*A Step-by-Step Guide for Working Together to Protect Your Region's Quality of Life for Future Generations*

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The changing climate is impacting our cities and world.

What we learned at Climate Education Partners (CEP) is there's great strength in amplifying what's going right and celebrating people who are doing the right thing in response to the changing climate.

With a solid scientific foundation, leaders make informed decisions together on how best to protect the spectacular natural beauty, economic vibrancy and their community's quality of life, not just for today, but for all future generations.

Climate Education Partners (CEP) was set up to work with leaders for this purpose.

Listen to leaders tell you in their own words about Climate Education Partners and the work we're doing together in the San Diego Region.

As our partners explained in their own words in the movie you just watched, Climate Education Partners (CEP) engaged, educated, and worked with leaders in our community to make more informed decisions that preserve the quality of life in our region.

This Community Toolbox site will tell you how we succeeded... And how you can, too.

Join us to learn Climate Education Partners' story and how we:

- Planned our approach
  - Convened & learned...together
  - Created great resources
  - Shared our learning with our community
  - Evaluated and refined our process
  - And celebrated the great work we did together.
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## San Diego Is Answering the Call

News articles from around the country recognize San Diego's leadership in addressing the impacts of a changing climate.

Take a moment and read some of the headlines shown here...

City of San Diego's Mayor Kevin L. Faulconer states,

“There are few places in the world as connected to their environment as San Diego so it should come as no surprise that we’re leading the way when it comes to protecting our natural beauty and quality of life. We’ve set ambitious goals with our landmark Climate Action Plan and continue to grow as the nation’s leader in solar installations.”

The Mayor continues, "We’ve proven that you can protect the environment and create the green jobs of the future. That’s why it’s so important that we continue to work together with groups like Climate Education Partners to help others join us in this effort. This new 'Community Toolbox for Leading in a Changing Climate' will be an invaluable resource for other cities and agencies looking to advance their climate action efforts.”

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## Climate Education Partners (CEP) Goals

With local experts and leaders, Climate Education Partners (CEP) began in 2010 with the goal of providing the following to our leaders and their communities:

1. Provide Local Climate Data:

Serve as a local resource for information analysis on the causes and impacts of climate change; temperature and precipitation are the driving forces affecting all other major impacts of climate change, such as water resources, coastal flooding, wildfires, nature’s benefits and public health.

2. Create Educational Resources to Inform Decision-Making:

Create practical resources, such as reports and movies, focused on local impacts of climate change for regional leaders and their communities.

3. Share Opportunities and Outreach:

Conduct a range of creative climate science educational activities, which includes climate impact tours, roundtable discussions, and social media outreach to support leaders in the community in making informed decisions.

4. Evaluate Using Data to Identify Best Practices:

Assess climate science education resources and activities to determine the most effective ways for San Diegans to learn about the changing climate.

5. Continue to Serve as a Useful Model for Other Communities:

Develop resources and tools that serve as an informative model in other communities of California, the nation and beyond.

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## How We Began: The National Science Foundation's Investment in Climate Change Education

So let's go back to the beginning...

In 2012, Climate Education Partners (CEP) was one of six projects awarded \$5 million funding from the National Science Foundation to conduct research and outreach activities.

NSF also funded the Climate Change Education Partnership (CCEP) Alliance to network the six multi-institutional projects funded by the Foundation. <http://ccepalliance.org/>

The mission of the CCEP Alliance was to advance exemplary climate change education through research and partnerships.

The six projects that constituted The Alliance were:

### Climate Education Partners (CEP)

CEP aimed to develop an integrated climate literacy model in order to build a community of concerned leaders and stakeholders working across the political spectrum to broaden understanding of locally relevant climate science and impacts and finding mutually beneficial solutions.

### Climate and Urban Systems Partnership (CUSP)

CUSP fostered a network of climate-focused organizations to implement targeted, coordinated, and concentrated educational strategies that explored local climate impacts and community-level responses.

### Maryland and Delaware Climate Change Education, Assessment and Research (MADE-CLEAR)

MADE CLEAR focused on ensuring that the current generation of students was able to make informed choices based on evidence, experiences, and trustworthy information about climate and climate change.

National Network for Ocean & Climate Change Interpretation (NNOCCI)

NNOCCI's mission was to train enough voices in proven communication techniques to change the national discourse around climate change to be productive, creative and solutions focused.

Pacific Islands Climate Change Education Partnership (PCEP)

PCEP aimed to empower the region's students and citizens through education that exemplified modern science and indigenous environmental knowledge, addressed the urgency of climate change impacts, and honored indigenous cultures so that students and citizens within the region have the knowledge and skills to improve understandings of climate change and how to adapt to its impacts.

Polar Learning and Responding Climate Change Education Partnership (PoLAR CCEP)

The Polar Learning and Responding Climate Change Education Partnership (PoLAR CCEP) sought to inform public understanding of and response to climate change through the creation of novel educational approaches that utilized fascination with shifting polar environments and were geared towards lifelong learners.

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## Discover More...

To discover more, please visit our [project website](#) or contact...

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# TOOL 1: PLAN

A successful journey is helped considerably by having a map and in the case of Climate Education Partners (CEP), this meant developing a plan.

We learned through a bit of trial and error, that the first tool in your Toolbox for Leading is developing a good plan that: is (1) informed by people with expertise in various areas of study, and (2) includes a strong organizational infrastructure to support the work.

When CEP started, we began by asking and answering these key questions:

- A. What are the long-term project goals and initial planning efforts?
- B. What expertise will contribute to defining objectives to reach those goals?
- C. What organizational structure is needed to facilitate decision making and project implementation?
- D. What information systems and technology will reduce inefficiencies and enable coordinated teamwork?

The answers to these questions unfold as you continue the story.

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## A. PROJECT GOALS AND OBJECTIVES

With local experts and leaders, Climate Education Partners (CEP) began in 2010 with the goal of providing the following:

1. Provide Local Climate Data
2. Create Educational Resources to Inform Decision-Making
3. Share Opportunities and Outreach

4. Evaluate Using Data to Identify Best Practices
5. Continue to Serve as a Useful Model for Other Communities

To best meet these goals and objectives, CEP initiated the following planning efforts:

First, CEP brought together its core team members, partners, leaders and stakeholders to learn from each other and develop communications and outreach strategies for climate change education in San Diego.

Second, CEP worked to refine its internal planning processes, resource management and data and information systems in order to support the project achieving its goals and objectives.

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## B. EXPERTISE THAT CONTRIBUTED TO DEFINING OUR GOALS AND OBJECTIVES

CEP's strategic plan for how to achieve its goal and objectives drew upon (and was developed by) the expertise of the following groups:

- World class science educators & researchers
- Behavioral science researchers
- Communications experts
- San Diego regional leaders

Key Learnings- When working with interdisciplinary and diverse experts, try to:

- Assume everything you do in creating resources and developing sharing strategies will take twice as much time as it usually does.
- Work with people who are open to broadening the way they have traditionally done things and are not set in a way that is inflexible.
- Expect innovation and creativity to occur if you are open to taking the best of all approaches and integrating them.

## WORLD CLASS SCIENCE EDUCATORS & RESEARCHERS

Climate scientists and science educators from Scripps Institution of Oceanography and the University of San Diego were a part of CEP's core team and helped do the following:

- Utilized current climate data to specifically identify impacts to San Diego Region in next 40 years, which was not available prior to this project.
  - Assured that all CEP resources conveyed accurate science throughout the project.
  - Identified key impact areas. Specifically, they stated that temperature and precipitation changes impacted San Diego region's water resources, coastal flooding, wildfires, nature's benefits (plants and animals) and health.
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## BEHAVIORAL SCIENCE RESEARCHERS

Traditional educational approaches that focus on imparting facts only, do not always lead to informed decision-making or changes in behavior. For this reason, this project also drew on what we know in behavioral sciences to inform the creating of resources and sharing of them to San Diego Regional leaders.

### TIMSI

While only recently applied in environmental psychology, the Tripartite Integration Model of Social Influence (TIMSI) provides a theoretical framework that predicts that acquiring climate change knowledge in a way that increases people's ability to act, to feel they belong (or identify) with a community of action, and to share the values with that community, will be more likely to engage the normative behaviors of that community. Basically, what this model shows is that people are more likely to make informed decisions about climate change if they feel social support for that from their peers.

During the tenure of CEP, we collected data from public opinion polls and conducted over 130 interviews with regional leaders to test this model and inform climate education practices. This research has done the following:

- Informed the content of the resources and strategies for sharing this information

- Served as the guiding theory for behavioral research conducted as part of this project
- Been shared with educators, climate scientists, and community leaders doing work in this field to inform their approach to doing this type of work.

For more information about TIMSI, download this current publication in the Journal of Urban Health [here](#).

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## COMMUNICATIONS EXPERTISE

Communicating effectively is an art and science and does not involve imparting facts only to people. Communications expertise, provided by The Steve Alexander Group, directed us to do the following:

- Identify our key audience
- Take time to learn about what matters to our audience through focus groups and interviews
- Create a "story" or message triangle that guided all our communication strategies, creation of resources, and our approach to sharing.

### The Message Triangle

CEP developed a message triangle that incorporated the Tripartite Integration Model of Social Influence (TIMSI).

This message triangle focused on San Diegan's valued quality of life, future challenges we face due to the changing climate, and ways in which we are working together to protect our quality of life for future generations.

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## SAN DIEGO REGIONAL COMMUNITY LEADERS

Leaders are the real experts on leaders. Their views, concerns, and guidance were integral to the success of CEP.

To identify key leaders, we focused on two groups:



- High impact sectors (i.e., sectors that have the ability to decrease greenhouse gas emissions)
- Highly impacted communities (groups of persons who are vulnerable to the health impacts of climate change)

With all groups, we worked to identify how to best prepare these sectors and communities to address the challenges and respond to the opportunities presented by climate change.

CEP core team members actively collaborated with community leaders who served on an advisory board, agreed to give input through an interview, or who served as ambassadors in sharing resources with our key sectors (see Share section for more information about these sectors that included business, elected officials, transportation, Latinos, public health and Tribes).

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## C. ORGANIZATIONAL STRUCTURE

A key to successful project management is developing and utilizing organizational structures that facilitate decision-making and project implementation. This step is often undervalued or even ignored. CEP was intentional in setting up organizational structure including:

### 1. Clear description of key contributors' roles and responsibilities & vetting protocols for decision-making

A document was created with key contributor roles defined and responsibilities listed. In addition, a decision-making tree was created to determine who had final say on issues concerning the budget, resources, public relations documents, and implementation of the strategic plan.

Functional Leads and Teams:

1. Coordinating Lead – Creates outline & schedule. If needed, identifies team members for Draft, Technical and Final Reviewer Teams.
2. Draft Team – Initiates draft, inputs content, completes basic edit for further team review
3. Technical Team – Provides expert advice and guidance to refine messaging, resource materials and outreach strategies.

4. Final Reviewer Team - CEP Leadership (Project Director and Principal Investigator) provides strategic and legal oversight for the project. Provides Final Approval for the product.

Key Learning: We learned that building consensus is important, but also having clarity on who has the final word reduces conflict and improves project function.

## 2. Internal committees with clear leadership and objectives

CEP refined its internal committee structure into 3 groups - focusing on Outreach, Resources/Communication, and Management. The outreach and communication committees met every other month.

- **OUTREACH COMMITTEE:** The outreach committee worked to coordinate San Diego “tracks,” which includes Business, Government, Public Health, Latinos, Transportation and Tribal communities as well as other outreach events (non-track activities) and tours that are organized by CEP partners and staff. The goal of the outreach committee was to contribute to the action research framework by providing a space to debrief on past events and identify opportunities for future engagement.
- **COMMUNICATIONS COMMITTEE:** The communications committee provided guidance on engagement strategies and input on educational resource development including presentations, movies and communications strategies.
- **MANAGEMENT COMMITTEE:** The CEP management committee addressed issues related to resource planning, personnel and grant management.

## 3. Meeting scheduling and agenda structure provided consistent interdisciplinary contributions throughout the project

CEP chose to have meetings that were less about "reporting out" and more about actually doing the work at hand. This meant that we chose to have less meetings (typically committees met every two months), but included agenda items that produced products such as refining a resource, debriefing and outreach, or planning for the future. Agendas were always available prior to the meetings and were calendared at least 2 months in advance. At the end of meetings, we often did a check-in of what went well and what we could do better.

## D. INFORMATION SYSTEMS AND TECHNOLOGY WHICH REDUCE INEFFICIENCIES AND ENABLE COORDINATED TEAMWORK

In order to facilitate this multi-faceted project, CEP worked to improve the internal processes, information systems, and technology tools in support of critical project functions such as contact and project management. These tools provided the project with greater capacity to coordinate and share information and systems that were critical for reducing inefficiencies, enabling coordinated teamwork and tracking metrics for evaluation reporting and project refinement.

CEP utilized Constant Contact as its primary contact database for managing contact information and track Key Influential (KI) involvement, creating invitations for events, and even collecting pre-event data.

CEP utilized Trello as a project management tool to streamline the tracking of events and activities; as well as clarify who was responsible for which administrative tasks.

Additionally, shared technologies supporting document sharing, calendaring, note taking were also implemented.

### In Conclusion

Due to CEP's deliberate planning efforts, a clear map was constructed to help guide the team forward and information systems and organizational structures provided the framework of support. The next step was to identify and CONVENE these groups in order to create the space for interdisciplinary learning to take place.

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## Discover More...

To discover more, please visit our [project website](#) or contact...

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## TOOL 2: CONVENE & LEARN

If you try to throw together a group of people with expertise in science, business, government, communications and community, what will happen?

Be ready to utilize the second tool in the Toolbox for Leading which is to convene and learn. After planning, Climate Education Partners (CEP) convened diverse groups of experts and leaders in order to guide the project's resource development and outreach efforts.

To initiate this process, CEP asked the following questions:

- A. Who are the groups of people needed to achieve our project goals and objectives?
- B. How will we bring them together?

In answering these questions, we laid a strong foundation for the work we did. We put together diverse groups to work collectively to create and share the work of CEP.

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### A. GROUPS WHO HELPED ACHIEVE CEP PROJECT GOALS

CEP initiated the planning process by identifying people in each of these groups:

- Interdisciplinary Planning and Implementation Teams
- Scientists & Technical Advisory Board
- Key Influentials (KIs) for External Advisory Board
- Community Partners and Stakeholders

All people involved in the project were enthusiastic about the goals and objectives and willing to help shape the strategic plan.

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## INTERDISCIPLINARY PLANNING TEAM

CEP's initial planning team consisted of experts in climate science, social psychology, law, policy and communications that carefully crafted a strategic implementation plan.

Members included:

- Steve Alexander, President, The Steve Alexander Group
- Scott Anders, Administrative Director of the Energy Policy Initiatives Center at the University of San Diego
- Michel Boudrias, PhD, Associate Professor in the Department of Environmental and Ocean Sciences at the University of San Diego
- Mica Estrada, PhD, Assistant Professor in the Department of Social and Behavioral Sciences, IHA, at the University of California, San Francisco
- Alexander 'Sasha' Gershunov, PhD, Research Meteorologist at Scripps Institution of Oceanography at University of California, San Diego
- Nilmini Silva-Send, PhD, Assistant Director of the Energy Policy Initiatives Center at the University of San Diego
- Zhi-Yong (John) Yin, PhD, Professor of Environmental and Ocean Sciences at the University of San Diego
- Emily Young, PhD, Executive Director of The Nonprofit Institute at the University of San Diego (former Vice President of Community Impact at The San Diego Foundation)

## DIVERSE IMPLEMENTATION TEAM

As the project progressed, the members of the CEP team changed and expanded to include additional consultants, staff, students, community partners and scientists that supported implementation of the outreach plan. Members included:

- Lori Brookes, Graphic Designer and Photographer, The Steve Alexander Group
- Lia Bruce, Communications Coordinator, Climate Education Partners
- Dustin Chen, MA, Climate Research Assistant, Climate Education Partners
- Christiana DeBenedict, MBA, Assistant Director, Climate Education Partners
- Kristen Guirguis, PhD, Project Scientist at Scripps Institution of Oceanography at University of California, San Diego
- Nicola Hedge, MPA, The San Diego Foundation

- Mallory Morgan, MAS, Climate Fellow at The San Diego Foundation
- Ann Tartre, President, Ann Tartre Consulting
- Lilibeth Watson, Psychology Research Assistant, Climate Education Partners

Over 25 undergrad and graduate students contributed research and support to the project from participating academic institutions and from multiple disciplines.

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## SCIENTISTS & TECHNICAL ADVISORY BOARD

Climate scientists from the renown Scripps Institution of Oceanography, behavioral scientists from California State University, San Marcos and University of California, San Francisco and science educators from the University of San Diego contributed their scientific expertise to the project.

In the beginning, CEP convened the Technical Advisory Board to lend support to the development of CEP's educational resources that helped guide the decision-making of our regional leaders, and advanced the understanding of climate change impacts on our region. Additionally, scientists conducted novel research that was published in scientific journals and disseminated for academic audiences.

The following scientists provided scientific expertise to CEP:

- Michel Boudrias, PhD, Researcher (climate scientist)
- Dan Cayan, PhD, Researcher (climate scientist)
- Randie Chance, PhD, Researcher (behavioral scientist)
- Rachel Clemesha, PhD, Researcher (climate scientist)
- Mica Estrada, PhD, Researcher (behavioral scientist)
- Alexander "Sasha" Gershunov, PhD, Researcher (climate scientist)
- Kristen Guirguis, PhD, Researcher (climate scientist)
- Wesley Schultz, PhD, Researcher (behavioral scientist)
- Rebecca Sokoloski, MA, Researcher (behavioral scientist)
- Christie Yaeger, MA, Researcher (behavioral scientist)
- Qi Zhi, MPH, Research Assistant (behavioral scientist)

The Technical Advisory Board was made up of several scientists shown in the list above as well as additional contributors and reviewers that provided their support in the initial stages of the project. Please see last page of the 2050 report for a full list of names.

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## LOCAL KEY INFLUENTIALS (KIs)

### What is a Key Influential?

For the purposes of this project, “Key Influentials,” were defined by the CEP team to include decision makers in elected office or executive leaders of a business, nonprofit, public or government agency with the ability to directly affect public/private policy in the area of climate change. KIs also included other leading San Diegans with recognition amongst (and influence with) decision-makers, key audiences and/or the broader public.

KIs were initially identified as local community leaders who demonstrates several of these KEY CRITERIA:

1. Work is connected to overall project goals
  2. Work influences behaviors that lead to reducing greenhouse gas emissions
  3. Work aligns with key co-benefits of addressing climate change (water, health, economy)
  4. Work aligns with additional NSF goals
  5. Decisions impact a large number of people
  6. Have influence with other key influential
  7. Groups reflects influence across party lines
  8. Can work with on a budget of up to \$10 million
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## EXTERNAL ADVISORY BOARD

We established an External Advisory Board to help guide development of a strategic plan for communicating effectively with the public about climate change and its impacts to the San Diego region. The Board's role was to meet during critical stages of the planning process and provide guidance on the direction and priorities of CEP's strategic plan. The Board was comprised of key influential thought leaders from the San Diego region with a



high level of expertise and representing a broad cross-section of the primary economic and social sectors and demographic diversity in our region:

- J. Michael McDade (Chair), President of McDade Strategic Consulting
- Mr. Richard Barrera, President of the San Diego Unified School District Board of Education
- Ms. Megan Blair, Development Director of the San Diego Public Library Foundation
- Ms. Joan Embery, Goodwill Ambassador for the San Diego Zoo
- Ms. Erica Holloway, Principal of Holloway Media Strategies
- Major General Anthony L. Jackson (retired), United States Marine Corps
- Dr. Irwin Jacobs, Board of Directors for Qualcomm
- Mr. Fred Maas, Founder and CEO of Pacific EcoCompanies, LLC
- Mr. Harry Mathis, Chairman of the Metropolitan Transit System
- Pastor Miles McPherson, Founder and Pastor of The Rock Church
- Mr. Michael Murphy, President and CEO of Sharp Healthcare
- Mr. Scott Pearson, Director of Environmental Services at SDG&E
- Mr. Roger Pierce, Meteorologist at the NOAA National Weather Service in San Diego
- The Honorable Ron Roberts, Supervisor of District 4 of the County of San Diego
- Mrs. Jill Sherman-Warne, Executive Director of the Native American Environmental Protection Coalition
- Mr. James Waring, Executive Chairman and Co-Founder of CleanTECH San Diego
- Mr. Michael Zucchet, General Manager of the San Diego Municipal Employee Association

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## PARTNERS (COMMUNITY & STAKEHOLDERS)

In addition to the organizations comprising our interdisciplinary team, CEP worked together with a number of organizations to raise awareness about the impacts of our changing climate today and on future generations. For more information on how we conducted outreach activities across various sectors, please visit Tool 4: Share / B. Outreach Strategy.

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## B. BRINGING THE GROUPS TOGETHER

Each of the groups brought together had different purposes and therefore different structures and processes.

### Interdisciplinary Planning & Implementation Teams

Members from the initial planning team convened at the beginning of the project and new members joined as the project worked to implement its outreach activities. Team members met regularly throughout the duration of the project either as a full team or in working groups to direct the project and implement the strategic plan.

Scientists and Contributors on the Technical Advisory Board met often and worked diligently to contribute to the CEP's key resource, "San Diego is Calling." After that was complete, individual scientists advised on other resources, but the larger groups did not convene again.

### Local Key Influentials

This was a less formal group of people who met with Project Team members to create and implement sharing of materials. These groups typically existed only during the planning and implementation of the resource development or outreach activity.

### External Advisory Board

This amazing group of leaders met regularly at the beginning of the project to advise and guide the project development. As CEP matured, this group met less frequently, but individuals remained active in project activities when it was relevant to their constitutes or their expertise was needed.

### Partners

This was a less formal group of people who met with Project Team members to create and implement sharing of materials. These groups typically existed only during the planning and implementation of the resource development or outreach activity.

## In Conclusion

These various groups were convened in order to facilitate interdisciplinary learning exchange that fostered collaboration and creativity. Once the right people were in the room, the project was ready to embark on creating innovative educational resources that would incorporate the collective wisdom, experience and knowledge from these diverse groups. In the next section: CREATE, we will share how and what we created.

## DISCOVER MORE...

To discover more, please visit our [project website](#) or contact...

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## TOOL 3: CREATE

Creating innovative, useful and interesting resources requires more than just good ingredients, it requires time to cook and a commitment to the process.

We quickly learned that the third tool from the Toolbox for Leading is to create resources that are accurate, useful and fun.

To begin this process, Climate Education Partners (CEP) asked the following questions:

- A. What is our strategy to create effective educational resources?
- B. What will be our signature resource?
- C. What additional resources can be created from our signature resource?
- D. How do we collaborate with leaders in the creation process?

A large portion of what we did was to disseminate relevant local climate science into easy-to-understand graphics, reports and educational movies for our target audience of Key Influentials (KIs).

In this section, you will discover how CEP created these many resources. This useful and varied list of resources are freely available to anyone who wants to access them. Every resource benefited from multidisciplinary team expertise and valuable contributions from the KIs in our San Diego Regional community.

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### A. STRATEGY TO CREATE EFFECTIVE EDUCATIONAL RESOURCES

We took these three steps to create these resources:

- 1) Analyzed, translated, and presented local data on the science and consequences of climate change

- 2) Identified approaches to framing this information that utilized the TIMSI framework (increasing efficacy, identity and values shared by others concerned about climate change)
- 3) Created educational resources that integrated both rigorous local climate science and TIMSI principles to create innovative educational resources

CEP's educational resources were developed to increase knowledge about the science of local impacts, what leaders can do to prepare for and reduce the likelihood of local impacts (i.e., efficacy) and develop a sense of community (i.e., identity), while linking to the core message of preserving a healthy environment for the next generation (i.e., community values).

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## B. CLIMATE EDUCATION PARTNERS SIGNATURE REPORT

The “San Diego, 2050 is Calling. How Will We Answer?” report was part of an effort by CEP to develop and implement a climate change education plan for the San Diego region. CEP worked with local expert scientists, social psychologists, science educators and a wide range of community leaders, to help San Diegans learn more about, prepare for and respond to the impacts of a changing climate.

View report [here](#).

Guided by the strategy to create effective educational resources, this report highlighted the community of San Diego leaders working together and presented climate science impacts using clear visuals, graphics and icons. These graphics have been requested and utilized by other organizations.

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## C. ADDITIONAL RESOURCES

### Climate Education Partners Short Reports

By utilizing the content, look and feel of the “2050 report,” CEP created a portfolio of resources that retained consistency in messaging, was adaptable to target audiences and

enabled a diversification of communications methods which used both online and traditional channels.

Key Influential Polling Data Findings Short Report- This short report provides comprehensive analysis of San Diego leader's behaviors, attitudes and beliefs on climate change. The short report was developed with creative direction from The Steve Alexander Group.

Economic Resilience with Water Focus Brief- This short report was completed with The San Diego Foundation, which provides comprehensive scientific references, key project findings related to economic resilience in relation to water resources, quotes from San Diego leaders and links to CEP's San Diego 2050 suite of resources (reports, movies, etc.) produced, with creative direction from The Steve Alexander Group.

Economic Resilience with Public Health Focus Brief- This short report, completed with The San Diego Foundation, provides comprehensive scientific references, key project findings related to economic resilience in relation to public health, quotes from San Diego leaders and links to CEP's San Diego 2050 suite of resources (reports, movies, etc.) produced, with creative direction from The Steve Alexander Group.

Climate Vulnerability Maps Short Report- A series of maps was developed showing climate change impacts, mainly heatwaves and temperature shifts, affecting San Diego communities and specifically the most vulnerable populations. With funding support from The San Diego Foundation, Dr. Paula Stigler Granados, Assistant Professor in Community Health at the University of Texas School of Public Health in San Antonio, Texas, provided the vulnerable populations data, and presents an assessment of vulnerability utilizing a new compilation of indicators that include climate change variables. Utilizing GIS mapping, these maps showcase heatwave projections using climate models from Dr. Kristen Guirguis at Scripps Institution of Oceanography at UC San Diego, and layer these climate change impacts with the vulnerable populations data that indicates which populations are at high, medium and low risk. Additionally, this short report highlights the health impacts to these communities.

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## 2050 Website

CEP created a dedicated website for the 2050 report that provides comprehensive scientific references, key project findings and links to additional resources ([www.sandiego.edu/2050](http://www.sandiego.edu/2050)). The user-friendly website improved CEP's online presence by offering existing and new supporters access to the CEP's San Diego 2050 suite of resources (report, movie, etc.) produced. The more comprehensive science information on the website was particularly important for audiences that wanted to go beyond the key facts presented in the report.

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## Academic Research & Maps

As an example of some of our science research projects, CEP worked with a group of collaborators to produce a series of Vulnerable Population Maps. The map below defines heatwaves across the San Diego region to show changes in heatwave days projected through the century. These maps were used in presentations and material presented in the report: [Climate Resilience: Vulnerable Populations](#).

Maps were produced in collaboration with The San Diego Foundation, Atkins Consulting Group, Dr. Paula Stigler Granados, University of Texas School of Public Health and Dr. Kristen Guirguis, Project Researcher, Scripps Institution of Oceanography at University of California, San Diego.

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## CEP Signature Movie

CEP's "Answering the Call" Movie depicts a new norm of concern and action among community leaders and local scientists working on climate change in San Diego. This movie also exemplifies the project's messaging triangle approach and highlights the 2050 Report. This movie was incorporated into our presentations as a way to demonstrate KI concern, knowledge and action.

View our signature movie [here](#).

## Additional Movies

In addition, CEP produced short animations which focused on local key climate change impacts. Discover more and watch these short movies on our YouTube page <http://www.youtube.com/user/ClimateEdPartners>

## Impact Movies

Continuing the work of the 2050 report and the 2050 intro movie, CEP created three more movies focusing on wildfire, coastal flooding, and public health. All combine the corresponding animated climate change impact movie with live movie clips of KIs. Each movie describes how climate change contributes towards increased risks, how to mitigate and adapt to that particular impact and includes a personal story connected to events in San Diego County.

[MOVIE: Wildfire Risk in Our Changing Climate](#)

[MOVIE: Coastal Flooding Risk in Our Changing Climate](#)

[MOVIE: Public Health Risk in Our Changing Climate](#)

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## D. LEADERS AS CO-COLLABORATORS

In the creation of these educational movies, we engaged leaders as ambassadors and spokespersons to speak about issues and solutions related to climate change.

In preparation to be interviewed, KIs researched and learned about CEP materials to become effective ambassadors. Then through the film itself, they taught the larger San Diego KI community about the important issues regarding our changing climate and our commitment to preserving this beautiful place for the next generation.

### In Conclusion

In the next section you will learn more about how the project engaged KIs for effective outreach activities and SHARED resources created across multiple channels to target audiences.

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DISCOVER MORE...



To discover more, please visit our [project website](#) or contact...

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## TOOL 4: SHARE

If all we did was talk amongst ourselves, what good would that be?

The fourth tool in the Toolbox for Leading is to share the resources we created. We knew that leaders needed the resources we created to inform their decisions, so we launched a broad outreach strategy to reach out to key audiences.

Some key questions to consider at this stage are:

- A. What steps do you need to take to know your audience?
- B. What is your outreach strategy to reach your selected audiences?
- C. What communication strategies will inform your outreach activities?
- D. How will you provide effective learning opportunities about specific climate impacts?
- E. What technology and channels will expand your project reach?
- F. What key lessons will help refine your sharing strategies?

In this section you learn about who and how CEP shared its educational resources with key audiences. You will also learn about the innovative approaches we took to create unique spaces for learning and integration of best practices in communications, engagement and technology in order to expand project reach.

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### A. KNOW YOUR AUDIENCE

One of the key lessons from our project was to know you audience. We did this through doing three things:

1. Talked to experts and people in the community who already have trusted relationship with KIs

First, meeting with trusted experts, we were able to identify key leaders in the community and establish CEP's credibility as an honest broker of knowledge.

2. Talked to KIs and listen to their concerns, their priorities, and their hopes for the future.

Second, from interviewing leaders we learned where there were gaps in KI climate knowledge. We also learned that 9 in 10 leaders in San Diego were concerned about climate change but believed only 1 in 10 of their peers are concerned. The results from the interviews told us what climate change impact areas to emphasize in our materials and that there was an opportunity to grow the awareness that KIs care about climate change in the San Diego Region.

### 3. Tapped into the general public's opinions through conducting public opinion polls.

Last, from public opinion polls of San Diego County residents we learned that overall, public opinion has been very steady across the years in terms of knowledge and concern for climate change. We also learned that San Diego was ahead compared to the rest of the nation.

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## B. AUDIENCE SELECTION & OUTREACH STRATEGY

CEP worked to educate and share all of our resources and learnings by, through and with Key Influentials (KIs).

We engaged KIs as spokespeople and connectors who could facilitate opportunities to present to interested groups with the desire to learn more about climate change impacts in San Diego. We shared our data and information through various online channels and in-person events.

We tailored our outreach events to specific audiences, for example, we organized a series of tours led by our partner The San Diego Foundation, to provide interactive and intimate educational experiences. We organized our own events to share our data to specific audiences and we were frequently invited to present on panels and at conferences. Over the course of the project we estimate participation in approximately 150 in-person events that reached at least 7500 people.

### CEP Audiences

CEP selected three audiences that had the potential to positively impact the way the San Diego Region addresses the challenges of a changing climate, to preserve our way of life for the next generation. We shared resources and conducted outreach activities with audiences from economic sectors causing most greenhouse gas emissions and the greatest impact such as transportation, business and government. We also shared resources with audiences from populations most likely to be impacted by the changing climate, such as Latinos, Tribal communities and Public Health leaders.

CEP participated in a variety of outreach events including but not limited to: lunch and learns, roundtable discussions, panels, conferences and as guest speakers at public meetings, workshops and other events.

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## Highly Impactful Audiences

### Business

With support from The San Diego Foundation and lead consultant, Ann Tartre (a local expert on climate change and business education), this track focused on providing accurate, science-based climate information to San Diego business leaders who are influential decision-makers. Educational resources and activities were tailored to inform businesses about the facts of climate change and how it affected our economy and quality of life, showcased how concerned businesses were being pro-active to reduce and mitigate greenhouse gas emissions, and worked collaboratively with the business community to address climate change impacts (e.g. drought and water vulnerability) and build a resilient economy for the future.

#### BUSINESS TOOLKIT

1. [Case Study on Hunter Industries](#)
2. [Case Study Video on Grand Pacific Resorts](#)
3. [Lessons Learned on Business Outreach](#)
4. [Powerpoint on Business and Climate Impacts](#)

### Government

Cities and public agencies make decisions about how we work, live, play and grow and therefore have a great impact both on how climate change will impact our region as well as how they will be part of the solution to addressing climate change. Led by CEP's partner, The San Diego Foundation, this track focused on working with key government leaders in the San Diego region to understand the latest climate science and provide the science knowledge needed for them to make informed local decision-making.

Government leadership can change somewhat more frequently than other sectors, so it was important to update relationships and check records such as the registrar of voter every two years. Given their longevity and role in influencing policy, reaching executive staff at local governments and public agencies as well as policy staff of local elected officials, is equally as important as working with elected decision-makers.

## Transportation

Led by CEP's Co-Principal Investigator, Dr. Nilmini Silva-Send, this track focused on transportation leaders in the San Diego region. Road transportation is the single largest source of greenhouse gas emissions in this region, as in California. Therefore, transportation agency leaders, city transportation departments officials and city planners make decisions that are an important part of the discussion in land use and alternative transportation decision-making for the future. CEP provided education about climate science and descriptions of possible solutions with and for this group.

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## Highly Impacted Audiences

### Tribal

Led by CEP's Co-Principal Investigator, Dr. Nilmini Silva-Send, this track focused on tribal decision-makers in the San Diego region. As with other native groups of Southern California, tribes are highly affected by all the impacts highlighted in the Focus 2050 study, temperature, heat waves, extreme events such as fires and drought. CEP participated in activities with tribes related to climate change, connected climate scientists with tribes, assisted tribes with adaptation and vulnerability assessments, mitigation options, and has showcased tribal responses and connected state, regional and city climate and energy policy developments with the tribes.

### Tribal Resources

- Vulnerable Populations Report
- Wildfire Risk in Our Changing Climate Movie
- 2017 University of San Diego Tribal Conference

## Public Health

Led by CEP's Assistant Director, Christiana DeBenedict, and Project Director and Co-Principal Investigator, Dr. Mica Estrada, this track focused on providing resources and learning opportunities to public health KIs in the San Diego region. Polling results and leader interviews show that leaders and the public underestimate the impact the changing climate will have on public health. With public health experts, CEP developed movies and vulnerability maps to show what San Diego communities are most vulnerable to climate change health impacts and highlight effective ways to respond.

## Latino Community

Led by CEP's Assistant Director, Christiana DeBenedict, and Project Director and Co-Principal Investigator, Dr. Mica Estrada, this track focused on KIs in the Latino community within the San Diego region. Polling data shows that the Latino community is highly knowledgeable and concerned about climate change. Also, climate data shows that areas of San Diego County with high concentrations of Latinos are also most vulnerable to climate change impacts. This track worked with community leaders to develop educational resources and activities to inform leaders about what we know and what we can do going forward to harness the potential of the Latino community to address these issues well.

Hundreds of Spanish Language 2050 Reports were disseminated and utilized by leaders working with the Latino community.

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## Academic Audiences

In addition to providing resources for leaders, CEP also presented at numerous academic conferences and summits to share the approach and the outcomes from the work. All these publications are available at <http://www.sandiego.edu/climate/discover-more/>

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# C. EFFECTIVE COMMUNICATION STRATEGIES

## Communication Workshops

CEP recognized the growing need of individuals working within the field as researchers, educators, and community leaders to effectively communicate about climate change to their respective audiences. CEP conducted communication workshops that used a “train the trainer” approach to model best practices in climate change communication. Workshop participants invited were often people that were currently in a position to educate others and could benefit from learning techniques that improved their climate communication skills including world class scientists and community leaders.

### Stories, Not Just Facts

Our training approach emphasized that a “knowledge deficit” model is insufficient, meaning that just communicating facts is not effective for changing decisions or behavior. Instead, we utilized easy to understand infographics and built-in community building and communication framing that greatly increases the chance of persons utilizing the information they receive to make informed decisions. For example, communication strategies that focus on storytelling and audience-centric approaches were presented by CEP’s communication specialists as more effective strategies for reaching diverse audiences.

### Engaging Key Influentials as Spokespersons

Another effective communication practice was to support leaders in being ambassadors and spokespersons for issues of climate change. KIs engaged with CEP in this way when they participated in the creation of our movies or served as spokespersons at events. In preparation to speak, KIs engaged with CEP educational materials to learn about climate change impacts . As spokespeople, they shared their own story as well as taught the larger San Diego KI community about the important issues regarding our changing climate and our commitment to preserving this beautiful place for the next generation.

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## D. CLIMATE IMPACT TOURS

CEP conducted several tours that engaged KIs and provided high “touch” activities. Tours focused on an impact area from the 2050 report.

Tours provided KI participants with interactive experiences in a more intimate environment. Here are a few examples of the tours we conducted:

- Public Health: CEP organized a public health tour in collaboration with The San Diego Foundation. Titled, Solutions for Promoting Healthier Communities Impacted by a Changing Climate, we held the tour at a local nonprofit, 2-1-1 San Diego. 34 public health professionals, organizations working with vulnerable communities, contributors to CEP's Economic Brief, Health Report and Public Health Movie, and regional leaders from government, business and civic sectors, and other advisors or state leaders were in attendance. This public health tour attracted a diverse audience of participants that included government, nonprofit and civic leaders.
- Coastal Flooding: The CEP team, in conjunction with ICLEI- Local Governments for Sustainability, facilitated a Coastal Resilience High Tide Breakfast for Key Influentials (Mayors, city councilmembers, city managers, Port commissioners, other local, regional or state leaders). Participants learned about activities already taking place in the San Diego region on this issue by both CEP team and representatives of three cities and participated in dialogues and discussions with a growing network of leaders. Through interactive and interdisciplinary panels, attendees learned about sea level rise science specific to the San Diego region and discussed examples of local cities and agencies taking action today to prepare for short and long-term changes, the social and economic impacts of coastal flooding, and resilience solutions available to the region.
- Wildfires: CEP in partnership with The San Diego Foundation, co-hosted about 25 attendees at San Diego Gas & Electric (SDG&E) headquarters that highlighted how the region is working to address regional climate change impacts.
- Water Resources: CEP partnered with the San Diego County Water Authority (SDCWA) to host a tour for regional leaders focusing on climate change and water supplies in San Diego. Two main tours of the SDCWA's Pump Station at Lake Hodges and the dam at the Olivenhain Reservoir brought in participants that included a variety of local leaders.

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## WEATHER ON STEROIDS EXHIBIT

Weather on Steroids Art Exhibit catalyzed new educational opportunities in front of new audiences. CEP scientists Gershunov, Boudrias, and Guirguis played a critical role in contributing to the exhibition, "Weather on Steroids: The Art of Climate Change Science" that opened February 10, 2017. Over 200 people (including many KIs) attended the opening. The art presentation educated the public about climate change science and



impacts of climate change on our region. CEP co-sponsored the educational effort and CEP's educational material on communicating climate science was one of the 11 scientific panels displayed.

In April, Boudrias and Wiese (artist) presented to a diverse community at a special event organized by Vanguard Culture. The focus was especially on the communication of climate change through science and art. In October 2017, the exhibit moved to the Long Beach Aquarium of the Pacific. Participating scientists from the event have attended at least seven associated events, providing an unexpected platform to serve as science communicators in various settings.

Furthermore, the partnerships formed during the production of "Weather on Steroids" provided opportunities to contribute to artists' perspectives and influenced their art pieces. In particular, the partnership between Boudrias and Wiese focused on the use of words, infographics and the connection to people's affective responses to engage audiences in discussing climate change in San Diego and beyond.

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## E. TECHNOLOGY & CHANNELS TO EXPAND PROJECT REACH

### Social Media Channels

During CEP's project years, social media use proliferated. To capitalize on this trend, CEP iteratively developed a strategic method to engage KIs. First, as with all climate education, CEP identified the audience. Three primary Facebook and Twitter audiences were CEP's internal team, local KIs, and strategic partner organizations. Then, CEP prioritized what content it would share on social media.

Priority posts included CEP produced products (reports, publications, brochures, movies, event & behind-the-scenes photos). Middle tier was for direct mentions from a KI or collaborating organizations (e.g., CEP resources used in new sea level rise visualization on Santa Monica Pier, CEP resources used in Climate Conference by partnering organization, Scripps Institution of Oceanography). Lastly, the bottom tier was for related news from a KI or collaborating organization and related and special events, interesting news, stories, pictures, infographics, or movies.

We found our content through-

- Our own team
- Our CCEP Alliance
- Google RSS Feeds
- Various news sites ranging from local news (like San Diego Union Tribune and KPBS) to California news (like Rough & Tumble) to United States to the world (like NASA)

We put these news stories into our online Task manager, Trello, where we keep our editorial calendar, which was created to carefully time posts, which capitalized on when target audiences were using social media most and to maintain consistency.

Finally, we would create a post which included our tagline, visual content, pre-approved hashtags, and a link to learn more about CEP. #climateeducation #climatechange

## Technology & Information Systems

In order to effectively share resources across multiple channels, it is critical to set up information systems that enable your data management for outreach and engagement.

CEP used a variety of information systems, the most critical ones utilized were the following:

- Constant Contact Events that provided an online registration platform to send out invites and manage registration for events online;
- Constant Contact database that helped identify and sort invitees based on specific criteria (i.e. sector or interest) in order to create targeted invitee lists;
- Trello project management tool that helped manage event logistics and monitor internal timeline of action items with team assignments;
- Shared folders on Dropbox that organized event materials, evaluation forms, and logistical information.
- Communications channels such as Social Media platforms (Facebook, Twitter) the website and news releases and newsletters

Significant effort was invested in the development of the invitee list and it was essential to have a database that enabled contact information to be sorted and organized by these

categories so that engagement with each group was more deliberate and aligned with project goals and the needs of the KIs.

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## F. KEY LESSONS LEARNED

Engaging KIs as spokespeople results in the development of "**Community of Leaders.**"

Climate Education Partners (CEP) found that when KIs share with each KI, not only are people more likely to pay attention, but a community of leaders emerges. These KIs are recognized as leaders on this issue and celebrated for their contributions by being featured in key resources and as spokespersons in the community.

**SNOWBALL EFFECT:** Capitalize on opportunities to engage more deeply with partners.

Several of the outreach activities resulted in new opportunities for engagement with the same partners or referrals to the next place to go. For example, as a result of CEP's participation in the U.S. Environmental Protection Agency Tribal Conference, CEP was invited to help tribes develop a greenhouse gas inventory and to participate in their major Earth Day community event. In all of this outreach, CEP chose to respond to the needs of KIs, as opposed to dictating their needs.

Take time to proactively plan and engage KI speakers and community leaders involved in your event.

A significant part of the effort to coordinate an outreach intervention takes place in the planning stages of the activity. For every outreach activity organized in partnership with another organization, several meetings both on the phone and in person were held which covered audience characterization, selection of speakers, choice of resources and logistic planning. These planning meetings provided an opportunity for relationship building to occur that helped strengthen the CEP community of existing and potential KIs and community leaders.

### In Conclusion

The dissemination and sharing of CEP resources required the greatest investment of project resources. Go to the next section on evaluation and refinement to learn more about how we EVALUATED AND REFINED our sharing strategies.

## DISCOVER MORE...

To discover more, please visit our [project website](#) or contact...

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## TOOL 5: EVALUATE AND REFINE

We often do things without knowing if we do it well.

Our fifth tool in the Toolbox for Leading is to evaluate and refine Climate Education Partners' (CEP) approach to leading in a changing climate. This required a data-driven strategy to track metrics and evaluate progress as you go.

Some of the key questions to ask:

- A. What is your logic model?
- B. What type of data will you collect and how will you track it?
- C. How do you continue to refine your outreach, resources and activity engagement?
- D. How could an external evaluator help refine project activities and outcomes?

In this section you will learn about the "nuts and bolts" of CEP's approach and some of what we learned along the way.

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### **A. CEP's Logic Model**

CEP designed a logic model to describe the inputs or resources (such as funders, partners, advisory boards, and staff) that contribute to achieving the project's specific activities and outcomes. These activities included the creation of educational resources and the sharing through multiple channels to achieve the following:

- Increase leader awareness of the changing climate in San Diego,
- Grow the community of leaders that are concerned about climate change impacts in San Diego.

With the logic model established, CEP identified the research, evaluation and data collection strategies that helped the project measure its success through the following:

- Conducting research on the TIMSI model
  - Conducting annual surveys of general public and Key Influentials in San Diego
  - Evaluating the effectiveness of interventions and resources
  - Identifying the most effective educational methods for non-traditional audiences
- 

## B. DATA COLLECTION & TRACKING SYSTEMS

For this project to have broader impacts and be useful to other cities, we approached our work as if it were a large research project. This allowed us to identify key learnings that could be shared on this website and inform future work in this area.

To do this, we collected data from several sources in order to track progress.

### Conducted Key Informant Interviews to Assess Knowledge, Concerns, Identity and Values of KIs

CEP conducted interviews with KIs in 2011, 2012 and 2017 and these data helped CEP understand KI knowledge, concern, values, and sense of community. Interviews conducted consisted of a post-interview data from the interviewer and an observer regarding KIs' climate change knowledge, efficacy, identity and values. The second included content coding of interviewer notes and quantitative data collected. Qualitative analysis of the interviews was also included in this dataset.

Results from these interviews included qualitative summary of what was learned and also quantitative (summative) results. The findings from the earlier interviews can be found [here](#).

**DATA COLLECTION SYSTEM:** Because of the confidential nature of interview data, CEP the results were kept in two research databases in SPSS and names of interviewee participants were removed.

### Conducted Regional Public Opinion Polls

CEP brought on two external pollsters from Fairbank, Maslin, Maullin, Metz & Associates (FM3) and Public Opinion Strategies in order compete four public opinion polls in the San Diego region. In total, over 2500 participants were surveyed in both English and Spanish

to assess climate change opinions and behaviors in San Diego. Results have been shared in comprehensive reports and presentations made available for distribution and can be found here.

## Conducted Focus Groups with Current and Emerging Leaders

(CEP) conducted two independent focus groups of San Diego Key Influentials and community leaders. One group was identified as “seasoned” leaders and the other as “emerging” leaders. Data from these groups helped guide the projects initial planning efforts by providing a more in-depth understanding of the way participants consciously thought about the topic of climate change. Results from these efforts can be found in this report: <http://www.sandiego.edu/climate/documents/CEP-FocusGroup.pdf>

## Assessing the Effectiveness of Events

For most CEP organized events, we collected post/pre surveys from participants to assess learning and impact of the events. In addition, we regularly conducted internal post-event debriefs to assess what went well and what could be done better. RTI (our external evaluator) was primarily responsible for this data collection and for sharing the results in the form of a short report.

**DATA COLLECTION SYSTEM:** CEP organized all project reach related indicators on the project management Trello board and in an excel document for comparable analysis purposes. A copy of our survey is presented below. Small modifications were made depending on the event topic and audience.

## Tracking Project Reach

Several internal tracking systems and processes were established to track and report project reach data through multiple online and various channels including website visitors, dissemination of the 2050 report, KI short report, and economic briefs on health and water. Additionally, data on social media posts and follower engagement was collected as well as number of movie views.

**DATA COLLECTION SYSTEM:** Metrics tracking of project reach was collected quarterly by RTI and CEP staff. All indicators were tracked in a master excel document.

## Measuring KI Engagement

CEP measured engagement of Key Influentials in educational activities that increased their knowledge, efficacy, values, and identity in order to help them become aware of climate change issues that affect San Diego. Through networking with other leaders at events as well as speaking publically or hearing other leader speak publically about climate change, CEP aimed to help KIs feel part of a community that is concerned about climate change issues that affect San Diego. CEP analyzed KI participation data to assess participation of KIs in CEP events as spokespersons and collaborators.

**DATA COLLECTION SYSTEM:** The CEP outreach database in Constant Contact stored information on participation in events and messenger activities for the majority of the Climate Education Partners outreach activities. There were other outreach events that occurred during the project that were not selected to be analyzed.

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## C. ONGOING REFINEMENT USING AN ACTION RESEARCH MODEL

CEP utilized an action research model which allowed the project to test theoretical educational models and stimulate ongoing evaluation assessments in order to refine and identify best practices in climate change education.

CEP's unique capacity to construct and conduct surveying tools, polls, interviews and focus groups over multiple years gave the project direct insight into the beliefs, attitudes and actions of its target audiences and their community. Communication and social science theories have been used to help diagnose barriers and opportunities.

This data has provided comparable data for deeper analysis of trends over time, which contributed to the evaluation of the program. CEP has directly applied this learning to the educational strategies employed and helped CEP to iteratively refine its outreach, resources, and activity engagement.

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## D. VALUE OF AN EXTERNAL EVALUATOR

As part of the CEP project proposal, the National Science Foundation, required that CEP bring on an external evaluator to support the project. CEP worked closely with the firm, RTI, who provided evaluation support in the following ways:



- Collected participant data on event satisfaction and effectiveness
- Collected and analyzed communications metrics to track website and social media engagement
- Analyzed leader engagement activities
- Assessed effectiveness of resources
- Conducted team analysis
- Provided input on survey methodology and structure

RTI brought an external perspective to the project's activities, in particular around assessment of team dynamics for effective implementation. Some of the key learnings include the following:

### Key Learnings:

#### Improving Interdisciplinary Team Function

CEP was a cross-disciplinary project that included experts from the hard sciences, social sciences, and political science. Trust between team members was critical in order to advance the level of interdisciplinary work needed to execute a collaborative partnership that is working to advance shared project goals.

Team members had to recognize that each field has a perspective that can add to the project and also that each field offered unique methodologies that may not be typical by other disciplines but were beneficial to the project. A key nexus in this project was in discussing how to communicate scientific data, and working through that challenge was key to a functioning team.

### In Conclusion

The evaluation activities conducted by CEP were critical to the project's ability to test and develop an climate literacy model that could be replicated by others. In the next section you will learn about the project's success and contribution beyond San Diego. It's time to CELEBRATE!

---

DISCOVER MORE...

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**CELEBRATE**

Given the challenges of addressing climate change, it is easy to focus exclusively on what is wrong.

What we learned with Climate Education Partners is that there is great strength in amplifying what is going right, celebrating the people who are doing the right thing and finding connection with community around shared values.

What are the values that connect your community? How about:

- There is more kindness than hate.
- There is more generosity than greed.
- There is more goodwill than malice in our society.

We hope you will join us in celebrating the successes and actions that have been taken to work together to protect our quality of life in San Diego today and for future generations. For those of you looking to apply some of what we learned...

We encourage you to look to your community for what is going right and amplify this in your climate education.

Build efficacy by showing people what is being done and can be done.

Increase identification with the community that is concerned and ready to address the opportunity before us.

Speak to the values that motivate us to answer the call and do what is right for the next generation on this beautiful planet.

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**ADVANCING LEADERSHIP IN THE REGION**

Climate Education Partners (CEP) has worked to advance leadership in the region in the following ways...

- In the San Diego region, CEP helped to create a community of concerned citizens and leaders. According to our latest public opinion poll, more than 87% of residents are united in their belief that climate change is happening.
  - All 18 cities and the County of San Diego have performed and continue to inventory comprehensive greenhouse gas emissions.
  - Two thirds of these local governments are working on or have adopted Climate Action Plans that are being monitored.
- 

## LEADERS CONFIRM, WE MADE A DIFFERENCE

*“Climate Educations Partners is an example of a collaboration that is happening in the San Diego region that really could teach some lessons to other places around the country.”*

- California's 52nd District U.S. Congressman Scott Peters

*“The San Diego 2050 Report was a great wake-up call for the tribes. Since that report was published, you have more tribes that are working on climate adaptation and mitigation.”*

- Jill Sherman-Warne, Executive Director, Native American Environmental Protection Coalition

We'll definitely be referencing San Diego, 2050 is Calling to understand and address the impacts of our region's changing climate. We look forward to using it to catalyze important conversations and collaborations in transportation planning."

- Matthew Tucker, Executive Director of North County Transit District

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## CEP SUPPORTS OTHER LEADING EFFORTS

CEP's efforts also supported other efforts by local organizations and agencies who have accomplished the following:

- The City of San Diego is nationally recognized as having one of the most ambitious climate action plans in the country.
- The Port of San Diego has worked in collaboration with the cities of Imperial Beach and San Diego to develop the first of its kind wetland mitigation bank, designed to fund habitat restoration, enhance resilience to flooding, and improve surrounding neighborhoods.

- The Tijuana River National Estuarine Research Reserve is leading a collaborative climate change adaptation project in the Tijuana River Valley, which contains one of the largest intact coastal wetlands in Southern California, to increase resilience to rising sea level and coastal flooding in the future.
- The San Diego Regional Climate Collaborative, housed at University of San Diego, was established as a partnership between public agencies, San Diego Gas & Electric, academia, philanthropy, nonprofit organizations and community leaders to facilitate collaboration among local leaders to preserve our quality of life through a strong economy and healthy environment.

San Diego has risen to be recognized nationally and internationally as a climate action leader!

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## **PROJECT REACH OUTSIDE SAN DIEGO**

This is where we are now in our story. You've read through what we've done and now you have the opportunity to continue the story in your own community. We hope you make use of the tools we have shared in our Toolbox for Leading in a Changing Climate:

- Plan
- Convene & Learn
- Create
- Share
- Evaluate & Refine
- Celebrate

We know that some cities have already begun to utilize CEP's innovative approach to work with Key Influentials and support informed decision making about the changing climate. There is great opportunity now to use what we learned to support cities in the United States and abroad who have adopted Climate Action Plans and that are seeking to meet the educational objectives stipulated in the Paris Agreement.

As we move forward, please feel free to contact us if you want to discover more about the details or have questions.

As someone who has read through our story, we can't wait to hear how you utilize what is here to advance your climate action and continue the good work in your region of the world for this generation and generations to come.

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## PROJECT PUBLICATIONS

CEP researchers, scientists and educators published research findings in several academic journals.

1. Estrada, M., Schultz, W., Silva-Send, N., Boudrias, M. (2017). The Role of Social Influences on Pro-Environment Behaviors in the San Diego Region. *Journal of Urban Health*. doi:10.1007/s11524-017-0139-0
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