# CLIMATE ADAPTATION FORUM

### Building Social Capital for Climate Resilient Communities

June 6, 2024 Foley Hoag LLP, Boston and Streaming on Zoom





## FORUM CO-CHAIRS

### **Nasser Brahim**

Senior Climate Resiliency Specialist Woods Hole Group

### **Alex Papali**

Director of Regional Economies Center for Economic Democracy



Quarterly Climate Adaptation Forum | June 6, 2024



### **PROGRAM INTRODUCTION**

# Alex Papali

### Forum Co-Chair

### Director of Regional Economies Center for Economic Democracy



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The Critical Role of Social Capital and Social Infrastructure in Resilience

# **Dr. Daniel Aldrich**

Professor, Political Science and Public Policy Director of the Resilience Studies Program Co-Director of the Global Resilience Institute Northeastern University



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Why Social Ties and Social Infrastructure Are Critical in Shocks and Disasters Daniel P. Aldrich daniel.aldrich@gmail.com Twitter/X @danielpaldrich





# #EveryKitShouldHaveLB Prepare an Emergency Kit for your home, work, and car. FOOD



### Trust, neighbors, networks

government representative, non governmental agency, or authority figure



### Exit vs. Voice





### **Collective Action**





# Informal Insurance

### Evacuation

#### Displacement from Hurricane Irma

#### September 4, 2017



September 6, 2017



September 8, 2017









### Survival not well correlated with height











government representative, non governmental agency, or authority figure



### Theories of Survival

### Social Networks Critical in Survival



CITY	IMMEDIATE CONDITIONS ON 3/2011	2 YEARS AFTER DISASTERS	3 YEARS AFTER DISASTERS	DIFFERENCE IN RECOVERY
SLOW RECOVERY TIME				
Namie	33	49	49	16
Futaba	29	46	48	18
Okuma	32	50	51	19
INTERMEDIATE RECOVERY TIME				
Minamisoma	35	74	75	40
Shinchi	41	75	82	41
Watari	52	94	96	47
FAST RECOVERY TIME				
Ofunato	29	89	99	70
Yamada	14	75	87	71
Rikuzentakata	23	92	96	73

#### Point Scale: 0 –100

**0** – All Systems Offline

**100 –** Everything Operational

### Recovery: Rebuilding Ishinomaki



### Recovery: Clean up in Sendai



### Coastal City



### Linking social capital critical in recovery





### Futaba town and Evacuation Orders



### Income and health do not affect K6 scores





# Social capital serves as a shield against mental illness







Tools for Building Resilience

### How to Survive and Thrive Before, During, and After a Crisis?



Horizontal ties critical in survival and mental health recovery



Vertical ties important during evacuation and rebuilding



These ties can be buit








#### Social infrastructure builds bridging ties







## Ibasho –social infrastructure - broadens networks and deepens efficacy



#### Communities with more social infrastructure saw fewer deaths





Average Treatment Effects of Policy Toolkits



#### Social Infrastructure Drives Economic Recovery



Type — Treatment - Counterfactual

#### Social Infrastructure Helps Population Recovery



Type — Treatment — Counterfactual

#### Lack of systematic data on social infrastructure



#### Uneven distribution of social infrastructure



Hard vs Soft Infrastructure Spending in Japan

Huge imbalance between physical and social infrastructure investment



Soft Tsunami Recovery Spending Hard Tsunami Prevention Spending

#### Conclusions

Societies fall back on building and rebuilding physical infrastructure but overlook social infrastructure



Social businesses, community spaces, parks, and places of worship are underappreciated for their ability to build bridging social infrastructure

Communities with better access to these gathering places have more resilience to shocks



Our societies underinvest in these facilities, distribute them unequally, and cut their funding first



SOCIAL CAPITAL IN POST-DISASTER RECOVERY



#### DANIEL P. ALDRICH

BLACK

# WAVE

HOW NETWORKS AND GOVERNANCE SHAPED JAPAN'S 3/11 DISASTERS

#### Healthy, Resilient, and Sustainable COMMUNITIES AFTER DISASTERS

Strategies, Opportunities, and Planning for Recovery

> INSTITUTE OF MEDICINE OF THE NATIONAL ACADEMIES

## From Loneliness to Connection: Why it matters

## Dr. Julianne Holt-Lunstad

Professor of Psychology and Neuroscience Brigham Young University



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## From Loneliness to Connection: Why it Matters.

#### JULIANNE HOLT-LUNSTAD, PHD

CLIMATE ADAPTATION FORUM,

BUILDING SOCIAL CAPITAL FOR CLIMATE RESILIENT COMMUNITIES.

JUNE 2024

#### HEALTH

## Dec 10, 2018 The Loneliness Epidemic

#### UK appoints loneliness minister to combat 'sad reality of modern life'

By Tamar Lapin

January 17, 2018 | 1:19pm | Updated



For a "United" Kingdom, they're pretty lonely.



A message from the U.S. Surgeon General

Japan Appoints "Loneliness" Minister to curb suicides

hy Siddhant

#### Our Epidemic of Loneliness and Isolation



The U.S. Surgeon General's Advisory on the Healing Effects of Social Connection and Community



SOUTH KOREA IS OFFERING TO PAY LONELY YOUNG PEOPLE \$500 PER MONTH TO RE-ENTER SOCIETY

### **Simultaneous Societal Crises**

LONELINESS

MENTAL HEALTH

POLITICAL

INEQUALITY

ENVIRONMENTAL

We are called to build a movement It will take all of us—individuals an health care and public health syste governments, faith organizations, a destigmatize loneliness and change It will require reimagining the struct a community to best support the d

Each of us can start now, in our ow connections and relationships. Our untapped resource — a source of hi can help us live healthier, more pro Answer that phone call from a frie without the distraction of your pho yourself authentically. The keys to extraordinarily powerful.

Eac

Loneliness and isolation represent well-being. But we have the power every day to strengthen our relatiefforts to rebuild social connectio together. We can build lives and o happer. And we can ensure our or than ever to take on the challenge

Our future depends on what we d

Vivek H. Murthy, M.D., M.B.A. 10th and 21st Surgeon General of the Vice Adminst, United States Public He

## Our Epidemic of Loneliness and Isolation



2023

The U.S. Surgeon General's Advisory on the Healing Effects of Social Connection and Community



n Matters

n family, friends, ne of what create a others and our ghborhoods, digital s. Social connection ur relationships reciated contributor munity safety, er, far too many or more ways, g to poor health

hough it is often illustrated isolation. Social isolation plat isolation is objectively erships, and infrequent bective internal state. I isolation or unmet need

dividual health and for premature death by connection can increase iterates a day.<sup>4</sup> In diwith increased risk and a 32% increased risk for anxiety. Il connection may namic costs to individuals, adults alone accounts ing annually, largely due for eover, beyond direct clated with lower academic h the U.S., stress-related in estimated \$154 billion ects individuals, but also bortant social determinant neluding (but not limited to) azards strike, community ment Ularce Jesso

imes? Social connection is food, water, and shelter, is been crucial to survival, is cally wired for social cally wired for social r to others, see Our distant needs. Living in isolation, fficult demands of survival one's chances of survival without engaging with nent), our biological need

helinass are a critical millions of Americans lack study found that when illy, only 39% of edults in important indicator opertion of Americans inpreximately haif of he highest rates among is indicate that longliness major health issues of is (14,7%), <sup>m</sup> and obesity premature death.

# What is the size of the problem and is it getting worse?



#### **Global Loneliness**

24%

of the global population felt "very lonely" or "fairly lonely" 19-29

Young people aged 19-29 reported higher loneliness than older adults aged 65+

#### Source: Meta/Gallup Global State of Connection Survey

#### In general, how lonely do you feel?

Male Female

All



#### % Lonely

0% 65%

Weighted percentages



## About **1 in 2** American adults report experiencing loneliness.

Source: OSG Advisory 2023; Cigna, 2020

## Social Contact





Source: American Time Use Survey; Kannan & Veazie, 2022

### Declines in Trust



Source: Social Capital Project analysis of General Social Survey, 1972-2018.

80

# 57% of Americans say they know only some or none of their neighbors

Source: Pew Research Center, 2019





1 in 3

•••

**Relationship stress** 

Absence of human connection

1 in 5

#### Google Trends: "how to make friends," search at an all-time high.

#### The Loneliness Epidemic in a Search Term

Google Trends show that interest in finding connection is at record highs.



"where to meet people" queries (US)

Source: Google Trends

Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A score of 0 means there was not enough data for this term.

# We are disconnected in a variety of ways

Social Disconnection may be at the root of several societal crises

### Loneliness and Climate Anxiety



 Higher loneliness and isolation associated with higher climate anxiety

 Connectedness to nature and connectedness to community protective



#### DEFINITIONS

• Social Isolation: Is objectively being alone, having few relationships, or infrequent social contact.

• Loneliness: Is subjectively feeling alone. The discrepancy between one's desired level of connection and one's actual level.



## The Three Vital Components of Social Connection

The extent to which an individual is socially connected depends on multiple factors, including:







#### Social Connection as a fundamental human need

Isolation=Objective lack Loneliness=biological signal/symptom Quality=Lack high quality/ nourishing



<u>This Photo</u> by Unknown Author is licensed under <u>CC BY-NC</u>

#### The Importance of Social Connection

Social Connection is a critical and underappreciated contributor to individual and population health, well-being, community safety, resilience, and prosperity.



PEOPLE WHO HAVE STRONG SOCIAL CONNECTIONS ARE HAPPIER, HEALTHIER, AND LIVE LONGER THAN THOSE WHO DON'T.

## Social connection is vital to individual health and functioning
### 3.4 million people, 70 studies

Loneliness Increases earlier death by

26%

Social Isolation Increases earlier death by 29%

Living Alone Increases earlier death by

32%

Source: Holt-Lunstad et al, 2015

### 308,849 people

## Social Connection -> 50% increased survival

Social Relationships and Mortality Risk: A Meta-analytic Review

Julianne Holt-Lunstad<sup>1</sup>, Timothy B. Smith<sup>2</sup>, J. Bradley Layton<sup>3</sup>

1 Department of Psychology, Brigham Young University, Provo, Utah, United States of America, 2 Department of Counseling Psychology, Brigham Young University, Provo, Utah, United States of America, 3 Department of Epidemiology, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, United States of America

#### The influence of Social Connection on Health



#### Physical Health

Cardiovascular Disease Stroke Type2 Diabetes



#### Mental & Behavioral Health Depression & Anxiety Suicidality Addiction



#### Cognitive Health

Cognitive decline Dementia Alzheimer's Disease



#### Economic Health

Billions in health care Spending Lower productivity More Absenteeism Lower quality of work

### Social Connection Is Vital to Community Thriving

#### **Population Health**



Ex: Spread of Illness Covid Response

#### Violence/Safety



21% reduction in murders20% reduction in car thefts(Stuart & Taylor, 2021)

#### Preparedness/Resilience



natural hazards, pandemics, safety threats.

### **Social Connected Communities**



# Combating loneliness and rebuilding connection is essential to our health and well-being.

surgeongeneral.gov/loneliness



Social connectedness as a key to transformative change

#### First Ever OSG Framework for a National Strategy

#### The Six Pillars to Advance Social Connection

#### Strengthen Social Infrastructure in Local Communities

Design the built environment to promote social connection

Establish and scale community connection programs

Invest in local institutions that bring people together Enact Pro-Connection Public Policies

Adopt a "Connection-in-All-Policies" approach

Advance policies that minimize harm from disconnection

Establish cross-departmental leadership at all levels of government

#### Mobilize the Health Sector

Train health care providers

Assess and support patients

Office of the U.S. Surgeon General

Expand public health surveillance and interventions

#### 6 Build a Culture

#### of Connection

Cultivate values of kindness, respect, service, and commitment to one another

Model connection values in positions of leadership and influence

Expand conversation on social connection in schools, workplaces, and communities

#### **4** Reform Digital

Environments

Require data transparency

Establish and implement safety standards

Support development of pro-connection technologies

Deepen Our Knowledge

5

Develop and coordinate a national research agenda

Accelerate research funding

Increase public awareness

#### Strengthen Social Infrastructure in Local Communities

Design the built environment to promote social connection

Establish and scale community connection programs

Invest in local institutions that bring people together

#### 2

#### Enact Pro-Connection Public Policies

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Expand conversation on social connection in schools, workplaces, and communities

#### **Our Epidemic of Loneliness and Isolation**

Key takeaways from the U.S. Surgeon General's Advisory on the Healing Effects of Social Connection and Community We all have a role to play in supporting social connection. Learn how you can take action by reading the advisory at: surgeongeneral.gov/connection

#### Humans are wired for social connection, but we've become more isolated over time

Social connection is as essential to our long-term survival as food and water. But today, loneliness is more widespread than other major health issues in the U.S. Our epidemic of loneliness and isolation is a major public health concern.

#### Social connection significantly improves the health and well-being of all individuals

Social connection reduces the risk of premature mortality. It can predict better physical and mental health outcomes and ease stress. Higher levels of connection can influence health-related behaviors. Educational and economic achievement are even impacted by connection.

#### Social connection is vital to community health and success

Socially connected communities enjoy better population-level health. They are more prepared for and resilient in the face — of disaster situations. They also experience greater economic prosperity and reduced levels of crime and violence.

### Together, we can advance social connection and improve our nation's public health

Fostering social connection requires that we each commit to our relationships and communities. Our actions today can create sustainable changes to society and bring better health to all.



Office of the U.S. Surgeon General



### Thank you!

Feel free to contact me for further questions: Julianne holt-lunstad@byu.edu

My website: <u>www.JulianneHolt-Lunstad.com</u> F4SC: <u>https://www.social-connection.org/</u> GILC: <u>https://www.gilc.global/</u>

### Community Building, Community Governance, and Climate Resilience

### Lydia Lowe

### Executive Director Chinatown Community Land Trust



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#### Chinatown Community Land Trust Community building, community governance, and resilience

#### Goals

- Resilience to Extreme Weather
- Reduce Energy Costs
- Model a Community Led Approach
- Expand Clean Energy
- Cut carbon emissions and support BERDO compliance



### **Environmental Justice**



Open Space 公共開放空間

Climate & Energy Resilience 氣候順應力





Climable (Fiscal sponsor for RUN team) Jeannie Ramey & Jen Stevenson

> Peregrine Energy Group Fran Cummings & John Snell

Clean Energy Solutions Dave Dayton & John Clune

> Prof. Carlos Rufin Suffolk University

CLU Community Labor United (Overseer) Lee Matsueda

> Clean Water Action Elizabeth Saunders

GreenRoots Chelsea María Belén Power, Roseann Bongiovanni

**Chinese Progressive Association** 

Mark Liu

GJC Green Justice Coalition

RUN

**Resilient Urban Neighborhoods** 



Chelsea microgrid

Chinatown microgrid



Chinatown Community Land Trust Lydia Lowe

RUN-GJC

### Microgrid Components



Phase I Measures:

- Solar PV (rooftop or carport), battery storage, microgrid controls, EV charging
- Roof upgrades as needed
- Eligible for EPA Community Change funding

#### Phase II Measures:

- EE upgrades, electrification (long-term goals)
- Satellite hotspots
- Additional incentives for EE expected in 2024

### Working Towards Emergency Preparedness

- 91% of Chinatown residents don't know where their local emergency shelter is located
- 64% don't have an emergency plan for their household
- 54% don't have a place to go in an emergency



Chinese Progressive Association community organizer Baolian Kuang spoke about microgrid benefits at CPA's 28 Ash Street headquarters on Feb. 26, while Mark Liu locks on. (Image courtesy of Yiyan Zheng.)

#### **PUBLIC BENEFIT CORPORATION**



### **RESIDENT INVOLVEMENT**









#### Mass Pike Towers



	336B Tremont
Address	St.
Property	Multifamily &
Туре	Commercial
Number of	
Units	200
Potential	
Solar	
Capacity	146 kW
Potential	
Battery	





Compared to all Boston residents, Chinatown residents have 13% public parkland and 26% pervious surfaces. 和波士頓全市居民相比,華埠居民人 均擁有的公園面積僅有13%,透水地表 面積僅有26%。













"I heard there is a new library being built... and there is a piece of land in Chinatown that they plan to build a parking lot; but we don't believe that's the best interest for Chinatown... we would love to reserve that land for Chinatown community, to make our community healthy. Parking lot brings a lot of CO2 emission that's harmful for the residents"

Coffee Hour participants, Focus Group reflection, January 2024



\$

#### Open Space Committee Work Areas

#### **Reggie Wong Memorial Park**

- Urge MassDOT to sign a 15-year ground lease for \$1/year & work on soil mitigation, community visioning for park renovations

- Advocate for community benefits @ Parcel 25





#### **Resident-led gardening**

- Planters throughout Chinatown to activate space

- Tours to nature spots outside of Chinatown
- Resident leadership development through gardening





#### **Phillips Square II Renovations**



#### New BPL Chinatown park

Procure a privately-owned parcel by the new BPL Chinatown branch and create a community park



































Strengthening Tribal Community Through Social Resilience

### **Troy Phillips**

Enrolled Member & Sub-Chief Hassanamisco Nipmuc Tribe Chairperson and Commissioner Massachusetts Commission on Indian Affairs



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### Strengthening Tribal Community Through Social Resilience

The Hassanamisco Nipmuc Band is the sole state-recognized tribe in the **Commonwealth of Massachusetts. They** were recognized in 1976 by Governor Michael Dukakis via Executive Order 126.<sup>[1]</sup> They were briefly known as the Nipmuc Nation, a union of the Hassanamisco Nipmuc and the Chaubunagungamaug Nipmuck bands, during their attempt to receive federal acknowledgment as a Nation. The Hassanamisco Nipmuc Band owns three and a half acres of reservation land in what is present day Grafton, Massachusetts.<sup>[2]</sup> The Nipmuc are native to Central Massachusetts, Northeastern Connecticut, and parts of Rhode Island.<sup>[3]</sup>



Flag of the Hassanamisco Nipmuc Band


















Social Resilience through Local Climate Planning? Cohasset, MA's work through MVP 2.0

## **Peyton Siler Jones**

Founder and Principal Siler Climate Consulting

#### Montanna Cassel

Sustainability Planner & Grant Coordinator Town of Cohasset



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## Social Resilience through Municipal Climate Planning

### Cohasset, MA's MVP 2.0 Project





Peyton Siler Jones (she/her) Founder & Principal Siler Climate Consulting (828) 273-9979



Montanna Cassel (she/her) Sustainability Planner & Grant Coordinator Town of Cohasset (781)-733-7253



#### Agenda

- 1. How the MVP 2.0 Program is seeking to support social resilience in municipal climate planning
- 2. MVP 2.0 Pilot Cohasset, MA





#### **Context: Social resilience**

- 1. What is social resilience?
- 2. What is social *climate* resilience?
- 3. What is social climate resilience at the *municipal* scale?







# Why do we care about social resilience in climate planning?

- "Numerous studies have shown that hazards disproportionately impact low-income and minority communities, that they receive fewer resources to recover, and that disruptions often exacerbate inequality" (Meerow et al., 2019).
- Not having access to safe and secure housing, job opportunities, internet access, social connections, neighborhood assets, and transportation options creates vulnerability and magnifies the harm caused by climate hazards and climate solutions.



# How the MVP 2.0 Program is seeking to support social resilience in municipal climate planning?

- MVP 2.0 is a State of Mass run grant program that builds on the climate planning work communities have done to date
  Revisiting existing community resilience priorities with a focus on equity and translate into project development and implementation
- How and why?
  Case study: Cohasset, MA



#### MVP 2.0:

- 1. Not about producing a plan
- 2. Expands community involvement through collaborative governance
- 3. Focused on action / material change
- 4. Capacity building and expertise in the community
- 5. Digs into social resilience



#### "Digs into social resilience."

MVP 2.0 gives the **process and tools** help identify root causes of social vulnerability and what it will take to build community resilience.



What process supports and tools does MVP 2.0 provide cities and towns to dig into social resilience?



(8) Implementing Seed Project (9) Reflecting and Adjusting



### Case Study: Cohasset, MA

#### **2018 Climate Hazards**

- Flooding (inland and coastal)
- Severe Storms (wind, snow, ice)
- Drought
- Extreme Heat

#### **2024 Climate Hazards**

- Flooding (inland and coastal)
- Storm Surges
- Increased Precipitation
- Extreme Heat
- Wetland Degradation

#### 2024 Social Vulnerabilities

- Car- centric community
- Lack of Sidewalks
  - Lack of Emergency Planning for Elderly, Disabled, and Low-Income Residents
  - Lack of Mental Health Resources



#### Phase 1: Developing A Core Team

#### **1. Ground Work**

Social Resilience Roadmap: Part A

Not an EJ Community 94% White 96% English-Speaking

8.7% Live With 1-5 Disabilities Increase in mental health
4.6% Low-income
70-85 Residents Weekly Food Pantry
38% Energy Burdened
17% 65 Years or Older

#### 2. Recruiting A Core Team

1 Vendor & 12 Core Members

**6** Town Liaison (Not Paid) **6** Community Liaisons (Paid \$40/hour)

#### **3. Core Team Training**

3 Climate & Equity Learning Series



#### Phase 2: Revisiting Resilience Priorities

#### 4. Uncovering Social Resilience (Current)

- Community Dinner
- Social Resiliency Targeted Survey
- Speed Climate Coffee Talk
- Collaborating with Food Pantry

## **5. Revisiting Community Resilience Priorities**

How can climate resiliency address the root causes of Cohasset's social vulnerabilities?



### Phase 3: Implementing a Seed Project

- 6. Select Seed Project
- 7. Develop Implementation Plan
- 8. Implement Seed Project

#### 9. Reflect & Adjust



(8) Implementing Seed Project (9) Reflecting and Adjusting

## **MODERATED DISCUSSION**

#### Panel Moderator: Nasser Brahim, Forum Co-Chair

Senior Climate Resiliency Specialist, Woods Hole Group

#### Panelists:

- Dr. Daniel Aldrich, Northeastern University
- Montanna Cassel, Town of Cohasset
- Dr. Julianne Holt-Lunstad, BYU
- Lydia Lowe, Chinatown Community Land Trust
- **Troy Phillips,** Hassanamisco Nipmuc Tribe; MA Commission on Indian Affairs
- **Peyton Siler Jones,** Siler Climate Consulting



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