



Appendices

Rising to the Challenge, Together

**A Review and Critical Assessment
of the State of the US Climate
Adaptation Field**

A REPORT PREPARED FOR THE KRESGE FOUNDATION

December 2017

Contents

Appendix A: List of Study Participants	4
Appendix B: Research Protocol	6
Appendix C1: Lessons from Other Fields for Prioritizing Field Building Recommendations	25
Appendix C2: Specific Recommendations for High-Level Policymakers	29
Appendix C3: Specific Recommendations for Adaptation Thought Leaders	30
Appendix C4: Specific Recommendations for Government Funders	31
Appendix C5: Specific Recommendations for Philanthropic Funders	33
Appendix C6: Specific Recommendations for Private Funders	35
Appendix C7: Specific Recommendations for Foundation and Government Program Managers	36
Appendix C8: Specific Recommendations for Local Elected Officials and Civic Leaders	37
Appendix C9: Specific Recommendations for Private Utilities and Businesses	38
Appendix C10: Specific Recommendations for Procurement Officers, Financial Staff, and Experts	39
Appendix C11: Specific Recommendations for Adaptation Practitioners	40
Appendix C12: Specific Recommendations for Adaptation Service Providers	41
Appendix C13: Specific Recommendations for Adaptation Network Conveners	42
Appendix C14: Specific Recommendations for Community-based Organizations, Grassroots Advocates, and Climate Justice Movement Leaders and Participants	43
Appendix C15: Specific Recommendations for Academics and Other Researchers	44
Appendix C16: Specific Recommendations for Communicators	45
Appendix C17: Specific Recommendations for Adaptation-Specific Professional Societies	46
Appendix C18: Specific Recommendations for Other Professional Societies	47
Appendix C19: Specific Recommendations for the Media	48
Appendix C20: Specific Recommendations for Other Organizations	49

Appendix A: List of Study Participants

Participants are listed in alphabetical order by last name and with organizational affiliation. (AG indicates Advisory Group member.)

Steve Adams

Institute for Sustainable Communities

Kacky Andrews

The Nature Conservancy

Kirsten Andrews-Schwind

Peninsula Clean Energy

Ernesto Arevalo

Communities for a Better Environment

James Arnott

Aspen Global Change Institute

Vicki Arroyo

Georgetown Climate Center

Aaron Bartley

People United for Sustainable Housing

Brooke Barton

Ceres

David Batker

Earth Economics

Ann Baughman

Freshwater Future

Gary Belan

American Rivers

T.M. Bull Bennett

Kiksapa Consulting

Chad Berginnis

The Association of State Floodplain Managers

Shamar Bibbins

The Kresge Foundation

Rosina Bierbaum

University of Michigan

Jessica Boehland

The Kresge Foundation

Dana Bourland

The JPB Foundation

Sundaa Bridgett-Jones

The Rockefeller Foundation

Katharine Burgess

Urban Land Institute

Harry Burkholder

Land Information Access Association

Timothy Burroughs

City of Berkeley, California

Kevin Bush

District of Columbia, formerly US Department of Housing and Urban Development

Matt Chadsey

Earth Economics

Arrietta Chakos

Urban Resilience Strategies

Darien Crimmin

WinnDevelopment

Jon Crowe

Meister Consultants Group

Jad Daley

American Forests, formerly Trust for Public Lands

Lois DeBacker

The Kresge Foundation

Meghan Doherty

SC&A Inc., formerly Notre Dame Global Adaptation Index

Krista Egger

Enterprise Community Partners

Denise Fairchild

Emerald Cities Collaborative

Melissa Finucane (AG)

RAND Corporation

Garrett Fitzgerald (AG)

Urban Sustainability Directors Network

Beth Gibbons (AG)

American Society of Adaptation Professionals/Institute for Sustainable Communities

Nancy Gilliam

Model Forest Policy Program

Kate Gordon

Independent, formerly The Paulson Institute

Tonya Graham

The Geos Institute

Jessica Grannis

Georgetown Climate Center

Byron Gudiel

Communities for a Better Environment

Shalini Gupta

Center for Earth, Energy and Democracy

Lara Hansen

EcoAdapt

Nicola Hedge

The San Diego Foundation

Jeanne Herb

Rutgers Climate Institute

Kathy Jacobs

University of Arizona

Taj James (AG)

Movement Strategy Center

Jennifer Jurado

Broward County, Florida

Lurna Kaatz

Denver Water

Alex Kaplan

Swiss Re

Cathleen Kelly

Center for American Progress

Roderick KingFlorida Institute for Health
Innovation (formerly the Florida
Public Health Institute)**Jay Koh**Global Adaptation and
Resilience Investment Working
Group/Lightsmith Group**Robin Leichenko**

Rutgers University

Nile Malloy

Neighborhood Funders Group

Cecilia MartinezCenter for Earth, Energy
and Democracy**Kate Meis**

Local Government Commission

David Miller

Island Press

Louise Misztal

Sky Island Alliance

Richard MossPacific Northwest
National Laboratory**Steve Nicholas**Institute for Sustainable
Communities**John Nordgren**

The Climate Resilience Fund

Ana Orozco

UPROSE

Jacqueline PattersonNAACP Environmental and
Climate Justice Program**Janet Peace**Center for Climate and
Energy Solutions**Cara Pike**

Climate Access

Peter PlastrikInnovation Network
for Communities**Mariella Puerto (AG)**

Barr Foundation

Ray Rasker

Headwaters Economics

Chera Reid

The Kresge Foundation

Melly ReulingCenter for Large Landscape
Conservation**Susan Ruffo**

Ocean Conservancy

Jill Ryan

Freshwater Future

Andrew Salkin

100 Resilient Cities

Alvaro Sanchez

The Greenlining Institute

Katie Moss SiebLand Information Access
Association**Joshua Stanbro**City and County of Honolulu,
Formerly Hawai'i
Community Foundation**Benjamin Strauss**

Climate Central

Missy Stults

Independent

Katherine Swenson

Enterprise Community Partners

Brian Swett (AG)

Arup

Gary TaborCenter for Large Landscape
Conservation**Marian Urquilla**

Strategy Lift

Shalini Vajjhala

Re:Focus Partners

Kimery Wiltshire

Carpe Diem West

Jalonne White-Newsome

The Kresge Foundation

Cindy Wiesner

Grassroots Global Justice Alliance

Elizabeth Yeampierre

UPROSE

Rev. Lennox Yearwood, Jr.

Hip Hop Caucus

Appendix B: Research Protocol

This Appendix describes our research approach and methods used in detail. Because the research involved human subjects, the research protocol was submitted and approved by an independent institutional review board (IRB), IntegReview (Protocol # Kresge01, entitled “The Kresge Foundation’s Climate Adaptation Portfolio Review”) prior to commencement of the research. The description of our research approach aims to provide deeper insight into the type of data obtained over the course of the study. While the type of study participants are described categorically here, the full list of study participants is provided in Appendix A. Interview protocols and the survey questions are included at the end of this appendix.

I. Goals of the Project

The goal of this project was (1) to conduct a review of The Kresge Foundation’s investments in climate adaptation within the US over the last seven years, and (2) to interview and survey individuals familiar with the US climate adaptation field to inform the Foundation’s forward-going strategy and share insights with the field.

II. Background and Significance

The Kresge Foundation requested a review and evaluation of its climate adaptation grantmaking portfolio, along with an assessment of emerging needs and opportunities in the adaptation/resilience field so as to inform its future climate-related investment. The Kresge Foundation is one of the premier philanthropic funders of adaptation and resilience-building work in the US, and can be expected to continue playing both place-based and field-building roles in future years.

1. As not merely an internal portfolio review, but a field review intended for wide distribution, this broad, multi-method, scientifically sound, backward- and forward-looking review of the climate adaptation/resilience field is of great significance to a broad audience.
2. Adaptation as a constantly changing set of activities, and as a rapidly changing field, requires regular review, reflection, and forward-looking field assessment to uncover and share new insights that will advance much-needed action at the local, state, and national levels. Thus, initial project results were shared with the broader US adapta-

tion community at the National Adaptation Forum (NAF) held in May 2017 in St. Paul, Minnesota. NAF is the premier venue for both drawing on and influencing the nation’s adaptation community and leadership.

3. Delivery of the final reports from this project falls still within the first year of a new federal administration and Congress, as well as new state leadership in many regions of the country. This project not only helps Kresge reassess its current and future directions in light of shifting political circumstances, but also supports Kresge’s leadership at this critical juncture.
4. Relevant outputs from this project will be shared as a technical input to the Fourth National Climate Assessment, a quadrennial assessment of the state of the science and practice of climate change, impacts, and responses. Field-reviewing work is among the most valued input for this exercise. (The next assessment is due in 2018.)
5. As a philanthropic funder in a chronically underfunded field, Kresge has played a significant role over the past decade in shaping adaptation thinking and practice across the nation. Philanthropic funding is expected to play a continued, and possibly growing, role in coming years, and Kresge has an opportunity to extend its leadership role among foundations to shape and encourage increased philanthropic investment in adaptation.
6. Finally, relevant outputs from this project will also be shared with the national and international academic community which cross-fertilizes its thinking across national boundaries.

III. Research Methods, Design, and Analysis

This approach to this project is divided into several major tasks (the communication of project outputs and project management tasks are not further described here). The tasks, their key objectives, and the methods used to achieve each, are described below.

Task 1: Literature Review

Objective: To assess the contributions and challenges of grantees’ work in the appropriate context of the last seven years of climate adaptation work, the context

and background on grantees' work must be adequately understood.

Methods: During this information-gathering and preparatory phase, the research team conducted a selective literature review to collect contextual information to fully understand and capture developments in the US climate adaptation field. This material (academic, peer-reviewed, and non-academic literature) was collected primarily prior to the interviews and survey, but continued throughout the study period. The team reviewed and synthesized the literature. Insights gained informed the development of the conceptual framing of the study, the development of the interview and survey protocols, and helped contextualize the findings from the interviews and survey. It also critically informed the assessment of the state of the field.

Task 2: Introductory Interviews

Objective: To help shape Task 3 interviews and surveys, a deeper understanding of the Foundation's work and past shifts in strategy was needed. In addition, a big-picture understanding of the adaptation field as well as perspectives on the value of a field review were sought from the Advisory Group.

Methods: The research team interviewed each member of The Kresge Foundation's Environment Program and the Foundation's director of strategic learning, research, and evaluation (for a total of five interviews or ca. 6% of all interviewees) as well as each member of the Advisory Group (AG; six individuals or ca. 7% of all interviewees). These interviews lasted, on average, ca. 82 minutes (range: 60-122 minutes), followed a semi-structured protocol, were recorded and selectively transcribed (when detailed interview notes taken by the researchers were thought to be insufficient). Foundation staff interviews provided key insights into the Foundation's strategic thinking, development over the review period, and its own expectations of future directions. AG interviews followed a similar semi-structured protocol, and—together with the staff interviews—informed the survey content (see below). AG members are experts on various specific aspects of the field, as well as the adaptation/resilience field as a whole, and bring a range of perspectives from the private, public, and NGO/civic sectors. We consider them to be thought leaders.

Task 3: Grantee and Expert Interviews and Surveys

Objectives: Building on the insights gained in prior tasks, the goal of this task was to assess experiences of grantees and climate adaptation experts to understand how the climate adaptation field has evolved

over time, describe outcomes achieved over the granting period, and identify trends, needs, and opportunities that could strengthen equitable climate adaptation efforts in the US.

Methods: Task 3 constituted the main research period, which included (a) interviews and (b) a survey. Table B.1 in Section IV shows the distribution of interviewees across all categories. The list of potential interviewees, interview protocols, and the survey questionnaire were developed jointly and iteratively with lead Kresge staff to ensure the study population and questions asked of project participants would yield the desired results of the evaluative study. The final responsibility for interviewee selection, question wording, and overall study content and approach, however, rests with the research team. Raw data from the interviews or survey were not shared with the Foundation to ensure confidentiality.

As per IRB requirement, prior to the interviews, we requested that interviewees sign an informed consent form, including the permission to tape the interviews for transcription and further review and analysis. (Signed forms are on file with the research team.)

The interviews covered 20–25 questions, depending on type of interviewee, as well as numerous follow-up probes. The interviews with grantees lasted, on average, 92 minutes (range: 45–128 minutes) and 71 minutes on average with thought leaders (range: 36–105 minutes). Again, they followed a semi-structured interview protocol and were recorded (in all but one case) and selectively transcribed when detailed and extensive note-taking was deemed insufficient to capture the conversation adequately. Each research team member conducted ca. one-third of the total interviews to equitably share the task and learn about the field, to bank on the research team's diverse perspectives, and—where research team members knew a particular interviewee well—to minimize bias and ensure interviewees had the opportunity to speak frankly about their work and experience with the Foundation. Detailed interview data syntheses are available upon request from the research team.

The interviews were complemented and deepened with an online survey (36 multiple-choice, rating, and open-ended questions), developed in parallel with the interview questions and targeted at the same project participants (except Kresge staff). The survey was mailed to the principal participant population (N=74). Respondents received up to three reminders over the course of three weeks. The overall response rate was 72% (n=53). Survey results were analyzed using a statistical package—distinguishing between responses of

grantees and thought leaders where appropriate, and otherwise examining combined response patterns. Results are selectively included in this report. A complete synthesis of survey findings can be obtained from the research team.

Task 4: Kresge Grantee Materials Review

The study also entailed a detailed analysis of grantee portfolios of 42 funding recipients, each containing between one and seven project reports over the entire granting period. Of these, 17 grantees were classified by Kresge as undertaking “place-based innovations” (with a total of 39 reports), and 25 grantees were classified as engaged in associated or cross-cutting “field-building initiatives” (with a total of 71 reports). Two grantees received both types of grants and two organizations had changes in fiscal sponsorship over time, thus resulting in 38 unique grantee organizations.

Grants included in this study were selected by Kresge as representative of the Environment Program’s climate adaptation portfolio. Important strategic shifts in program foci had occurred over the seven-year period, and examples from earlier and more recent program areas were included in the review. The 110 reports were coded by three analysts using a common coding rubric (initially developed by the lead research team member, Susanne Moser). In addition to basic grant and grantee information (grant amount, project budget, granting period, organizational annual budget), the rubric characterized each grant by several Kresge-internal identifiers (strategic program area, purpose of grant, and project goals) and a much larger number of traits thought to be helpful to characterize grant achievements and the overall portfolio’s achievements (e.g., sectoral and regional focus, project partners, other funders, focus on climate variability/extremes and/or climate change, consistency with Kresge’s understanding of adaptation and resilience, centrality of social equity in the funded work, activities undertaken to address equity issues, contributions to field building, innovations, types of activities funded under the grant, outputs, outcomes, challenges encountered, lessons learned, future opportunities and needs mentioned, and organizational diversity concerns addressed during the granting period).

Two additional analysts assigned to the task were trained to use the coding rubric. During the training, the analysts coded a small subset of the same grant reports (field-building and place-based innovation projects). Numerous questions arose over the course of this training period, partly because the grant reports

greatly varied in length and detail. Inter-coder variability was addressed in several successive meetings with the overseeing research team member (Moser), resulting in refinement of the coding rubric and in greater consistency in coding (not quantitatively assessed). Notable differences and any remaining errors were captured through a detailed review of the coded material by the lead researcher, who also coded the field-building contributions of all relevant grant reports.

Coded reports were analyzed using descriptive statistics. Independent verification of outputs and outcomes achieved was beyond the scope of this project. However, the grant portfolio could be characterized in interesting ways through this analysis. The majority of findings are contained in a separate report to The Kresge Foundation, but overarching findings also informed the field review presented in this report.

Task 5: Synthesis and Peer Review

Results from all tasks were analyzed and integrated, using quantitative, qualitative, and comparative analysis (as appropriate; see above) and extensively deliberated by the research team until agreement on interpretation was reached (a form of internal peer review).

Preliminary findings were then presented to lead Kresge Foundation staff and AG members during a 5-hour meaning-making session held at the Foundation’s offices.

Feedback on an advanced project synthesis was also elicited from 88 invited individuals (study participants and others) during a half-day facilitated workshop at the National Adaptation Forum 2017 in St. Paul, Minnesota. Participants also provided input on potential ways to advance US adaptation.

A draft version of the synthesis report was submitted for review by the AG members, lead Kresge Foundation staff, as well as an external (not previously involved) reviewer knowledgeable of the adaptation field and philanthropy (for a total of 9 external reviewers), and subsequently revised for final publication.

IV. Research Population

For this study, we interviewed 87 individuals over the course of 78 interviews. Nine grantee organizations chose to include two staff members in the interviews due to familiarity with the Kresge-funded work; thus, we distinguish interviews from the total number of interviewees. Table B.1 details the distribution across interviewee groupings.

Table B.1: Overview of Interviewees

Category of Interviewees	Absolutes				Percentages			
	Total # of Interviews	Total # of Interviewees	Gender		Interviews	Interviewees	Gender	
			Women	Men			Women	Men
Thought Leaders	30	30	17	13	38.5	34.5	19.5	14.9
Grantees	37	46	28	18	47.4	52.9	32.2	20.7
AG Members	6	6	3	3	7.7	6.9	3.4	3.4
KF Staff	5	5	5	0	6.4	5.7	5.7	0.0
TOTAL	78	87	53	34	100	100	60.9	39.1

Interviewees in these categories were identified on the basis of a number of criteria:

- A. Thought leaders:** Thought leaders in the adaptation/resilience field were selected on the basis of the research team’s knowledge and familiarity with the field, contacts in existing organizations and networks, and assessment of relevant actors in climate-sensitive sectors. This list was augmented through recommendations from The Kresge Foundation and the project’s Advisory Group. The Kresge Foundation expressly wished to expand the pool of thought leaders beyond “the usual suspects” (i.e., well-known figures in the field, regularly consulted for their expertise). Moreover, the research team sought to balance interviewees familiar with urban (but also rural) adaptation issues, various sectors and types of climate change impacts, adaptation challenges and solutions, and representing perspectives from academia, non-profits, government, the private sector, and philanthropy. Thought leaders were approached by the Environment Program’s lead, Lois DeBacker; subsequent interactions were managed by the research team. All but two initially approached thought leaders agreed to participate in the study (the two had time conflicts).
- B. Grantees:** Kresge selected 42 grantees* from the past seven years for inclusion in this portfolio review. Its selection criteria included factors such as a) grant ended no more than two years ago; b) grantees consider themselves part of the adaptation/resilience field; c) grants involve each strate-

gic area of the program (i.e., place-based activities; field building activities); d) a contact person (i.e., knowledgeable interviewee) is likely to be found; and e) for ongoing grants, grant recipient has been funded by the Foundation for at least one full cycle before (i.e., they are not first-time grantees in the middle of their work). Grantees were approached by the Environment Program’s lead, Lois DeBacker, and subsequent interactions were handled by the research team. All approached grantees agreed to participate in the study.

- C. Advisory Group:** A distinguished set of adaptation and resilience thought leaders, deeply familiar with The Kresge Foundation’s work and with the US adaptation field, was selected to serve as the project’s advisory group. The research team and lead Kresge Foundation staff had equal say in its composition.
- D. Kresge Foundation staff:** The four staff members of The Kresge Foundation’s Environment Program and the Foundation’s lead on evaluation, research, and learning were interviewed given their deep, but differentiated, knowledge of the Program’s grants, granting procedures, and strategy.

Interviewees ranged in age from between ca. 30 and 65 years of age (i.e., mid-career to senior employees) and included 53 women (61%) and 34 men (39%). They represent a cross-section of racial and ethnic populations, reflecting both the overall demographics of the US and also The Kresge Foundation’s principal interest in supporting climate adaptation and resilience building with a strong focus on social equity.

* Of the 42 grantee organizations selected by the Foundation, two organizations received both place-based innovation and field-building grants; two changed fiscal sponsorship (although the work was undertaken by the same entity). These grantee organizations were interviewed only once (for experience with both initiatives and over the entire granting period). One additional grantee interviewee was counted as part of the Thought Leader group given involvement in multiple nationally significant initiatives, but was also interviewed for experience with The Kresge Foundation, hence the total number of grantee interviews of 37.

Interview Protocol – Kresge Foundation Staff

A. Introductory question

1. Can you describe your role and position here in the Environment Program (EP)?

Follow-up (FUP): How long have you been here?

B. Environment Program goals & evolution

2. How have Kresge’s EP goals and focal areas changed over time?

FUP: What motivated these shifts?

3. Have your criteria for evaluation/selection of grant applications changed?

FUP: If so, how and why?

4. Can you describe the way direction of a program like the EP is set: What is your role, the Board’s role, others?

C. Theory of change

5. What do you hope your investment in adaptation/resilience projects will achieve out in the world?

6. How exactly do you think your investment has enabled change?

FUP: What has the money bought?

D. Successful grants

7. Without necessarily naming names or projects, in your experience and mind, what are the traits of a “successful” Kresge-funded project?

FUP: How has this influenced your selection of projects over time?

FUP: Do you judge “success” by project, across your entire portfolio, or both?

Note: Let interviewee define whether success is in terms of outcomes, outputs, process, or all.

8. What are the most common problems you have noticed or encountered in your time working with Kresge grantees in terms of their project implementation?

E. Kresge’s niche

9. In your opinion, what is the niche that Kresge’s EP currently occupies in the adaptation arena?

FUP: What about in the resilience context?

FUP: What about in the context of investments in greater equity?

10. What is Kresge’s EP niche as a philanthropy vis-à-vis other funders of this type of adaptation- and resilience-related work (i.e. government [federal, state, local], private, or philanthropic funders)?

FUP: Has this changed over time, in your view?

11. From what you know prior to this portfolio review, what do you feel the EP’s impact on the adaptation field has been to date?

F. Adaptation field

12. What are elements of traits of a “field?”

FUP: What about elements of a “mature field?”

13. Where do you think the adaptation/resilience “field” or “fields” is/are at this point?

FUP: Explore further...

14. Is there another field you have in mind, or can think of, that adaptation could learn from?

G. Perceptions of evolving field and needs

15. In your view, what major trends has the US climate adaptation field experienced over the past seven years?

FUP: What has been accomplished?

FUP: What are the lessons learned?

16. Now, looking forward, where do you see the adaptation/resilience field(s) going?

17. Where should the adaptation/resilience field(s) be within, say, 5 years?

FUP: What would its/their characteristics be if it/they had advanced or were more mature?

18. Where are the greatest opportunities for advancement in this direction?

19. What are the biggest challenges in moving in this direction that you see?
FUP: Do you foresee any new or different needs, in the near term, during a Trump administration?
20. In very practical terms, where do you see the greatest needs in moving adaptation forward?
FUP: What would be needed to further integrate equity?
FUP: What about to further integrate mitigation and adaptation?
21. In your mind, where do you think the most action will occur—and by which actors in society—to move adaptation forward?
FUP: If interviewee asks about “should” versus “will” occur—focus them on “will.”
FUP: Probe as needed.
22. What would be a moonshot idea in adaptation/resilience building, in your opinion?
FUP: If you were unconstrained and could do anything to make a difference, what would that be?

H. Closing questions

23. If it were all up to you, what are one or two changes you think Kresge could make to be even more impactful in the adaptation/resilience arenas?
24. What do you most want to learn from this portfolio review?

Interview Protocol – Advisory Group

A. Introductory question

1. Can you briefly describe the position you hold and what you do in the context of your organization's mission and focus?

Follow-up (FUP): How long have you worked on these issues?

B. Defining adaptation and resilience

2. What do you mean by “adaptation?”

FUP: Do you use the term “resilience” in a different sense? What does that word mean to you?

FUP: In what ways, if at all, does social equity play into what you do?

FUP: Do you think mitigation of greenhouse gas emissions is part of resilience?

C. Theory of change

3. What do you hope Kresge's investment in adaptation/resilience projects will achieve out in the world?

FUP: In your opinion, what should Kresge do to achieve these goals?

D. Successful grants

4. How do you think about “success” in a grant?

FUP: How about success of a portfolio?

FUP: Would your definition of “success” be any different if the funder was not a foundation?

E. Kresge's niche, Environment Program goals, and evolution

5. What do you know about Kresge's EP goals and how they have changed over time?

FUP: Name goals if interviewee is unfamiliar

FUP: Do you have any thoughts about these goals and shifts?

6. In your opinion, what is the niche that Kresge's EP currently occupies in the adaptation arena?

FUP: What about in the resilience context?

FUP: What about in the context of investments in greater social equity in that context?

7. What is Kresge's EP niche within philanthropy vis-à-vis other funders of this type of adaptation- and resilience-related work (i.e. government [federal, state, local], private, or philanthropic funders)?
8. From what you know prior to this portfolio review, what do you feel Kresge's impact on the adaptation field has been to date?

F. Adaptation field

9. Do you see adaptation as a “field of practice?”

FUP (if yes): How so?

FUP: How would you describe its current state?

FUP (if no): Why not? What would make it a “field of practice?”

10. Is there another field you can think of that adaptation could learn from?

G. Perceptions of evolving field and needs

11. In your view, what major trends has the US climate adaptation field experienced over the past seven years?

FUP: What has been accomplished?

FUP: What are the lessons learned?

12. Now looking forward, briefly, where do you see the adaptation/resilience field(s) going?

13. Where should the adaptation/resilience field(s) be within, say, 5 years?

14. Where are the greatest opportunities for advancement in this direction?

15. What are the biggest challenges in or barriers to moving in this direction?

FUP: Do you foresee any new or different needs, in the near term, during a Trump administration?

16. In very practical terms, where do you see the greatest needs in moving adaptation forward?

FUP: What would be needed to further integrate social equity?

FUP: What about to further integrate mitigation and adaptation?

17. In your mind, where do you think the most action will occur, and by which actors/sectors in society, to move adaptation forward?

FUP: If interviewee asks about “should” versus “will” occur—focus them on “will.”

18. What would be a moonshot idea in adaptation/resilience building, in your opinion?

FUP: If you were unconstrained and could do anything to make a difference, what would that be?

H. Closing questions

19. If it were all up to you, what are one or two changes do you think a funder like Kresge could make to be even more impactful in the adaptation/resilience arena?

20. What do you most want to learn from this portfolio review?

21. Request input into study design:

- Suggestions for additions to the literature review
- Suggestions for additions to the list of thought leader interviewees
- Suggestions for who should hear findings (i.e., dissemination of findings)
- What do you most want to learn from this project?
- We are asking grantees questions that look both backward and forward—do you have high-level suggestions on this emphasis?

Interview Protocol – Grantees

A. Introductory question

1. Can you briefly describe your role and position in your organization?

Follow-up (FUP): How long have you been here?

B. Kresge-funded work and basic understanding of adaptation and resilience

2. Turning to the project(s) or stream of work that Kresge has funded for your organization, can you tell me a bit about your specific role in that?

FUP: In what ways (if at all) have you addressed mitigation and adaptation within this work?

3. How big is this project or stream of work in the bigger picture of what your organization does?

FUP: Is (or was) this Kresge-supported work co-funded by others?

4. How do you define adaptation?

FUP: What does “resilience” mean to you?

FUP: In what ways, if at all, does social equity play into what you do?

FUP: Do you think mitigation of greenhouse gas emissions is part of building resilience?

5. Over the time that you have been working on these issues, how has your understanding of adaptation, resilience, and the consideration of social equity changed?

FUP: Has your interaction with Kresge in any way changed your thinking about these concepts?

C. Theory of change

6. Let’s come back to the specific work you got funded by Kresge. You already spoke a bit about what you did, but we would like to better understand how you plan and implement a project/stream of work like that. Can you describe your internal process of identifying goals for the project: how you planned out what to do and how to implement the work?

7. Can you tell us more about what your project(s)/stream of work has accomplished?

FUP: What were the most significant accomplishments [look for results/outcomes, not activities]?

FUP: Probe for change in attitudes, understanding, capacity, policy impact, etc.

FUP: How do you know?

D. Success in your work

8. How would you describe the contribution your work makes to achieving greater resilience?

FUP: What would constitute “success,” in your mind?

9. What do you need to be more effective in the ways you want to contribute to resilience?

10. How have you experienced the interaction with Kresge’s EP?

FUP: What worked well? What has Kresge done well?

FUP: Is there any way in which Kresge added value beyond the grant?

FUP: What was challenging or not helpful? Could Kresge improve that somehow?

E. Kresge’s niche

11. You mentioned that your work is solely/not only funded by Kresge. That gives you a particular perspective on Kresge’s role. How would you characterize Kresge’s role in the adaptation arena?

FUP: What about the resilience context? What about in the context of equity?

12. From what you know of Kresge’s work and its role in the adaptation/resilience/social equity space, what do you think has been their impact on the field to date?

F. Adaptation and resilience field(s)

13. Do you see adaptation as a “field of practice?”
FUP (if yes): How so?
FUP (if no): Why not? What would make it a “field of practice?”
FUP (if yes or no): How about “resilience?”
14. If the above question was answered with a ‘yes’: How would you describe the current state of the field(s) of adaptation and resilience building?
15. Is there another field you think adaptation could learn from?

G. Perceptions of evolving field and needs

16. In your view, what major trends has the US climate adaptation field experienced over the past seven years?
FUP: What has been accomplished?
FUP: What are the lessons learned?
17. Now, looking forward, briefly, where do you see the adaptation/resilience field(s) going?
18. Where should the adaptation/resilience field(s) be within, say, 5 years?
FUP: What would its/their characteristics be if it/they had advanced or were more mature?
19. Where are the greatest opportunities for advancement in this direction?
20. From what you can see, what are the biggest challenges in or barriers to moving in this direction?
FUP: Do you foresee any new or different needs, in the near term, during a Trump administration?
21. In very practical terms, where do you see the greatest needs in moving adaptation forward?
FUP: What would be needed to further integrate equity?
FUP: What about to further integrate mitigation and adaptation?

22. In your mind, where do you think the most action will occur, and by which actors/sectors in society, to move adaptation forward?
FUP: If interviewee asks about “should” versus “will” occur – focus them on “will”
23. What would be a moonshot idea in adaptation/resilience building in your opinion?
FUP: If you were unconstrained and could do anything to make a difference, what would that be?

H. Closing questions

24. If it were all up to you, what are one or two changes you think a funder like Kresge could make to be even more impactful in the adaptation/resilience arena?
25. Are there any other last thoughts you would like to share?

Interview Protocol – Thought Leaders

A. Introductory question

1. Can you describe the position you hold and what you do in the context of your organization's mission and focus?

Follow-up (FUP): How long have you worked on these issues?

B. About adaptation and resilience

2. What do you mean by “adaptation?”

FUP: What does “resilience” mean to you?

FUP: In what ways, if at all, does social equity play into what you do?

FUP: Do you feel mitigation of greenhouse gas emissions is part of building resilience?

C. Success in your work

3. How would you describe the contribution your work makes toward achieving greater resilience or adaptation?
4. From your experience with people and projects in this arena, what enables them to contribute most effectively to successful adaptation and greater resilience?

FUP: What gets in their way most commonly?

D. Theory of change

5. Considering your own work, what have you learned about how to be most impactful? And how do you track whether you actually made a difference?

E. Adaptation field

6. Do you see adaptation as a “field of practice?”

FUP (if yes): How would you describe the current state of the field of adaptation/resilience building?

FUP (if no): What would make adaptation a field, if it were one?

7. Is there another field you have in mind, or can think of, that adaptation could learn from?

F. Perceptions of evolving field and needs

8. In your view, what major trends has the US climate adaptation field experienced over the past seven years?

FUP: What has been accomplished?

FUP: What are the lessons learned?

9. Now, looking forward, where do you see the adaptation/resilience field(s) going?
10. Where should the adaptation/resilience field(s) be within, say, 5 years?

FUP: What would its/their characteristics be if it/they had advanced or were more mature?

11. Where are the greatest opportunities for advancement in this direction?
12. What are the biggest challenges in moving in this direction that you see?

FUP: Do you foresee any new or different needs, in the near term, during a Trump administration?

13. In very practical terms, where do you see the greatest needs moving adaptation forward?

FUP: What would be needed to further integrate equity?

FUP: What about to further integrate mitigation and adaptation?

14. In your mind, where do you think the most action will occur, and by which actors/sectors in society, to move adaptation forward?

FUP: If interviewee asks about “should” versus “will” occur—focus them on “will.”

15. What would be a moonshot idea in adaptation/resilience building, in your opinion?

FUP: If you were unconstrained and could do anything to make a difference, what would that be?

G. Kresge's niche

16. To the extent that you're familiar with Kresge's work, what do you think is the niche that Kresge's EP currently occupies in the adaptation arena?

FUP: What about in the resilience context?

FUP: What about in the context of investments in greater social equity?

17. What is Kresge's EP niche as a philanthropy vis-à-vis other funders of this type of adaptation- and resilience-related work (i.e. government [federal, state, local], private, or philanthropic funders)?
18. From what you know of Kresge's work and its role in the adaptation/resilience/social equity space, what do you think has been its impact on the field to date?

H. Closing questions

19. If it were all up to you, what are one or two changes that a funder like Kresge could make to be even more impactful in the adaptation/resilience arena?
20. Are there any other last thoughts you would like to share?

Survey Questionnaire (delivered online)

Kresge Environment Program Goals & Evolution

- How familiar are you with the current programmatic goals of The Kresge Foundation's Environment Program? (please check only one option):
 - Extremely familiar
 - Very familiar
 - Somewhat familiar
 - Not very familiar
 - Not at all familiar
- How would you weight the amount of climate-related work you do personally on mitigation (GHG reduction to minimize climate change) vs. adaptation (preparing for and managing the consequences of climate change)? Please select your best estimate as a percentage, adding to 100%.

	Percentage
Climate Change Mitigation	__%
Climate Change Adaptation	__%
Other (Please describe in comment box below.)	__%
Other (Please specify.)	
- How would you weight the amount of climate-related work your organization does on mitigation (GHG reduction to minimize climate change) vs. adaptation (preparing for and managing the consequences of climate change)? Please select your best estimate as a percentage, adding to 100%.

	Percentage
Climate Change Mitigation	__%
Climate Change Adaptation	__%
Other (Please describe in comment box below.)	__%
Other (Please specify.)	
- "Equity" in the sustainability context (including climate change adaptation and resilience) can be defined in a number of ways. Below, we list one definition (adapted from USDN 2014), and ask you to identify which of these components you agree are aspects of equity, and which ones you cur-

rently address in your work. Click the boxes next to each component of the definition to indicate your agreement and current work.

Reference: Urban Sustainability Directors Network - Equity in Sustainability Report

- Procedural equity—inclusive, accessible, authentic engagement and representation in processes to develop or implement programs and policies
- Distributional equity—programs and policies resulting in fair distribution of benefits and burdens across all segments of a community, prioritizing those with the highest need
- Structural equity—decision makers institutionalize accountability; decisions are made with a recognition of historical, cultural, and institutional dynamics and structures that have routinely advantaged privileged groups and resulted in chronic, cumulative disadvantage for subordinated groups
- Transgenerational equity—decisions consider generational impacts and don't result in unfair burdens on future generations
- Other dimensions of equity not covered above (Please specify.)

Response options for each:

Yes, I see this as an aspect of equity

Yes, I currently work on this aspect

- To what extent do you personally integrate social equity considerations in your climate change-related work? (Please pick the answer that comes closest to your actual work.):
 - Equity pervades everything I do.
 - Equity is a primary focus in my work.
 - Equity is a growing focus in my work.
 - Equity is just emerging as a concern in my work, but I am not yet sure how to address it.
 - I am generally aware of equity issues but I don't specifically work on it.
 - I have not paid much attention to equity in my work.
 - Until today, I have not thought about it at all.

We welcome any additional comments you might wish to share about social equity.

6. Over the past 3–5 years, what have been the top 5 influences on the direction of your work? (Please select 5 factors from the list below.):
- Expressed or elicited needs of stakeholders/partners
 - Personal sense of urgency about climate change
 - Personal sense of urgency about social equity
 - Personal interest in a particular issue/area
 - I had a great idea for a new/different approach or strategy
 - Shift in Board/organizational priorities
 - Experience of climate change impacts in our area
 - Change in policy/law
 - Funding became available
 - Past work had run its course and needed to end/change
 - Someone else's innovative ideas
 - New opportunity to collaborate with key partners
 - Other (Please fill in.)
9. If there is any deviation from 100% for the goals you listed above, can you briefly explain why you feel you have not fully achieved your stated goal?
10. In your work, how do you track the impact of what you do? (Please check all that apply.):
- I don't have the time or capacity to track outcomes or impacts of my work in any way.
 - I don't believe it's important to track outcomes or impacts.
 - Others in my organization are charged with tracking outputs, outcomes, and impact per funding requirements.
 - I collect written notes whenever I hear something good happening as a result of my work.
 - I make a mental note when I hear my work was useful somehow.
 - I have a systematic internal tracking system to make sure I capture the impacts of my work.
 - I regularly meet with my supervisor to evaluate my work.
 - My organization does periodic external evaluations to help us see what we did and didn't accomplish.

Theory of Change

7. Please list the top 3 goals of your most recent (i.e., currently ongoing or most recently completed) Kresge-funded work (alternative phrasing for non-grantee thought leaders: Please list the top 3 goals of your current adaptation/resilience-focused work):
- 1.
 - 2.
 - 3.
8. How close do you feel you have come, over the course of the most recent grant cycle, to achieving the goals you outlined in the above question? Please provide your best estimate as a percentage of full goal achievement (e.g., specific goal [30% complete]).
- 1.
 - 2.
 - 3.

11. Please list any project planning, monitoring, and evaluation tools you currently use in your work. If you do not use any monitoring tools, please write "none."

Success in Your Work

12. Please indicate your level of agreement or disagreement with the following statements about climate change adaptation.
- Adaptation is a chance to improve things over the current state of affairs.
 - Adaptation is about keeping or sustaining what we have in the face of change.
 - Adaptation is about finding a dignified way out of a worsening situation.

Response options for each:

Strong agreement

Agreement

Neither agreement nor disagreement

Disagreement

Strong disagreement

13. Please indicate your understanding of the relationship between adaptation and resilience. (Please select the one answer that comes closest to your opinion.):

- Adaptation is a means to achieving resilience.
- Resilience is a means to adapting to climate change.
- Adaptation and resilience are pretty much the same thing.
- There is a different relationship between adaptation and resilience. (Please describe.)

14. What are the biggest challenges you see in the US in making more progress on climate change adaptation? Please rate each of the challenges listed below as either a “big hurdle,” “small hurdle,” or “not a hurdle.”

- Current pressing issues are all-consuming
- Insufficient staff resources to analyze and assess relevant information
- Lack of funding from regional, state, and/or federal agencies to prepare a plan
- Lack of funding from regional, state, and/or federal agencies to implement a plan
- Disagreements on importance of climate change and its impacts
- Legal pressures to maintain status quo
- No legal mandate to take climate change impacts into account
- Science is too uncertain
- Unclear how climate change relates to my job
- Unclear what adaptation options are available
- Lack of access to relevant information and data
- Lack of technical assistance from state or federal agencies
- Lack of public demand to take adaptation action
- Lack of social acceptability of adaptation strategies
- Opposition from stakeholder groups
- Magnitude of problem is too overwhelming to address
- Other (Please specify in the textbox below.)

Response options for each hurdle:

Big hurdle

Small hurdle

Not a hurdle

15. Of the challenges you have marked as “big hurdles” in the question above, what has helped most in lowering or overcoming them? (Please describe.)

Kresge’s Niche

16. How would you rate The Kresge Foundation’s influence on the adaptation/resilience field in the US? (Please check one answer per statement.)

- Kresge has provided the largest source of philanthropic funding for adaptation/resilience in the US over the past 7 years.
- Kresge has provided the most consistent source of philanthropic funding for adaptation/resilience in the US over the past 7 years.
- Kresge has fundamentally shaped thinking about adaptation/resilience work in the US.
- Kresge has built essential adaptive capacity in communities across the US.
- Kresge is fostering a community of practice in the adaptation/resilience field.
- Kresge has helped to put social equity on the agenda of adaptation/resilience thinkers and practitioners.
- Kresge is advancing a transformative agenda in climate-related work in the US.
- Kresge has helped to build and guide organizations working in the adaptation/resilience field.
- Kresge has helped to shape federal adaptation/resilience policy.

Response options on each:

Strongly agree

Somewhat agree

Neither agree nor disagree

Somewhat disagree

Strongly disagree

Can’t judge

17. From what you know about The Kresge Foundation’s work in the adaptation/resilience/equity space, how would you rate the significance of its impact on the US climate adaptation/resilience field?

- Indispensable
- Very important
- Significant
- Noticeable
- Negligible
- Can’t judge

Adaptation Field

18. Please check those elements that define a “field of practice,” in your opinion (check all that apply).

- A shared knowledge base (e.g., common ideas, credible evidence base, means for dissemination)
- A set of standards of practice (e.g., codified standards, exemplary models, credentialing/training)
- A network of leaders (e.g., influential individuals, exemplary organizations within and across fields/sectors)
- An enabling funding and policy environment (e.g., organized funding streams, supportive policies)
- Other (Please specify.)

19. Please rate the status of the elements as to how well-developed they are at this time, from your perspective.

- A shared knowledge base
- A set of standards of practice
- A network of leaders
- An enabling funding and policy environment

Response options on each:

Not at all developed
Beginning to be developed
Somewhat developed
Well developed
Very well developed

20. If you included other elements that define a “field of practice” in the question above, please describe how you would rate each based on the above rating scale.

21. People differ on how much has been accomplished over the last several years within the adaptation/resilience field. Please indicate your level of agreement with each of the following statements.

- There is widespread agreement now that climate change is a problem we must address.
- Whether or not people agree on the causes of climate change, they agree we must adapt to changes.
- Mitigation is no longer seen as a competing activity to adaptation.
- Adaptation is often a way to get people interested in mitigation.

- In the climate-sensitive sector(s) I am familiar with, we now have a set of “best practices” for adaptation.
- We now have the basic tools we need to assess climate risks.
- We now have the necessary tools to evaluate adaptation response options.
- We have built a community of knowledgeable people that works on adaptation.
- We have learned from various “pilots” and know now what works and doesn’t work.
- Social equity/climate justice is getting adequate attention now.

Response options on each:

Strongly agree
Somewhat agree
Neither agree nor disagree
Somewhat disagree
Strongly disagree

22. Are there any other key accomplishments in the adaptation/resilience field that you are aware of? (Please specify.)

23. A number of trends over the past few years may have influenced the current state of the adaptation/resilience field. Please select up to 5 that you view as particularly important, from your perspective. (multiple choice)

- More extreme events have raised awareness of climate change impacts.
- Disasters have unleashed large amounts of public funding.
- The science on climate change has become more solid.
- Emerging impacts of climate change are creating a sense of urgency.
- Political leadership at the federal level (Obama Administration) has mainstreamed the conversation about adaptation.
- The growing climate movement has helped build political momentum.
- The media is paying attention not just to mitigation but to adaptation now.
- Extreme events have caused far-reaching impacts (e.g., supply-chain disruptions).
- The economic recession brought attention to inequities and underlying causes.
- The repeated failure of US and global mitigation policy has redirected focus toward adaptation.
- The magnitude of disasters has woken

- people up.
- International and domestic conflicts have revealed political failures.
 - Large and sustained philanthropic investment has catalyzed the adaptation field.
 - There are more models available now that show what the possible adaptation solutions are.
 - The expertise in the practitioner community has grown significantly.
 - There have been important shifts in focus within the adaptation field.
 - Another influential trend (Please specify.)
24. In 5 years from now, the adaptation/resilience field could have made major strides toward any number of desirable goals. Please pick up to 5 goals that you would like to see the field achieve. (multiple choice)
- Resilience and climate change impacts are thoroughly and directly addressed by local governments.
 - The population has widespread awareness of climate change impacts and the need for adaptation.
 - The policy environment for clean and resilient energy solutions is vastly improved.
 - The focus of adaptation/resilience has shifted to community well-being (social, economic, cultural, etc.).
 - There is now complete national consensus on the role of green/nature-based infrastructure.
 - Tools and approaches are widely available to make the “business case” for adaptation action.
 - Organizations working on adaptation are well-networked and working effectively together.
 - Research is readily available to assist local communities in responding when faced with a crisis.
 - What is effective in adaptation practice is well understood.
 - Resilience and equity are now a normal part of the economic development conversation.
 - Decision makers can draw on consistent and regularly updated climate impacts information.
 - There is a much wider set of feasible financial mechanisms available to fund adaptation.
 - There are now strong alliances among non-traditional partners working toward joint
- resilience goals.
- There is a credible evidence base now that shows which interventions made us safer.
 - Grassroots and big green (i.e., mainstream environmental) groups now work in equal partnership.
 - Grassroots and local government now work in equal partnership.
 - Other (Please fill in.)
26. In which regions of the US do you see the greatest need for investment in furthering adaptation/resilience? (Check top three.):
- Northeast
 - Mid-Atlantic
 - Appalachia
 - Southeast
 - Caribbean
 - Gulf of Mexico
 - Midwest
 - Great Plains
 - Rocky Mountains
 - Southwest
 - Pacific Northwest
 - California
 - Alaska
 - Hawaii and US-affiliated Pacific Islands
 - National level
 - Don’t know
 - Cross-cutting (Please specify.)
27. In which sectors of the US do you see the greatest need for investment in furthering adaptation/resilience? (Check top three.):
- Coastal Zones
 - Oceans and Marine Resources
 - Water Resources
 - Agriculture
 - Forests
 - Ecosystems and Biodiversity
 - Human Health
 - Urban Systems and Related Infrastructure
 - Rural Communities
 - Emergency Management
 - Transportation
 - Energy Supply/Use
 - Indigenous Peoples, Lands, and Resources
 - Don’t know
 - Other or cross-sectoral issues (Please specify.)

28. Please rank the following sample of possible priorities to advance the adaptation/resilience field by how important you think they are (with 1 being the most important and 10 being the least important).
- We need to build (human) capacity in communities to knowledgably address climate change impacts.
 - We need a stronger message and better communication about the need for adaptation.
 - We need to develop sustained funding mechanisms to fund adaptation.
 - We need to build greater trust between justice-focused organizations and mainstream organizations.
 - We need to build greater awareness for the need for adaptation.
 - We need to be able to make the economic argument for adaptation action.
 - We need to show that adaptation is a good investment.
 - We need to focus our attention on those areas where we see the greatest economic vulnerabilities.
 - We need to better organize people to work together on adaptation strategies.
 - We need to strengthen the evidence base for what works (case studies, evaluation, syntheses, etc.).
 - We need to do a better job communicating the successes, failures, and impacts of adaptation measures.
 - Other (Please specify.)
29. What is your advice on how to ensure that federal initiatives (policies, rules, regulations, funding programs, investments, etc.) best meet local needs? Select up to 3 key strategies.
- Continually educate federal agency staff.
 - Provide federal incentives, but don't regulate standard approaches to local adaptation.
 - Invest philanthropic dollars in small and medium-sized communities that lack capacity to access federal funds.
 - Strengthen the coalition of justice organizations to resist top-down initiatives that perpetuate the status quo.
 - Build up local capacity and leadership.
 - Protect scientific integrity, data portals, and tools.
 - Train people at all levels in key sectors on social equity, economic, and climate issues.
 - Develop local policies that enable federal investment to be used toward resilience.
30. To advance adaptation most effectively, should the following "sectors" play a less significant, similar, or more significant role compared to the role they play now? For each of the sectors listed below, please indicate the role you would like each to play.
- Federal government, executive branch
 - Federal government, legislative branch
 - Federal government, judicial branch
 - State government
 - Local government
 - Non-governmental organizations focused on social equity
 - Non-governmental organizations focused on community development
 - Non-governmental organizations focused on the environment
 - Community-based organizations
 - Academic and other research institutions
 - Large corporations
 - Small and medium-sized enterprises
 - Investor-owned utilities
 - Public utilities
 - Financial sector (banks, insurers, investors etc.)
 - Philanthropies
- Response options on each:*
 More significant role than currently
 About the same as currently
 Less significant role than currently
 Don't know
31. Which individuals and/or organizations do you view as particularly important leaders in the field? Please list individuals or organizations that you look up to below. (Write in)
- Name of individual/organization, for leadership on:
 - Name of individual/organization, for leadership on:
 - Name of individual/organization, for leadership on:

Demographic Questions

32. Please indicate the topical area(s) you work in (Check all that apply.):

- Urban
- Rural
- Energy
- Natural resource/ecosystem management/conservation
- Human health
- Water
- Coastal
- Ocean
- Emergency management
- Infrastructure management
- Finance
- Economics
- Social Justice
- Other (Please fill in.)

33. Please indicate the sector you work in:

- City, county, or other local government
- State government
- Federal government
- Private sector/business community
- Civic, community, or non-governmental organization
- Academia/research
- Philanthropy
- Other (Please specify.)

34. Briefly describe your area of expertise (field of study, field of longest work experience, particular emphasis/focus).

35. How many years have you worked in your current position?

36. How many years have you worked in your area of expertise?

37. What is your age?

- 18–30
- 31–40
- 41–50
- 51–60
- 61–70
- >71

38. What is your gender?

- Female
- Male
- Wish not to answer

39. Please feel welcome to share any additional thoughts or input you may have below.

Thank you for your time in answering these questions!

Click “Done” to submit your answers.

Appendix C1: Lessons from Other Fields for Prioritizing Field Building Recommendations

In Chapter 5 of this report, we approached the question of prioritization from two angles:

- Theory-based and empirical experience with field building
- Other efforts aimed at scaling up interventions to address complex issues

We provide this background to our suggested approach to prioritization of recommendations to advance the US adaptation field.

Field Evolution through Theoretical and Empirical Lenses

Many field-building experts do not speak about the phases of building a field, just of evaluating or assessing it.¹ But the Innovation Network for Communities (Cleveland et al. 2016) offers a four-stage evolutionary model, whereby a field progresses from framing to networking to maturation to standardization.² We can roughly (though maybe not exclusively) equate “framing” to the Purpose component, “networking” to the People component, “maturation” to the Practice component, and “standardization” to the Pillars component in our 4P framework. An evolutionary, and thus prioritization, sequence could be discerned: focus first on the Purpose, then on the People, then on the Practice, and finally on the Pillars.

O’Neil and Onike (2016)³ offer some historical evidence for this sequence of stages from the evolution of the public-health field.⁴ They found the field to be launched with a targeted focus on one health issue in 1909 (Purpose), followed by concerted efforts to align actors and build networks in 1910 (People); as of 1913, the focus shifted to practice and identity (Practice); and in 1915, field leaders expanded to address other health problems (thus creating a need for new ideas) (Purpose); by the 1930s, yet other frontiers of work opened up; concerted field building efforts continued through World War II and then gradually ceased after large-scale institutionalization (Pillars).

Our assessment of the US adaptation field suggests that a relatively simple and linear 4-stage model is unlikely to apply to adaptation, and that sub-fields within the larger field will exhibit various degrees of maturity for some time to come. Our reasons are as follows:

- **Emergent presence of all, but uneven development of the 4Ps**—The 4Ps of field building are already in place to some degree, but there is considerable unevenness in the development of each component across regions and sectors, thus making it impossible to apply one field-building strategy across the entire US. This is due, in part, to the heterogeneity of how climate change shocks and stresses will be experienced across different geographies and sectors and also to disagreements on what is most vulnerable, resulting in varying recognitions of the urgency of the problem (Purpose). There is also heterogeneity in terms of how far along the practitioner community is at this time (better in cities, and maybe in coastal and water sectors, but less well-developed in other sectors, rural areas, and certain regions) (People, Practice).
- **Interdependency of 4Ps**—The 4Ps are deeply interlinked and the absence or over-emphasis of any one component to the point of neglect of others can undermine their progress, making it potentially ill-advised at best and completely ineffective at worst to address them sequentially or independently of one another.
- **Diversity of field needs**—Adaptation is complex and context-sensitive, with multiple specific problems emerging simultaneously and interacting in ways that require diverse responses, capabilities, networking, and policy changes.
- **Persistent support needed across the field**—Finally, climate change, while a scientific fact, is interpreted through ingrained values and interests, and is a highly politicized topic in the US. This makes adaptation per se political (in the sense of it relating to the management of public affairs, particularly in terms of implementation priorities), but also politicizes the building of the adaptation field itself. Both demand a focus on the policy and funding pillars not only at the end of field building but throughout.

Thus, we might agree with the central emphasis of each evolutionary stage as a key to how to advance the field to greater maturity, but not with addressing them only in sequence rather than concurrently. Adaptation is also highly complex, which complicates the search for priority actions in a simple, staged model of evolution.

The findings of O’Neil and Onik (2016) regarding field building duration and the necessary scale of intervention might also help set expectations for those interested in advancing the US adaptation field. They note,

“We found little in the literature to help guide thinking about how long it takes to build a field. However, the case studies we found of successful field-building work by philanthropies generally involved work lasting more than one decade and often two or more. [...] Similarly, we found no strong evidence on what scale is necessary for field-building to work. However, one hypothesis is that some later Rockefeller Foundation field-building efforts had limited impact because of their relatively smaller scale.”⁵

Based on our understanding of the state of the US adaptation field, we believe that significant progress can and must be made over the next decade, but that due to the progressive nature of climate change, the heterogeneity of challenges and expertise required within the field (and its sub-fields), and the regional and sectoral differences with which climate change impacts are unfolding, field building is highly unlikely to be complete in 10 years.

In fact, an important lesson for field building is “not to push the field faster than it is ready to develop, thus potentially slowing it down.”⁶ Instead, field-building efforts will likely change as new, larger, and possibly unprecedented challenges unfold. Particularly in under-resourced regions of the country, field-building investment and support may be required for significantly longer, before adaptation becomes fully institutionalized.

Learning from Diverse Efforts Aimed at Increasing Impact

The existing research about building fields does not easily apply to adaptation. So what can be learned from other efforts at scaling up interventions, particularly on deeply entrenched, complex problems?

As in field building, many social-change efforts begin from small-scale innovations and interventions that first galvanize just the few, but then must expand to shape the behaviors, resources, and practices of the many. All theories for scaling up these innovations have commonalities with field building and many face similarly heterogeneous, complex, and often politically contentious problems. But there are also differences between building a field of practice and, say,

- Scaling the impact of investment in a new product;
- Fostering organizational change;
- Spreading technological innovations;
- Addressing deeply entrenched and complex social problems through collective impact;
- Building social movements;
- Managing wicked problems/complex adaptive systems; or
- Managing transitions.⁷

In this literature, we found many common elements and overlaps in leverage points consistent with our 4P framework. The most strategic contributions on how to accelerate, spread, scale up, and deepen social innovations points to several cross-cutting strategies. We have compiled them in Box 20 in Chapter 5.

The first four (Framing, Scaling out, Scaling up, Scaling deep) are frequently described in the literature as occurring sequentially, whereas the next two (Integrating and Accelerating) are particularly relevant to and aim at improving the quality and systemic approach of interventions. The final one (Learning) is a necessity consistently called for in any dynamic and complex problem area.

Our more specific recommendations in Section 5.2 all fall into one or more of these seven categories. Consider using Box 20 as a “check” on the field-building interventions you might consider: if planned activities do not contribute in one of these seven ways to rapidly advancing the field, should they be pursued now? Given that we see the field as currently in an emergent phase, following these seven strategies should help with the critical challenge of accelerating field building toward maturity.

Notes

1. O’Neil, K. and C. Onike. 2016. *Field-Building for Social Impact: A Rapid Review*. New York: Rockefeller Foundation Strategic Research Team.

Lynn, J. 2014. *Assessing and Evaluating Change in Advocacy Fields*. Denver, CO: Spark Policy Institute, p. 4.

Spark Policy Institute. ND. *What It Takes to Build or Bend a Field*. Denver, CO: Spark Policy Institute. Available online at: www.sparkpolicy.com/tools.
2. Cleveland, J., P. Plastrik, J. Crowe, J. Curti, and W. Rickerson. 2016. *Leadership by U.S. Cities: Innovations in Climate Action*. Boston, New York: Innovation Network for Communities, Meister Consultants Group and Bloomberg Philanthropies.
3. O’Neil and Onike, 2016, see Endnote 1 (Appendix C1), p.7.
4. Depending on the boundary one draws around public health (e.g., being separate from or part of the medical field), one might argue that there has been a “pre-professionalization” phase, which would significantly extend the time needed to build the field to maturity.
5. O’Neil and Onike, 2016, see Endnote 1 (Appendix C1). The authors provide some empirical examples to illustrate their points: “The Rockefeller Foundation’s work on hookworm spanned 25 years; work on the field of public health lasted at least 60 years. Conversely, the Rockefeller Sanitary Commission made critical progress in institutionalizing public health in the American South in only five years—although whether those advances would have been sustained in the absence of the Foundation’s further work is unknowable.”
6. Plastrik, P. and J. Cleveland. 2009. *Fields, Innovations and Places: Three Different Strategies for Social Innovators*. Boston, MA: Innovation Network for Communities, pp. 13. [Presentation available online at: <https://www.slideshare.net/johncleveland/fields-innovation-places>].
7. Abercrombie, R., E. Harries, and R. Wharton. 2015. *Systems Change: A Guide To What It Is and How To Do It*. London: New Philanthropy Capital. Available online at: <http://lankellychase.org.uk/multiple-disadvantage/publications/publication-1-title/>.

Bradach, J., and A. Grindle. 2014. Transformative scale: The future of growing what works. *Stanford Social Innovation Review*: 7 pp., available online at: https://ssir.org/articles/entry/transformative_scale_the_future_of_growing_what_works.

Chertavian, G. 2014. To reach transformative scale, transform the conversation. *Stanford Social Innovation Review*: 3 pp., available online at: https://ssir.org/transformative_scale/entry/to_reach_transformative_scale_transform_the_conversation.

Ford Foundation. 2004. *Asset Building for Social Change: Pathways to Large-Scale Impact*. New York: The Ford Foundation.

Ganz, M. 2010. Leading change: Leadership, organization, and social movements. Chapter 19 in Nohria, N. and Khurana, K. (eds.), *Handbook of Leadership Theory and Practice: An HBS Centennial Colloquium on Advancing Leadership*. Boston: Harvard Business Press. Available online at: <http://marshallganz.usmblogs.com/files/2012/08/Chapter-19-Leading-Change-Leadership-Organization-and-Social-Movements.pdf>.

Gopal, S., and H. Preskill. 2016. Putting systems thinking into practice. Available online at: <https://www.fsg.org/blog>.

Hanleybrown, F., J. Kania, and M. Kramer. 2012. Channeling change: Making collective impact work. *Stanford Social Innovation Review*: 10 pp., available online at: https://ssir.org/articles/entry/channeling_change_making_collective_impact_work.

Holton, J. A. 2015. Exploring social movements thinking for leading large-scale change in health and social services systems. *Journal of Corporate Citizenship* (58): 102–118.

Hurst, A. 2012. Demystifying Scaling. (in 5 parts). *Stanford Social Innovation Review*: 5 pp., available online at: https://ssir.org/articles/entry/demystifying_scaling_part_1 (and subsequent parts).

Kania, J., and M. Kramer. 2011. Collective impact. *Stanford Social Innovation Review*: 7 pp., available online at: https://ssir.org/articles/entry/collective_impact#.

Kania, J., F. Hanleybrown, and J. S. Juster. 2014. Essential mindset shifts for collective impact. *Stanford Social Innovation Review*: 6 pp. Available online at: https://ssir.org/articles/entry/essential_mindset_shifts_for_collective_impact.

Koh, H. 2017. Scaling out: For solutions to get to scale, we need strong entrepreneurs who can build on existing breakthrough ideas, rather than creating entirely new ones. *Stanford Social Innovation Review*: 5 pp., available at: https://ssir.org/articles/entry/scaling_out.

Kramer, M. R. 2017. Systems change in a polarized country. *Stanford Social Innovation Review*: 9 pp., available online at: https://ssir.org/articles/entry/systems_change_in_a_polarized_country.

McAdam, D. 2017. Social movement theory and the prospects for climate change activism in the United States. *Annual Review of Political Science* 20(1): 189–208.

McCannon, J., B. Margiotta, and A. Z. Alyesh. 2017. Unleashing large-scale change: Eight ways to grow an unstoppable movement. *Stanford Social Innovation Review*: 3 pp., available online at: https://ssir.org/articles/entry/unleashing_large_scale_change.

Moore, M.-L., D. Riddell, and D. Vocisano. 2015. Scaling out, scaling up, scaling deep. *Journal of Corporate Citizenship* (58): 67–84.

Stroh, D. P. 2015. *Systems Thinking for Social Change: A Practical Guide to Solving Complex Problems, Avoiding Unintended Consequences, and Achieving Lasting Results*. White River Junction, VT Chelsea Green Publishing.

Van Den Bosch, S., and J. Rotmans. 2008. *Deepening, Broadening and Scaling Up: A Framework for Steering Transition Experiments*. Delft, Netherlands: Knowledge Centre for Sustainable System Innovations and Transitions (KCT).

Waddell, S. 2016. Societal change systems: A framework to address wicked problems. *The Journal of Applied Behavioral Science* 52(4): 422–449.

Waddell, S., in review. Strategies for societal transitions: Creating societal change systems. Manuscript submitted for publication.

Walker, J. C. 2017. Solving the world's biggest problems: Better philanthropy through systems change. *Stanford Social Innovation Review*: 12 pp. Available online at: https://ssir.org/articles/entry/solving_the_worlds_biggest_problems_better_philanthropy_through_systems_cha.

Westley, F. R., N. Antadze, D. Riddell, K. Robinson, and S. Geobey. 2014. Five configurations for scaling up social innovation: Case examples of nonprofit organizations from Canada. *The Journal of Applied Behavioral Science* 50(3): 234–260.

Appendix C2: Specific Recommendations for High-Level Policymakers

Below, we provide specific recommendations for high-level policymakers. Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the report.

Pillars

- Move toward greater emphasis on pre-disaster hazard mitigation funding, and incentivize proactive resilience building and integration of resilience thinking into new and redevelopment efforts.
- Establish requirements that all post-disaster rebuilding, infrastructure upgrades, or new infrastructure and development use climate-cognizant development/building/materials standards, consider equity, and are not maladaptive (e.g., increase greenhouse gas emissions).
- Lead on and demand intra-organizational/intra-jurisdictional and cross-jurisdictional/cross-sectoral budget integration and funding alignment.
- Use policy levers at higher (i.e., regional, state, and federal) levels to scale up and spread promising or established best-practice approaches (based on accumulated evidence of what achieves goals effectively, efficiently, and equitably).
- Regional collaboratives (with local governments as their partners) should explore ways to strengthen policy impact (giving plans “teeth”) across local jurisdictions (e.g., through common planning standards, joint funding mechanisms, inter-jurisdictional MOUs, shared powers of authority).
- Support R&D and capacity building.
- Recognize the need for transformative change.
- Set goals that are not just incremental, but ambitious and transformative.

Practice

- Foster alignment of values across the political spectrum around common goals.
- Clarify risk ownership, stewardship principles for public trust, and future liabilities in policies and legal documents.
- Foster a learning culture within your organizations.
- Prioritize actions that mitigate, adapt, and foster social cohesion.
- Avoid any actions that make climate change worse, adaptation and mitigation harder, or disproportionately burden historically neglected populations.
- Mainstream equity into all elements of policymaking.

People

- Join bipartisan and non-partisan caucuses focused on climate action, and promote urgent action on both mitigation and adaptation in a socially just manner.

Purpose

- Relentlessly communicate the scope and urgency of climate change, as well as the efficacy of solutions, in your spheres of influence.
- Demand that your staff seek out scientific expertise on climate change to bolster urgent, proactive policy action.

Appendix C3: Specific Recommendations for Adaptation Thought Leaders

Below, we provide specific recommendations for adaptation thought leaders. Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the report.

Purpose

- Facilitate processes for others to define and find common ground around shared challenges (i.e., how their diverse concerns fit into a larger, more widely shared problem, and how adaptive solutions to them can produce resilience and other desired benefits).
- Help people contain unmanageably big problems to make them amenable to community action and expand problems that are too narrowly defined to embrace resilience building.
- Relentlessly communicate the scope and urgency of climate change, as well as the efficacy of solutions, in your spheres of influence.

People

- Promote an approach to adaptation and transformation not merely from a technical or economic perspective, but from a community and relationship perspective.
- Use your visibility and influence to bring people together to jointly explore adaptation.

Practice

- Facilitate processes for people to identify common problems; define a shared action agenda, including shared measures of adaptation progress and success; develop and implement solutions together; track progress; and learn.
- Use traditional media, new media, social media, and existing networks to share your own and others' leading ideas, insights, and approaches to adaptation.

- Serve as a role model through your words/actions on climate change and social equity.
- Disturb set ways of thinking about adaptation and resilience building, as well as about old ways of doing things that were not cognizant of climate change.
- Make your own fearlessness contagious.
- Bring people together for creative, collaborative innovation and solution finding.
- Become a sustained champion for socially just resilience building.
- Communicate shared goals across many forums and spheres of influence.
- Name issues of power and privilege head-on, and urge and facilitate conversations about them until appropriate actions are taken and behavior or policy changes are made.
- Educate yourself about and embark on the journey of becoming a “systems leader.”

Pillars

- Foster hope by helping people find a unifying vision of a better future for themselves because, often, exciting solution options can set free new energies and open up new, previously unavailable resources.
- Recognize and communicate the need for transformative change.
- Set goals for resilience building that are not just incremental, but ambitious and transformative.
- Advocate for R&D and capacity building for adaptive and transformative change.

Appendix C4: Specific Recommendations for Government Funders

Below, we provide specific recommendations for government funders. Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the main report.

Pillars

- Establish funding requirements (and support implementation) that demand or recommend collaboration across sectors, disciplines, and funding programs.
- Invest in “backbone” organizations that can support large-scale systemic changes in certain areas of resilience building.
- Support the development of innovative financing approaches within sectors and as private-public-civic partnerships.
- Regularly convene funded entities to accelerate and deepen learning about changing funding needs and challenges.
- Develop funding policies that use a “carrot-and-stick” approach. (Funding for large-scale infrastructure, hazard mitigation, insurance payments, etc. is contingent on use of best available science—climate, ecological, economic, and social—adherence to climate-cognizant professional standards, equity considerations, commitment to implementation of plans, etc.).
- Demand and fund monitoring and evaluation of adaptation interventions as “normal” practice (including investment in capacity [building], especially in smaller communities).
- Fund the identification, development, tracking, and regular updates of purpose-driven indicators and metrics of adaptation progress and success.

Purpose

- Demand (by way of calls for proposals or through funding criteria) that funded entities examine and address adaptation challenges in a holistic fashion.
- Convene funders (across and beyond government) to align priorities and funding streams around comprehensive approaches to resilient, equitable solutions.

People

- Institutionalize adaptation-related funding into mandated work streams to create funding reliability.
- Support smaller convenings and larger sectoral, regional, and national conferences to foster exchange, learning, and community building among adaptation professionals.
- Deliberately bring organizations together that do not yet regularly interact but that could fruitfully collaborate on specific adaptation challenges.
- Actively support the work and maintenance of professional and peer-learning networks (basic staff and technological support, regular get-togethers, development of solutions for network member-specific needs; cross-fertilization across sub-field networks).

Practice

- Model internal collaboration within your own entities, organizations, or agencies.
- Consider ways to work outside funding silos to account for real-life intersectionality (i.e., the interconnections and dependencies across sectors of society, which can result in more robust adaptation solutions when taken into account).
- Work with professional communications staff to improve communication of science discoveries and success stories of government-funded adaptation projects.
- Regularly engage evaluation experts to synthesize and assess outcomes of government-funded projects.
- Share results with the media and existing networks to accelerate spreading of good ideas, insights, and approaches to adaptation challenges.
- Support professional training within and outside your agency as well as agency-funded efforts beyond government; where you see shortcomings in practice (e.g., social equity, systems thinking, climate change, communication), require deepening of skills and knowledge.

- Deliberately invest in think tanks, research institutions, and other entrepreneurial entities for a continuous flow of novel solutions.
- Invest in R&D to ensure that promising new ideas are supported in becoming established as common adaptation practice.
- Establish clear funding criteria in line with needed cultural shifts.
- Actively engage funded entities on how to align projects more closely with shared values.
- Support critical assessments of practice to establish a cadre of exemplary models and best practices for a range of sectors, including transparent analysis of processes and outcomes.
- In project and program funding, encourage or demand multi- and transdisciplinary, cross-sectoral collaboration.
- Support the move toward joint adaptation action (not just assessment or planning).
- Establish longer-term funding streams for maintaining, evaluating, updating, and improving tools and resources given that short funding cycles do not allow for maintenance and updating.
- Commit to building and supporting not just adaptive but also transformative capacities among yourselves and others.
- Invest in innovation and transformations research.
- Urge or require skilled science–practice collaborations in adaptation- and transformation-related research and application.
- Support boundary organizations and skill building for connecting, translating, and negotiating across differences in adaptation work.

Appendix C5: Specific Recommendations for Philanthropic Funders

Below, we provide specific recommendations for philanthropic funders. Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the main report.

Pillars

- Convene philanthropic leaders (CEOs, program leads, Board members) to explore opportunities for pooled, coordinated, complementary, and sustained funding streams to fill gaps (e.g., rural/urban divide, lack of federal support); expand impact; avoid duplicative, maladaptive, inefficient use of resources; and establish funding requirements to meet network goals.
- Track and evaluate funding achievements and gaps over time.
- Maintain “open door” to new funders.
- Invest in “backbone” organizations that can support large-scale systemic changes in certain areas of resilience building.
- Support the development of innovative financing approaches within sectors and as private-public-civic partnerships.
- Support advocacy for changed/increased funding in alignment with shared values, actions, and goals via funding requirements that demand or recommend collaboration across sectors, disciplines, and funding programs.
- Support policy-advocacy work in line with shared goals/values.
- Financially support the establishment of policy libraries to enable wider sharing.
- Support efforts to spread adaptation best practices to more places (not only demanding that everything has to be totally novel).
- Support grantee convenings and other ways of learning among grantees.
- Require and support meaningful, ongoing monitoring and evaluation of funded projects (processes and outcomes) to foster a learning culture among grantees.
- Adopt skilled evaluation and learning approaches within philanthropic organizations (both internal and external/independent evaluation).
- Coordinate within your organizations and across programs to align and coordinate mission-driven funding.

Purpose

- Demand (by way of calls for proposals or through funding criteria) that grantees examine and address adaptation challenges in a holistic fashion.
- Convene funders to align priorities and funding streams around resilience-building challenges and comprehensive approaches to resilient, equitable solutions.

People

- Support smaller convenings and larger sectoral, regional, and national conferences to foster exchange, learning, and community building for the adaptation field.
- Deliberately bring organizations together that do not yet regularly interact but that could fruitfully collaborate on specific adaptation challenges.
- When it comes to building the adaptation field, consider yourselves “in it for the long haul” rather than change funding priorities every few years.
- Actively support the work and maintenance of professional and peer-learning networks (via basic staff and technological support; regular get-togethers; development of solutions for network member-specific needs; and cross-fertilization across sub-field networks).
- Establish a funders network for adaptation and resilience building.

Practice

- Model internal collaboration within your own entities, and organizations.
- Consider ways to work outside funding silos to account for real-life intersectionality (i.e., the interconnections and dependencies across sectors of society, which can result in more-robust adaptation solutions when taken into account).
- Engage communications experts to work with grantees to improve quality, focus, and frequency of communication of grantees’ successful projects.
- Work with traditional media and networks to support the distribution and communication of adaptation success stories both within and outside the field.

- Regularly engage evaluation experts to synthesize and assess outcomes of funded project, then share results with the media and existing networks to accelerate spreading of good ideas, insights, and approaches.
- Fund the garnering of relevant best practices/ lessons from other fields.
- Support professional training within and outside your organizations and in all sectors; where you see shortcomings in practice (e.g., social equity, systems thinking, climate change, communication), require deepening of skills and knowledge.
- Convene influencers from a range of fields to augment, affirm, and expand on what a desirable future under significant climate change could look like, and identify shared values.
- Support the convening of public forums where it is safe and welcome to have deep conversations about deep-seated societal challenges and transformative solutions.
- Continue and/or expand support for community-based, grassroots and grasstops organizations that foster and advance progressive values and a deeper engagement with the need for transformative change (social relations, justice, human–nature relationship, economic system, climate change, etc.).
- Establish clear funding criteria in line with needed cultural shifts.
- Actively engage grantees around how to align projects more closely with shared values.
- Support critical assessments of practice to establish a cadre of exemplary models and best practices for a range of sectors, including transparent analysis of processes and outcomes.
- In projects and program funding, encourage or demand multi- and transdisciplinary, cross-sectoral collaboration.
- Urge and support the move toward joint adaptive action (not just assessment or planning).
- Fund systems for maintaining, evaluating, updating, and improving tools and resources over time given that short funding cycles do not support maintenance and updating.
- Commit to building and supporting not just adaptive but also transformative capacities among yourselves and others; invest in innovation and transformations research.
- Urge or require skilled science–practice collaborations in adaptation- and transformation-related research and application.
- Support boundary organizations and skill building for connecting, translating, and negotiating across differences in adaptation work.

Appendix C6: Specific Recommendations for Private Funders

Below, we provide specific recommendations for private funders. Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the main report.

Pillars

- Establish investment criteria that demand or recommend collaboration across sectors and disciplines.
- Support the development of innovative financing approaches within sectors and as private-public-civic partnerships.
- Regularly convene investors and those implementing funded solutions to accelerate and deepen learning about changing funding needs and challenges.
- Collaborate with researchers and practitioners to establish measures of adaptation success and progress that are linked to shared goals (and/or locally adapted versions of shared goals).
- Foster a learning culture across your organization.

Purpose

- Establish investment/funding criteria that prioritize adaptive solutions to climate change problems in a holistic fashion.
- Seek out philanthropic and government funders to explore joint funding solutions to adaptation challenges and to align priorities and funding streams around comprehensive approaches to resilient, equitable solutions.

People

- Establish an investor network for adaptation and resilience building.
- Deliberately bring organizations together that do not yet regularly interact but that could fruitfully collaborate on funding and implementing specific adaptation challenges.

Practice

- Establish clear investment criteria in line with needed cultural shifts.
- Foster education and professional development of financial experts in the intricacies of adaptation and resilience building.
- Deliberately invest in think tanks, research institutions, and other entrepreneurial entities for a continuous flow of novel solutions.
- Invest in R&D to ensure that promising new ideas are supported in becoming established as common adaptation practice.
- Support critical assessments of practice to establish a cadre of exemplary models and best practices for a range of sectors, including transparent analysis of processes and outcomes.
- Encourage or demand multi- and transdisciplinary, cross-sectoral collaboration in implementing investment ideas.
- Invest in innovation and transformations research.
- Urge or require skilled science–practice collaborations in adaptation- and transformation-related research and application.

Appendix C7: Specific Recommendations for Foundation and Government Program Managers

Below, we provide specific recommendations for program managers in foundations or government agencies. Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the main report.

Purpose

- Relentlessly communicate the scope and urgency of climate change, as well as the efficacy of solutions, in your own organizations, with grantees, and in other arenas.
- Build awareness of the need for transformative changes, given the pace, scope, and speed of climate change.

People

- Actively engage grantees and funded entities to work toward improved, holistic, socially just adaptation practice.
- Organize convenings that not only bring like organizations together, but also build connections among organizations that do not usually collaborate.
- Serve as a thought leader to “backbone” organizations that can support large-scale, systemic changes in certain areas of resilience building.

Practice

- Foster coordination across programs within your own organizations and agencies.
- Facilitate connections across silos, organizations, differences, disciplines, agencies, etc. to address adaptation challenges holistically.
- Reach beyond your program, your organization, and your sector to work with colleagues to identify shared goals around field building.
- Educate yourself and others about evidence-based strategies in all aspects of socially just resilience building.
- Educate yourself and others in evidence-based strategies that create greater impact, such as collective impact, transformation, transdisciplinarity, and systems change approaches.
- Invest in trainings and train-the-trainers to scale out best practices.
- Focus innovations investment in areas that pose barriers to adaptation, so as to facilitate acceleration of practice.
- Learn about and support transformative capacity-building efforts.

Pillars

- Freely share policy documents, model ordinances, plans, and programmatic achievements to facilitate spreading of effective or innovative adaptation policies and approaches.

Appendix C8: Specific Recommendations for Local Elected Officials and Civic Leaders

Below, we provide specific recommendations for local elected officials and civic leaders. Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the main report.

Pillars

- Prioritize local actions that mitigate, adapt, and foster social cohesion.
- Avoid actions that make climate change worse, make adaptation harder, or disproportionately burden historically neglected populations.
- Mainstream equity into all elements of local policy-making and decision making.
- Move toward greater emphasis on local pre-disaster hazard mitigation funding; incentivize proactive resilience building; and integrate resilience thinking into new and redevelopment efforts.
- Establish requirements that all local post-disaster rebuilding, infrastructure upgrades, or new infrastructure and development use climate-cognizant standards for development, buildings, and materials standards; and are not maladaptive (e.g., increase greenhouse gas emissions); consider equity.
- Clarify risk ownership, stewardship principles for public trust, and future liabilities in local policies and legal documents.
- Lead on and demand intra-organizational/intra-jurisdictional and cross-jurisdictional/cross-sectoral budget integration and funding and policy alignment.
- Recognize the need for transformative change.
- Set goals that are not just incremental, but ambitious and transformative.
- Advocate at the state and regional levels for scaling up best practices proven at the local level (based on accumulated evidence of what achieves goals effectively, efficiently, and equitably).
- Work within regional collaboratives to address adaptation consistently and efficiently; explore and support ways to strengthen policy impact (giving plans “teeth”) across local jurisdictions (e.g., through common planning standards, joint funding mechanisms, inter-jurisdictional MOUs, shared powers of authority).

Purpose

- Relentlessly communicate the scope and urgency of climate change, as well as the efficacy of solutions, in your own organizations, with grantees, and in other arenas.
- Build awareness of the need for transformative changes, given the pace, scope, and speed of climate change.

People

- Seek out existing networks or develop new networks of local leaders like yourselves to build up political momentum for urgent climate action.
- Use networks for peer learning and to rapidly spread local pilot projects to other local jurisdictions.

Practice

- Launch and participate in local visioning efforts and dialogues with community members about what a desired future for the community/region might look like under climate change.
- Become skilled in facilitating and participating in meaningful, difficult dialogues about value-laden choices that must be made.
- Foster progressive values and/or alignment of values across the political spectrum around common goals.
- Conduct, offer, and invest in professional development within your own organizations.
- Foster a learning culture within your organizations.
- Urge and support collaboration with academia and educators on developing practice-centered curricula so as to build a well-trained local workforce for adaptation.
- Reach out to and work closely with well-networked, capable subject-matter experts, who are also skilled in change management and collective impact facilitation, to build needed skills and capacities in all sectors of society.

Appendix C9: Specific Recommendations for Private Utilities and Businesses

Below, we provide specific recommendations for private utilities and businesses. Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the main report.

Purpose

- Recognize the urgent challenge posed by climate change to your ability to reliably deliver products and services.
- Relentlessly communicate the scope and urgency of climate change, as well as the efficacy of solutions you can implement together, in your own organizations; with your rate payers, clients, and suppliers; and in other arenas.

Pillars

- As private utilities reliant on regulated funding by rate payers, you play a critical role in funding infrastructure for communities and entire regions. Partner with local and state governments and philanthropic funders to identify high-priority adaptation needs and a shared action agenda toward integrated, holistic, socially just adaptive solutions.
- Ensure internal policy consistency across branches of your businesses/utilities (e.g., pursuit of greenhouse gas reduction goals and reliable, well-adapted service/product delivery; resilience and sustainability).
- Set ambitious targets for mitigation and adaptation.
- Ensure socially just pricing policies.

People

- Join existing regional adaptation collaboratives, professional societies, or sector-specific networks to rapidly increase in-house expertise and connections to external partners and experts on socially equitable resilience-building efforts.

Practice

- Consider upstream and downstream implications of supply-chain and service/product delivery disruptions.
- Foster a learning culture within your organizations.

Appendix C10: Specific Recommendations for Procurement Officers, Financial Staff, and Experts

Below, we provide specific recommendations for procurement officers, financial staff, and experts. Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the main report.

Purpose

- Educate yourself about the urgent challenge of climate change and its implications for the ability to reliably deliver government services.
- Educate yourself about emerging creative and innovative funding models for adaptation.

Pillars

- Explore where procurement practices pose barriers to the adoption of innovative adaptation practices.
- Explore innovative financing models.
- Conduct or collaborate on studies that help make the economic case for proactive climate adaptation and share the results widely to policymakers and practitioners.
- Work with adaptation professionals (practitioners) to field-test and refine funding approaches.
- Ensure existing and novel funding mechanisms are accessible to low-capacity, low-income communities.
- Collaborate with practitioners and researchers to establish measures of adaptation success and progress that are linked to shared goals (and/or locally adapted versions of shared goals).

People

- Join existing professional societies or sector-specific networks to rapidly increase in-house expertise and connections to external partners and experts on socially equitable resilience-building efforts.
- Work with sector-specific or cross-cutting adaptation/resilience networks to identify and overcome internal barriers to adaptation funding and financing.

Practice

- Work with resilience, sustainability, and other practitioners to explore steps to break down funding silos that prevent effective collaboration.
- Foster a learning culture across your organizations.

Appendix C11: Specific Recommendations for Adaptation Practitioners

Below, we provide specific recommendations for adaptation practitioners (planners, engineers, utility managers, social/health service providers, natural resource managers, etc.). Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the main report.

People

- First and foremost, approach adaptation not as a technical problem, but as a matter of building relationships across silos, organizations, disciplines, sectors, and all manner of difference so that it can be addressed systemically and holistically, meeting the needs, and building on the skills, knowledge, and resources of all involved.
- If you are not already part of a peer-learning network, join one; if there isn't one, create one that focuses on your adaptation-related needs.
- Collaborate with academics and investors to establish measures of adaptation success and progress that are linked to shared goals (and/or locally adapted versions of shared goals).
- Reach out to students and educators (high school-level and higher) to share professional journeys and the need for highly skilled adaptation professionals in different sectors and fields.

Practice

- Seek out information and training to deepen understanding of climate science, including about the scale/pace of the problem; environmental systems; relevant mitigation and adaptation solutions, tools and supportive capacities; social justice and equity issues; and transformational adaptation.
- Commit to the highest ethical and professional standards for adaptation professionals.
- Establish and use a “whole-system” or “whole-community” approach as standard practice (i.e., approach all work from a systems perspective, conduct holistic assessments, collaborate across departments, organizations, and jurisdictions).
- On a voluntary or mandatory basis, bring “the whole system” into the room to design holistic adaptive solutions.
- If collaborations are new, build in sufficient time for collaborators to get to know each other, develop a shared language, and identify shared goals.
- Learn about empowerment and shared leadership.
- Mainstream equity into all elements of decision making.
- Partner with and jointly identify realistic and appropriate roles for the private sector in adaptation action.

- Work with academia and educators on developing practice-centered curricula.
- Conduct, offer, and invest in professional development.
- Reach out to and work closely with capable subject-matter experts, who are also skilled in change management, to build needed skills and capacities in all sectors of society.
- Foster a learning culture across your organizations (i.e., establish ongoing learning and evaluation practices to enable adaptive, improved practices).
- Educate yourself and/or seek expertise in transformational change.

Purpose

- Relentlessly communicate the scope and urgency of climate change, as well as the efficacy of solutions, in your own organizations, with grantees, and in other arenas.
- Identify shared or overlapping problems (with or without climate change) that can be solved more effectively together with peers and those in other sectors, departments, or agencies; ensure that problems are solved in ways that close the resilience gap (mitigate, adapt, and foster social cohesion).
- Self-organize in existing professional societies or within societies of adaptation professionals around solving common problems.

Pillars

- Seek the highest possible leverage point to make far-reaching adaptation interventions in existing systems and to establish proven local practices as widely as possible.
- Determine primary and secondary near- and long-term costs and benefits for your projects and capacity-building efforts, and regularly articulate those needs to government and philanthropic funders.
- Elicit expertise to make, and then advocate, the economic case for proactive adaptation solutions to decision makers.
- Freely share policy documents, model ordinances, and plans to facilitate spreading of effective or innovative adaptation policies.

Appendix C12: Specific Recommendations for Adaptation Service Providers

Below, we provide specific recommendations for adaptation service providers (in non-profits, government, academia, and consultancies). Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the main report.

People

- First and foremost, approach adaptation not as a technical problem, but as a matter of building relationships across silos, organizations, disciplines, sectors, and all manner of difference so that it can be addressed systemically and holistically, meeting the needs, and building on the skills, knowledge, and resources of all involved.
- If you are not already part of a peer-learning network, join one; if there isn't one, create one that focuses on your adaptation-related needs.
- Collaborate with academics and investors to establish measures of adaptation success and progress that are linked to shared goals (and/or locally adapted versions of shared goals).
- Use your networks and collaboratives to identify, promote, and enact shared values, goals, and actions around adaptation.
- Seek connections to experts and partners that address adaptation challenges in a systemic, holistic, and socially just fashion.
- In the context of specific place-based or sector-focused projects or programs, meet other adaptation service providers and explore complementary skills and capacities to establish collaborative ties and overcome competitive (and sometimes hostile) sentiments.
- Use your influence and facilitate processes that help diverse communities identify and move toward shared goals.
- Seek and/or offer a range of skill-building opportunities to develop greater competency in climate science, social equity and climate justice, and transformative capacities.
- Foster approaches that help spread, scale up, deepen, integrate, accelerate, and support learning about adaptation practices and their effectiveness.

Practice

- Commit to the highest ethical and professional standards for adaptation professionals.
- Regularly assess changing needs of adaptation practitioners.
- Self-assess or have externally evaluated/validated what is considered best practice, and distill lessons from shortcomings and failures.
- Make the evidence base for best practices more transparent and quickly accessible through existing platforms and networks.
- Facilitate access to high-quality information.
- Collaborate on clearinghouses to minimize duplication and confusion.
- Wherever you enter the adaptation space, learn about local adaptation work already underway (e.g., led by local governments, non-profits, and grassroots organizations).

Pillars

- Establish well-organized, searchable libraries of tools, information, and policies at widely known clearinghouses to enable easy sharing across sectors, sub-fields, and the field.
- Advocate for policy change at higher levels to scale up and spread promising or established best-practice approaches (based on accumulated evidence of what achieves goals effectively, efficiently, and equitably).
- Recognize the need for transformative change.
- Help clients set goals that are not just incremental, but ambitious and transformative.

Purpose

- Become a stronger voice for the urgency of climate change as well as for equitable resilience solutions.
- Self-organize in existing professional societies or within societies of adaptation professionals around solving common problems.

Appendix C13: Specific Recommendations for Adaptation Network Conveners

Below, we provide specific recommendations for adaptation network conveners. Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the main report.

People

- First and foremost, approach adaptation not as a technical problem, but as a matter of building relationships across silos, organizations, disciplines, sectors, and all manner of difference so that it can be addressed systemically and holistically, meeting the needs, and building on the skills, knowledge, and resources of all involved.
- Form, join or maintain communities of practice and increase diversity within them.
- Apply best practices in effective networking to bring the greatest value to/meet the needs of the members of your networks.
- Ensure there is connection between individual sub-field networks and the larger field.
- Within your networks, foster approaches that help spread, scale up, deepen, integrate, accelerate and support learning about adaptation practices and their effectiveness.
- Foster a shared identity as adaptation professionals within your network.

Practice

- Use your influence and facilitate processes that help diverse communities identify and move toward shared goals.
- Use your networks and collaboratives to identify, promote, and enact shared values, goals, and actions.
- Seek and/or offer a range of skill-building opportunities to enhance cultural competency, literacy in climate change and transformative capacities.

Purpose

- Become a stronger voice for the urgency of climate change as well as for equitable resilience solutions.
- Identify shared or overlapping problems (with or without climate change) with peers and those in other sectors that can be solved more effectively together and ensure that problems are solved in ways that close the resilience gap (mitigate, adapt and foster social cohesion).

Pillars

- Help members of your network identify the highest possible leverage points to make far-reaching adaptation interventions in existing systems and to establish proven local practices as widely as possible.
- Advocate for policy change at higher levels (on behalf of your network members) to scale up and spread promising or established best-practice approaches (based on accumulated evidence of what achieves goals effectively, efficiently, and equitably).
- Elicit expertise to make, and then advocate, the economic case for proactive adaptation solutions to decision makers.
- Recognize the need for transformative change.

Appendix C14: Specific Recommendations for Community-based Organizations, Grassroots Advocates, and Climate Justice Movement Leaders and Participants

Below, we provide specific recommendations for community-based organizations, grassroots advocates, and climate justice movement leaders and participants. Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the main report.

People

- Form, join, or maintain adaptation and resilience-focused peer-learning and collaborative networks (across sectors, beyond local activists).
- Invite adaptation practitioners to know your work.

Practice

- Share your ideas and approaches with practitioners and professional networks to help your work become part of the mainstream body of adaptation knowledge and practice.
- Show how you practice adaptation and resilience building in your communities.
- As participants and leaders in the climate justice movement, influence the mainstream adaptation field's focus and emphasis on social equity and justice.
- Collaborate with other community organizations, networks and practitioners to expand your work to other geographies and constituents.
- Collaborate with educators/academics/students, adaptation practitioners and professional networks to capture and share the work you do, your successes, as well as the need for higher-level policy change to scale up your local successes.
- Seek out opportunities to learn about and build capacities for transformative change.

Purpose

- Ask how climate change affects the problems you and/or your organization are centrally addressing and how solutions to your challenges can be made more robust to climate disruption.
- To those unfamiliar with your work, describe your work in terms of adaptation and resilience.
- Become or continue to serve as a strong voice for the urgency of climate change as well as for equitable resilience solutions.
- Continue to insist on transformational change to address the root causes of long-standing societal problems and their impacts on the environment and climate.

Pillars

- Seek grants specific to adaptation, helping funders see the connections between your work (e.g., on health, housing, justice, crime, employment) and climate change.
- Continue fostering (unusual) alliances for effective policy advocacy.

Appendix C15: Specific Recommendations for Academics and Other Researchers

Below, we provide specific recommendations for academics and other researchers. Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the main report.

People

- First and foremost, approach adaptation not as a scientific/technical problem, but as a matter of building relationships across disciplines, organizations, silos, sectors, and all manner of difference so that it can be addressed systemically and holistically, meeting the needs, and building on the skills, knowledge, and resources of all involved.
- Seek out connections and collaborators in relevant practice arenas to link more actively to the adaptation-practice field.
- Invite adaptation professionals to classes to introduce students to potential careers in the adaptation field.
- Join regional and national conferences of adaptation practitioners and invite professionals to adaptation- and transformation-focused scientific conferences to actively foster academic–practice interactions.
- Increase diversity of all kinds within academia to include and empower often-excluded voices, to enrich the education of all students, and to enhance the professional preparation of a resilience-conscious work force.

Practice

- Place stronger focus on solutions-oriented research.
- Become familiar with and embark on the life-long career path of transdisciplinary and transformational science.
- Synthesize (and periodically update) and make widely accessible what is considered best available and most robust scientific understanding of adaptation and transformation science and practice.
- Collaborate with practitioners to distill core principles, skills, and best practices from existing practice, and share widely through peer-learning networks and professional societies.
- Develop practice-oriented curricula throughout the educational ladder.
- Work closely with practitioners, particularly in graduate-level and professional training.
- Share insights from social equity- and justice-

focused research more effectively with adaptation practitioners, professionals, the media, and policymakers.

- Reach out to under-resourced, low-capacity communities to inquire how students and researchers can assist them with recording their stories, assessing and sharing best practices, and telling stories of what comprehensive resilience building looks like.

Purpose

- Rapidly advance understanding of societal transformation processes.
- Communicate the need for transformational change to address the root causes of long-standing societal problems and their impacts on the environment and climate.
- Seek out training in how to more effectively communicate the urgency of climate change as well as the efficacy of solutions (mitigation, adaptation, and social cohesion) to close the resilience gap.

Pillars

- Explore innovative financing models and conduct studies that help make the economic case for proactive adaptation; then synthesize and share them widely within and beyond academic outlets.
- Work with practitioners to field-test and refine findings from financial/economic studies.
- Collaborate with practitioners, investors, and others to establish measures of adaptation success and progress that are linked to shared goals (and/or locally adapted versions of shared goals).
- Advocate for investment in transformational science with government and philanthropic funders.
- Translate scientific findings into policy briefs and share them strategically with policymakers and their staff at relevant levels to help inform effective or innovative adaptation policies.
- Work with standard-setting organizations to develop professional, building, material, and other standards to foster resilience in all sectors and areas of society.

Appendix C16: Specific Recommendations for Communicators

Below, we provide specific recommendations for communicators. Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the main report.

Purpose

- Vastly improve communication of the urgency of the problem (by balancing with messages of efficacy).
- Move away from mere disaster reporting and commit instead to solution-oriented communication (not just problems and risks).
- Tell success stories of communities averting threats, being safer due to the full range of climate actions taken, illustrating in real places what adaptation success and maintained or increased human well-being looks like.
- Share stories of persevering through challenge, stories of resilience, stories of greater equity, and stories of renewal after hardship.

People

- Hire dedicated communications staff, experts, and organizations to help spread a common language for key concepts.
- Work with researchers to translate scientific work into valuable, widely understood communications for the public (e.g., by establishing what constitutes effective [shared] language(s) for different audiences).
- Tell and widely share stories of different actors uniting around common problems and solutions.
- Assist networks with effective internal communication and with external communication to those outside the networks.
- Use networks to share and elicit knowledge, ideas, and practices.

Practice

- Tell stories of successful (and unusual, innovative) collaborations to solve adaptation challenges within and beyond the field (stories of “silobusting”).
- Tell stories of maverick or outside-the-box solutions.
- Report on new discoveries, ideas, and solutions.
- Share stories of communities arriving at shared goals. Goals become shared when they are widely known and made resonant with different audiences.

- Tell empathic stories of communities successfully making big and difficult changes.
- Help people frame and understand the difficulties and benefits of adaptation and transformation (along a pathway with many uncertainties and unknowns).
- Improve your own skill in communicating issues related to social justice.
- Insist on being integral to projects and programs from the start, and support internal and external communication.
- Facilitate conversations in organizations, communities, sectors, and elsewhere that honestly acknowledge the depth of change required to close the resilience gap, including needed cultural or political shifts and the legacies of social injustice that must be addressed.
- Effectively integrate the translation of scientific concepts, findings, and language in values-based communication.
- Tell narratives of society grappling with deep cultural change.
- Share success stories of people coming together, across values differences, around common goals.
- Develop narratives of change (adaptive and transformative) to assist in the cultural shift to adaptive and dynamic cultural norms.
- Seek out trainings (basic or refresher) in best communications practices; become skilled in the translation of scientific findings and in connecting across sectors, disciplines, cultural and political differences; effectively communicate the urgency of climate change.
- Seek out knowledge (basic or constantly advancing) on evidence-based communication practices to improve communication practice. Practice values-first communication strategies.
- Develop greater skill in dialogue facilitation (rather than just messaging).

Pillars

- Share stories of successful funding approaches.
- Share stories of innovative policy approaches.

Appendix C17: Specific Recommendations for Adaptation-Specific Professional Societies

Below, we provide specific recommendations for adaptation-specific professional societies. Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the main report.

People

- First and foremost, approach adaptation not as a technical problem, but as a matter of building relationships across silos, organizations, disciplines, sectors, and all manner of difference so that it can be addressed systemically and holistically, meeting the needs, and building on the skills, knowledge, and resources of all involved.
- Foster community, shared values, common purpose, highest ethical and professional standards, positive social and professional relations, and collaboration on field-building initiatives.
- Form, join, or maintain communities of practice, and increase diversity within them.
- Seek collaboration with other (related, relevant) professional societies for exchange, collaboration, and joint efforts or projects.
- Foster a shared identity as adaptation professionals within your societies.

Practice

- Create credible adaptation certification programs, training programs, and partnerships.
- Further elevate awards and professional recognition.
- Reach out to societies outside of the field for collaboration.
- Look to other, more-established fields for lessons and best practice in field development.

- Share core ideas with other professional societies, and illustrate how they are effective.
- Actively maintain ongoing relations (on boards, committees, joint projects or initiatives) with thought leaders, researchers, private-sector innovators, and youth for emerging ideas, knowledge updates, and fresh approaches and thinking.
- Engage with each other over a sustained period of time to get acquainted, learn from each other, find common ground, and identify shared actions (such as capacity building).
- Regularly review, evaluate, and update professional skills and standards and establish regular communication with educators and trainers.

Purpose

- Become a stronger voice for the urgency of climate change as well as for equitable resilience solutions.

Pillars

- Help members of your network identify the highest possible leverage points to make far-reaching adaptation interventions in existing systems and to establish proven local practices as widely as possible.
- Advocate—as law permits—for resilience and adaptation policy at federal, state, and regional levels.
- Recognize the need for transformative change.

Appendix C18: Specific Recommendations for Other Professional Societies

Below, we provide specific recommendations for other professional societies. Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the main report.

Purpose

- Survey your members for common climate-sensitive/resilience problems and enable peer-learning and exchange.

People

- Foster adaptation communities within your associations.
- Co-host sessions or conferences with adaptation-specific professional societies and scientific experts on adaptation/transformation.

Practice

- Share core ideas from within your field with adaptation-focused professional societies, and illustrate the effectiveness of your approaches.
- Establish a new information-sharing stream (within newsletters, via webinars, and at conferences) to share best (equitable) adaptation and resilience-building practices with your members.
- Engage with each other over a sustained period of time to get acquainted, learn from each other, find common ground, identify shared actions (such as capacity building).
- Explore overlap and the need for adopting adaptation practice and thinking into existing professional activities.

- Review and revise professional standards and ethical guidelines to reflect recognition and adoption of shared values that assist successful adaptation and systemic transformation.
- Conduct, offer, and invest in professional development.
- Reach out to and work closely with well-networked, capable subject-matter experts to build needed skills and capacities in all sectors of society.
- Work with academia and educators on developing practice-centered curricula.
- Regularly review, evaluate, and update professional skills and standards, and establish regular communication with educators and trainers.

Pillars

- Join other professional societies, including adaptation-specific professional societies, to articulate the need for enhanced or redirected funding streams and policy changes.
- Advocate—as law permits—for resilience and adaptation policy at federal, state, and regional levels.

Appendix C19: Specific Recommendations for the Media

Below, we provide specific recommendations for the media. Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the main report.

Practice

- Launch an “America adapts!” series of news stories (focused on a wide variety of sectors, regions, sizes of communities, businesses, etc.) that highlights novel ideas and best practices, and that illustrates effective use of science, inclusive planning, and decision making for equitable outcomes.
- Tell stories of successful (and unusual, innovative) collaborations to solve adaptation challenges within and beyond the field (stories of “silo-busting”).
- Report on new discoveries, ideas, and solutions.
- Tell stories of maverick or outside-the-box solutions.
- Communicate widely what is insufficient and contrast that with more comprehensive approaches.
- Improve your own skill in communicating issues related to social justice.

Purpose

- Vastly improve communication of the urgency of the climate problem (by balancing with messages of efficacy).
- Move away from mere disaster reporting and commit instead to solution-oriented communication (not just problems and risks).

- Tell success stories of communities averting threats, being safer due to the full range of climate actions taken, illustrating in real places what adaptation success and maintained or increased human well-being looks like.
- Share stories of persevering through challenge, stories of resilience, stories of greater equity, and stories of renewal after hardship.

People

- Use mainstream, conventional, and non-traditional social media and other networks to vastly increase climate-related reporting.
- Ensure reporters are skilled and current in effective climate change communication practice.

Pillars

- Consider reporting climate change not from the environment or science desk, but as a matter of economic, social, health, policy, and security news.
- Consider reporting on funding shortfalls for “making/keeping America safe.”
- Consider reporting on bipartisan federal and state or non-partisan local policy advances.

Appendix C20: Specific Recommendations for Other Organizations and Practitioners

Below, we provide specific recommendations for other organizations and practitioners. Recommendations are organized by the 4Ps of the field, presented in order of priority suggested for this group. They are consistent with, but in some cases more detailed than, the synthesis of recommendations offered in the main report.

Purpose

- Educate yourself about the urgent challenge of climate change and its implications for the ability to reliably deliver government services.
- Identify the ways in which your interests, problems, and concerns are climate-sensitive, and seek out and enable peer learning and exchange.

People

- Reach out to adaptation professionals to find relevant peer or expert networks, research institutions, federal and state agencies, and adaptation-related professional societies to identify entry points into climate change and adaptation expertise.

Practice

- Utility leaders and other service providers (e.g., public health) should explore climate sensitivities and your ability to deliver on your current goals and targets.
- Examine upstream and downstream, local/regional, and long-distance interconnections with other utilities, entities, suppliers, and sectors that increase the resilience of critical services, sectors, and communities.
- Share proven skills and tools with adaptation professionals.
- Use your outsider perspective to offer new and different views, and propose innovative solutions to adaptation professionals.

Pillars

- International and national standard-setting organizations should collaborate across organizations, academia, and practitioners to establish and regularly update relevant standards.
- Explore possibilities of creating co-financing to solve multiple problems at once.

THE
KRESGE
FOUNDATION

kresge.org



susannemoser.com



climateresilienceconsulting.com



427mt.com