

# Building Capacity for Transformational Resilience: Leading the Path Toward Planetary Health



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University of  
New Hampshire

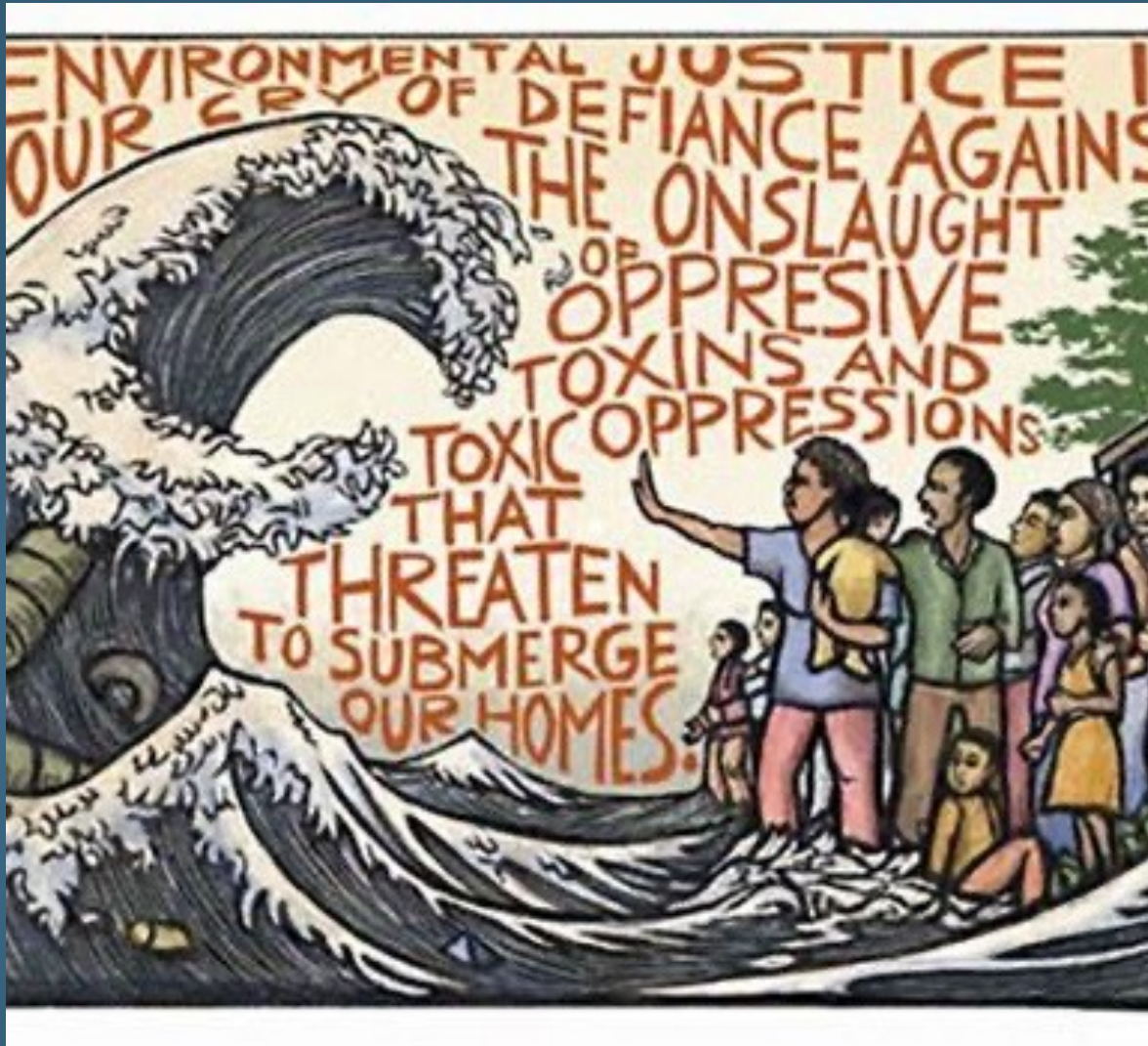
# Acknowledgements

*\*Thank you to Dr. Bob Doppelt, my colleagues, and my students, who provided invaluable contributions this presentation*

*Doppelt, B. The Resource Innovation Group.*

*<http://www.theresourceinnovationgroup.org/transformational-resilience/>*





"Injustice anywhere is a threat to justice everywhere.

We are caught in an inescapable network of mutuality, tied in a single garment of destiny.

Whatever affects one directly, affects all indirectly."

- DR. MARTIN LUTHER KING, Jr.

# What is Transformational Resilience?

- Approach developed by Dr. Bob Doppelt
  - *The Resource Innovation Group.*  
<http://www.theresourceinnovationgroup.org/transformational-resilience/>
- Enables us to take care of ourselves and each other so that we may engage in structural change through community organizing, engagement, and advocacy work
- Centers on reciprocity (caring for the planet as we care for ourselves)<sup>2</sup>



2. Denise and Paul Pouliot, Indigenous Tribal Leaders, [Cowasuck Band of the Pennacook-Abenaki People](#)

See: "Swimming Upstream: Indigenous Environmental Justice for our Waterways" <https://www.youtube.com/watch?v=iszQ07r0gRY>

The left side of the slide features a vibrant, abstract background. It consists of several overlapping concentric circles in shades of orange, yellow, and red, creating a ripple effect. In the bottom left corner, there is a silhouette of a person standing, facing right, with their arms slightly outstretched. The overall aesthetic is energetic and artistic.

# What is Transformational Resilience?

“Care deeply, act collectively”

– Elizabeth Wathuti

- **Presencing** - Connecting to personal goals values and using reflective techniques such as mindfulness to nourish self-care
- **Purposing** - Moving from 'I' to 'We' to support collective efficacy and advance social change

1. Elizabeth Wathuti at Cop 26: <https://www.youtube.com/watch?v=VMvzJu79WG0>

Photo credit and resource: [https://ssir.org/articles/entry/the\\_science\\_of\\_what\\_makes\\_people\\_care](https://ssir.org/articles/entry/the_science_of_what_makes_people_care)

# Our Mission



Northeast Passage empowers people living with disabilities (both visible and invisible) to define, pursue, and achieve whole life health, community engagement, and personal fulfillment.

To develop and promote best practices in the fields of Therapeutic Recreation and Adaptive Sports."

# Recreational Therapy (RT):

Is an allied health profession that uses the rich context of facilitated recreation engagement to address the needs of individuals living with a wide variety of disabling health conditions:

- Physical Disability
- Intellectual Disability
- Chronic Health Conditions
- Behavioral Health Conditions



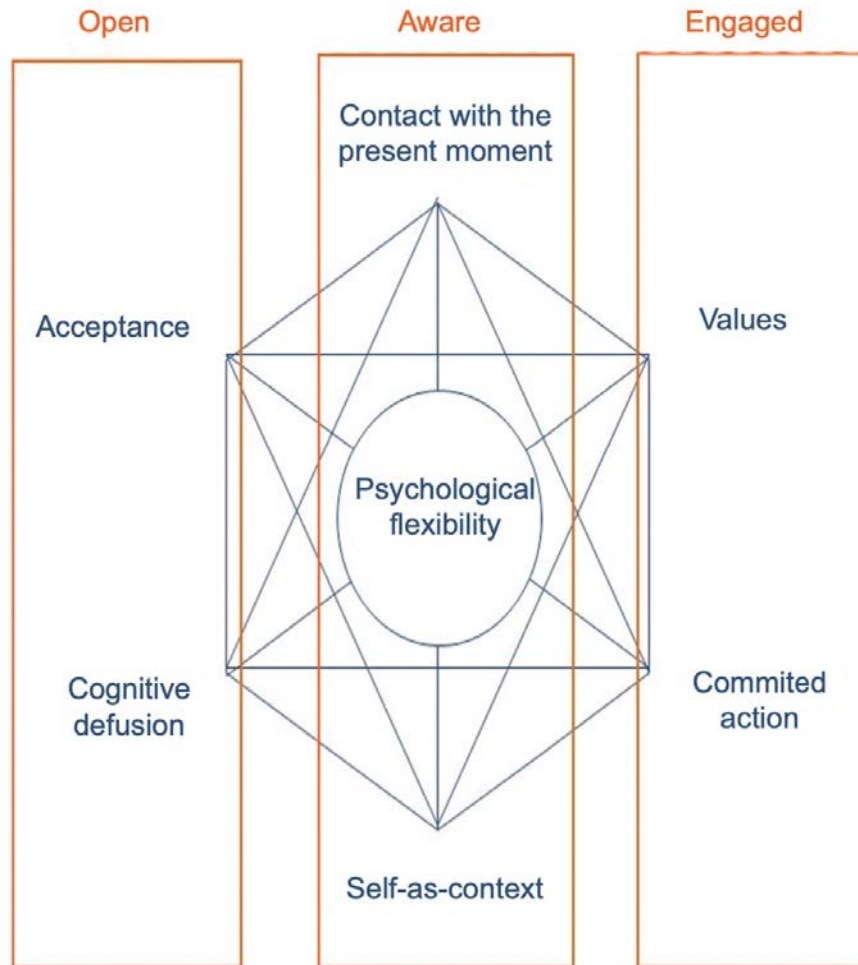
“I used to fight my disability, thinking that if I just worked hard enough, I would be able to walk. Now though, I realize that that part isn’t going to change, but I figured out now I just do things differently. That shift has been the most important part.”

# What is ACT?

“ACT is a unique and creative model for both therapy and coaching, based on the innovative use of mindfulness and values.

The aim of ACT is to maximize human potential for a rich, full and meaningful life; to cultivate health, vitality and well-being through mindful values-based living. “ – Russ Harris

Source: ACT Mindfully Workshops with Russ Harris <https://www.actmindfully.com.au/>



**Figure 1** The hexaflex model of ACT for psychological flexibility and inflexibility.  
**Abbreviation:** ACT, acceptance and commitment therapy.

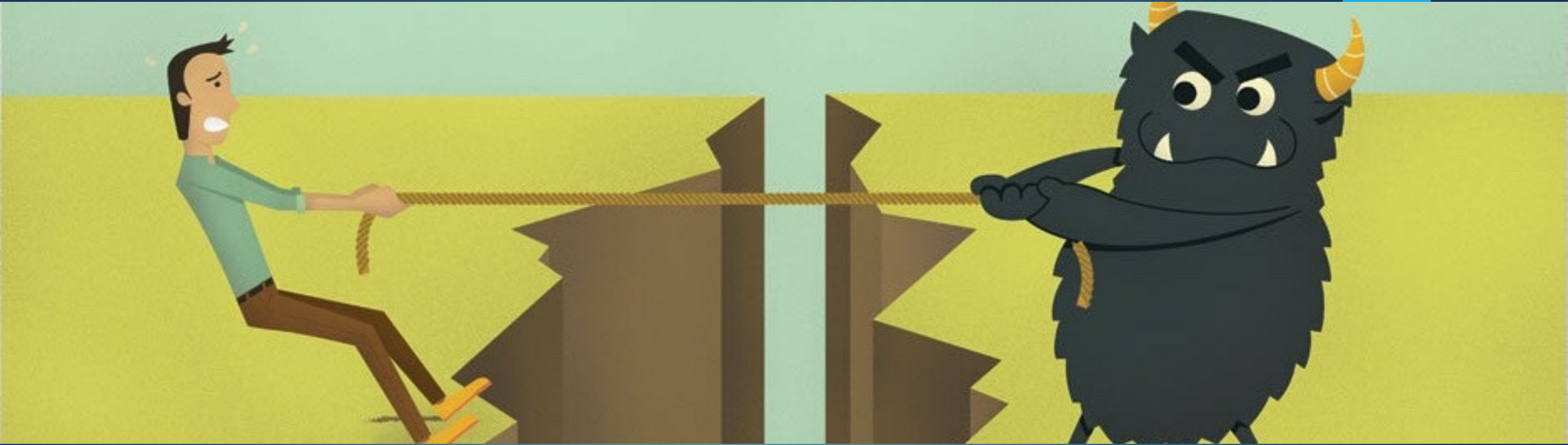
Feliu-Soler, A., Montesinos, F., Gutiérrez-Martínez, O., Scott, W., McCracken, L. M., & Luciano, J. V. (2018). Current status of acceptance and commitment therapy for chronic pain: a narrative review. *Journal of pain research*, 11, 2145–2159. <https://doi.org/10.2147/JPR.S144631>

# Psychological Flexibility

- “The super skill of resilience and mental Health”<sup>1</sup>
  - **Open:** to the present moment as it is vs. as you wish it would be<sup>2</sup>
  - **Aware:** of yourself within the context: an observer of your own thoughts and feelings
  - **Engaged:** committed action in the direction of your values

<sup>1</sup> The weekend University, 2020, <https://theweekenduniversity.com/psychological-flexibility/>

<sup>2</sup> Brown, Brené (Host). (2021, March 1) **The Dangers of Toxic Positivity, Part 1 of 2** with Dr. Susan David. [Audio Podcast] <https://brenebrown.com/podcast/brene-with-dr-susan-david-on-the-dangers-of-toxic-positivity-part-1-of-2/>



*Acceptance does not mean giving up...but rather letting go of the control agenda so that you can engage meaningfully in creating strategies that are workable.*

# Mindfulness: The observer

**Mindfulness is a way to strengthen being aware of and noticing ourselves with openness, curiosity, and flexibility.**



Misconception:  
→ Mindfulness not a way to make pain go away or get rid of unwanted feelings.





# Engaged living: Moving Towards A Rich, Full, and Meaningfull Life

Well-being has two definitions

1. Feeling good or pleasure
2. A powerful sense of vitality that comes from: acting on things that matter most, moving moving toward things we believe to be valuable & worthy, and clarifying what we stand for in life and act accordingly – Russ Harris The Happiness Trap

Harris, R. (2008). The happiness trap. Robinson Publishing  
Seligman, M. E. P. (2013). Flourish. Simon & Schuster.

# Your Rich Full and Meaningful Life

- ▶ **Find a picture** on your phone that embodies the idea of a rich full and meaningful life
- ▶ **Share your picture** (take turns) describing as if you are there (sights, sounds, feelings, what is happening, context)
- ▶ **Ask open ended questions** to find out more and confirm the themes, values, and personal qualities you here reflected in the story.

ex: "I'm hearing that the idea of humor and finding ways to celebrate the people you love in the midst of working really hard is part of connection"

- ▶ **Write down key words** that describe what each person's story is about on the table cloth (ex: humor, connection, tenacity)

# Look for connections in stories

- ▶ As a table talk about the words you have written down
- ▶ Go to [Menti.com](https://www.menti.com)
- ▶ Type in code

# Emotional Agility



“Although most of us think of ourselves as thinking creatures that feel. We are actually feeling creatures that think “ – jill Bolt Taylor

“Emotions are data not directives” –  
Dr Susan David

1. The ability to recognize our emotions without **becoming** our emotions creates space to make decisions and show up in ways that align with our values
2. Identifying emotions on a more granular level allows your body to process and regulate them more easily
3. Emotions can point to the things we value and need

Brown, Brené (Host). (2021, March 1) **The Dangers of Toxic Positivity, Part 1 of 2** with Dr. Susan David. [Audio Podcast] <https://brenebrown.com/podcast/brene-with-dr-susan-david-on-the-dangers-of-toxic-positivity-part-1-of-2/>

Image credit and link: <https://www.lucidchart.com/blog/improving-your-emotional-agility>

# Emotional Agility & Personal Resilience

- ▶ Self Awareness
- ▶ Self Compassion
- ▶ Moving towards values
- ▶ Advocating for needs
- ▶ Setting Boundaries
- ▶ Re-creation
- ▶ Meaningful Connection

<https://www2.deloitte.com/content/dam/Deloitte/us/Documents/about-deloitte/us-about-deloitte-workwell-podcast-emotional-agility.pdf>



*Semra Ayur*

# Transformational Resilience: Purposing MOVING FROM “I” to “WE”

“The ability of communities to prepare for, withstand, and recover from public health incidents in both the short and long term.”

- ▶ Develops strategies to connect self-efficacy and collective-efficacy

## Video Clip: (Minute 12-15)

Swimming Upstream: Indigenous Environmental Justice for our Waterways” <https://www.youtube.com/watch?v=iszQ07r0gRY>

Denise and Paul Pouliot, Indigenous Tribal Leaders, [Cowasuck Band of the Pennacook-Abenaki People](#)



# Planetary Health

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Defined as “the health of human civilization and the state of the natural systems on which it depends ”

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Focuses on the *interdependence* of people and the environment.

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Emphasizes balancing human needs with the preservation of the Earth’s ecosystem services to sustain the health and well-being of future generations.

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Requires a multidisciplinary, cross-sector, and transborder approach to change mindsets and behaviors at every level, from global to local.



Unites many similar concepts that address the intersections between health and the environment:

- Environmental Justice
- EcoHealth
- One Health
- GEOHealth (Global Environmental and Occupational Health)

Source: The Panorama Perspectives: Conversations on Planetary Health:

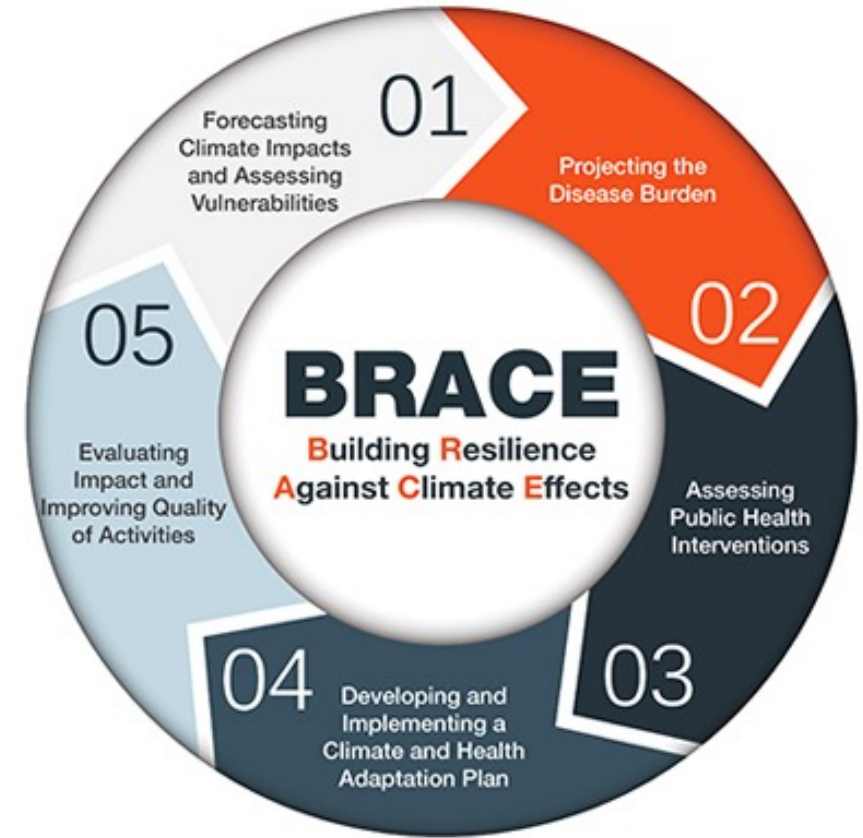
[https://assets.website-files.com/62448c65f2a3dc7ae94193bd/62448c65f2a3dc01ce4195a8\\_Planetary-Health-101-Information-and-Resources.pdf](https://assets.website-files.com/62448c65f2a3dc7ae94193bd/62448c65f2a3dc01ce4195a8_Planetary-Health-101-Information-and-Resources.pdf)

# Transformational Resilience Aligns with: CDC Building Resilience Against Climate Effects (BRACE)

- ▶ Air Pollution
- ▶ Heat Stress
- ▶ Extreme weather
- ▶ Vector Borne Disease
- ▶ Waterborne Illness
- ▶ Foodborne Illness
- ▶ Behavior and Chronic Disease
- ▶ Mental Health

Sources: Centers for Disease Control and Prevention (CDC)  
<https://www.cdc.gov/climateandhealth/BRACE.htm>

Wake, C., Bucci, J.P. & Aytur, S.A. (2014, October). *Climate Change and Human Health in New Hampshire: An Impact Assessment*. Report to New Hampshire Department of Health and Human Services. <https://scholars.unh.edu/sustainability/7/>



# Aligns with: CDC/APHA Climate Justice Playbook:

## *Justice, Equity, Diversity, and Inclusion in Climate Adaptation Planning*

- ❑ CDC has partnered with the American Public Health Association (APHA) to create the Climate Change and Health Playbook: Adaptation Planning for Justice, Equity, Diversity, and Inclusion.
- ❑ This step-by-step resource is designed to supplement the Building Resilience Against Climate Effects (BRACE) framework and support public health departments and adaptation planners as they blend JEDI into their climate and health efforts.
- ❑ **UNH Project ECHO virtual series** (Nov 2, Nov. 16, Nov. 30, Dec. 14, 12:00-1:00) will help to build capacity for this work (see ECHO Flyer to register (free) or email [Semra.Aytur@Unh.edu](mailto:Semra.Aytur@Unh.edu))



Sources: Centers for Disease Control and Prevention (CDC) <https://www.cdc.gov/climateandhealth/JEDI.htm>  
<https://www.cdc.gov/climateandhealth/BRACE.htm>

Wake, C., Bucci, J.P. & Aytur, S.A. (2014, October). *Climate Change and Human Health in New Hampshire: An Impact Assessment*. Report to New Hampshire Department of Health and Human Services. <https://scholars.unh.edu/sustainability/7/>

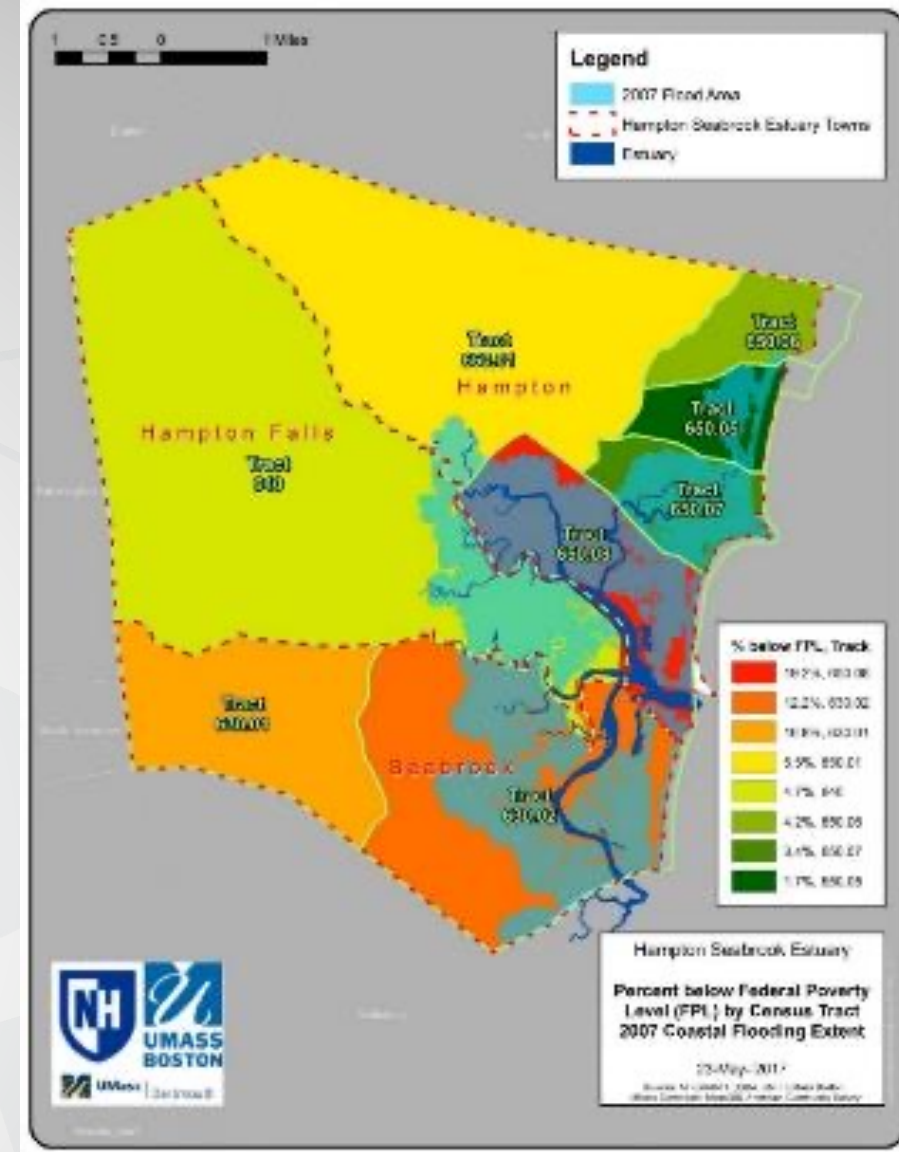


# Example: Flooding in Hampton-Seabrook, NH



**In NH, events such as floods and extreme heat exacerbate vulnerabilities for those living with existing mental health challenges and substance use disorders.**

- Prior research suggests that after Hurricane Maria, there was a 26% increase in suicides.
- After Hurricane Katrina, the proportion of people experiencing suicidal thoughts doubled.
- Post-traumatic stress symptoms (PTSS) remained high 43 to 54 months after Hurricane Katrina.



Kirshen, P., Aytur, S.A., Burdick, D., Lippman, T., Nick, S., & Foster, D. (2018). Final Report to NOAA - Coastal and Ocean Climate Applications (COCA). *Integrated Assessment of the Value of Ecosystem Services in Coastal Adaptation: Methodology and Collaborative Case Study of Hampton-Seabrook Estuary, New Hampshire*. <https://unh.box.com/s/u4d8c2l1sbyevcz8teboni4g5nvnbfug4>; [https://scholars.unh.edu/jel/154/Reardon \(0215\)](https://scholars.unh.edu/jel/154/Reardon%2015). <https://www.nature.com/news/hurricane-katrina-s-psychological-scars-revealed-1.18234>  
Paxon et al: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3286602/pdf/nihms339629.pdf>  
Rhodes et al: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3276074/#:~:text=The%20prevalence%20of%20probable%20serious,socio%2Ddemographic%20and%20health%20measures.>

# Syndemics (end references)

## Sources:

Singer, M/ (1996). A dose of drugs, a touch of violence, a case of AIDS: conceptualizing the SAVA syndemic. *Free Inq Creat Sociol.* ; 24: 99-110

Caron RM, Adegboye ARA. COVID-19: A Syndemic Requiring an Integrated Approach for Marginalized Populations. *Front Public Health.* 2021 May 11;9:675280. doi: 10.3389/fpubh.2021.675280. PMID: 34046392; PMCID: PMC8144466.

DHHS. (2021).

<https://www.hhs.gov/blog/2021/05/27/syndemics-commitment-quitting-equitably.html>

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“Synergistic pandemics” or multiple epidemics that co-occur in relation to harmful environmental and social conditions that interact to exacerbate risk

1990s Singer – SAVA syndemic (substance abuse, violence, and AIDS)

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Syndemics are heightened by health inequities attributable to poverty, structural racism, violence, and stigmatization.

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Addressing climate change and environmental factors will help to prevent future syndemics, as a large proportion of emerging global disease threats are associated with climate-related zoonotic diseases.

# Definitions of Resilience

## Individual-level:

- ▶ Resilience had been defined as “the process of adapting well in the face of adversity, trauma, tragedy, threats, or even significant sources of stress”
  - The American Psychological Association (2014), (para. 4).

American Psychological Association. *The road to resilience*. Washington, DC: American Psychological Association; 2014. Retrieved from <http://www.apa.org/helpcenter/road-resilience.aspx>.

Southwick, S. M., Bonanno, G. A., Masten, A. S., Panter-Brick, C., & Yehuda, R. (2014). Resilience definitions, theory, and challenges: interdisciplinary perspectives. *European journal of psychotraumatology*, 5, 10.3402/ejpt.v5.25338. <https://doi.org/10.3402/ejpt.v5.25338>

Southwick S. M, Douglas-Palumberi H, Pietrzak R. H. Resilience. In: Friedman M. J, Resick P. A, Keane T. M, editors. *Handbook of PTSD: Science and practice*. 2nd ed. New York: Guilford Press; 2014. pp. 590–606.

Kim-Cohen J, Turkewitz R. *Dev Psychopathol*. 2012 Nov; 24(4):1297-306.

# Community Resilience

- ▶ “The ability of communities to prepare for, withstand, and recover from public health incidents in both the short and long term.”
- ▶ Determinants of resilience include **biological, psychological, social and cultural factors** that interact with one another to determine how one responds to stressful experiences.

Sources: CDC, State and Local Readiness. (2021). <https://www.cdc.gov/cpr/readiness/capabilities.htm>  
U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response. (2015). <https://www.phe.gov/Preparedness/planning/abc/Pages/community-resilience.aspx>  
Kim-Cohen J, Turkewitz R. Dev Psychopathol. 2012 Nov; 24(4):1297-306.

Purposing: Moving from I to We

Finding our common voice with  
Photovoice

# What is Photovoice?

- Photovoice is a Participatory Action Research (PAR) methodology, grounded in reciprocity, community development and social action.
- Participants are given cameras and prompted to tell a story about their lived experience in pictures
- Facilitated dialogue co-creates shared meaning-making to support collective efficacy
- Can be applied in adaptation planning, community based participatory research (CBPR), Environmental Justice work, community health needs assessment, and other group settings

Wang C, Burris MA. Photovoice: concept, methodology, and use for participatory needs assessment. Health Educ Behav. 1997 Jun;24(3):369-87. doi: 10.1177/109019819702400309. PMID: 9158980

# Prompt for Mini-Photovoice Activity:

*Why are you engaged in the work that you do (as part of CAW or with the community you identify with? (What keeps you energized to do this work?)*

- 1. Find an image that represents your answer to this question. (Can be from your photo library, a google search, or something you sketch in the moment)*

# Mini-Photovoice Activity

1. Write a caption (or word) that goes with your personal photo
2. Share individual photos and words/captions at your table

# Mini-Photovoice Activity

Find some common themes/words about the pictures at your table and write them down (how many of these same words/themes do we have at our table?)

# Mini-Photovoice Activity

Out of the photos at the table choose one to represent the table's collective ideas

As a group, write a caption or word that reflects the group's collective meaning of the photo (Group meaning-making)

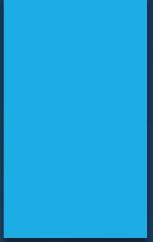
Share #5 to Padlet [bit.ly/NHClimateSummit](https://bit.ly/NHClimateSummit)

- Tap the "plus" button at the bottom of the view.
- Add a photo: tap the icon **furthest to the left** and then select "Photo Library" to contribute an image from your device. *(It will take a few seconds to upload!)*
- Tap "Add a caption" (below the image).
- Tap "Done".
- Tap "Subject" (above the image) if you'd like to type a theme for the image. Tap "Done".
- Tap "[Publish](#)" (at the very top of page) to post the image to the Padlet.

# Mini-Photovoice Activity-Part 2: Padlet Discussion

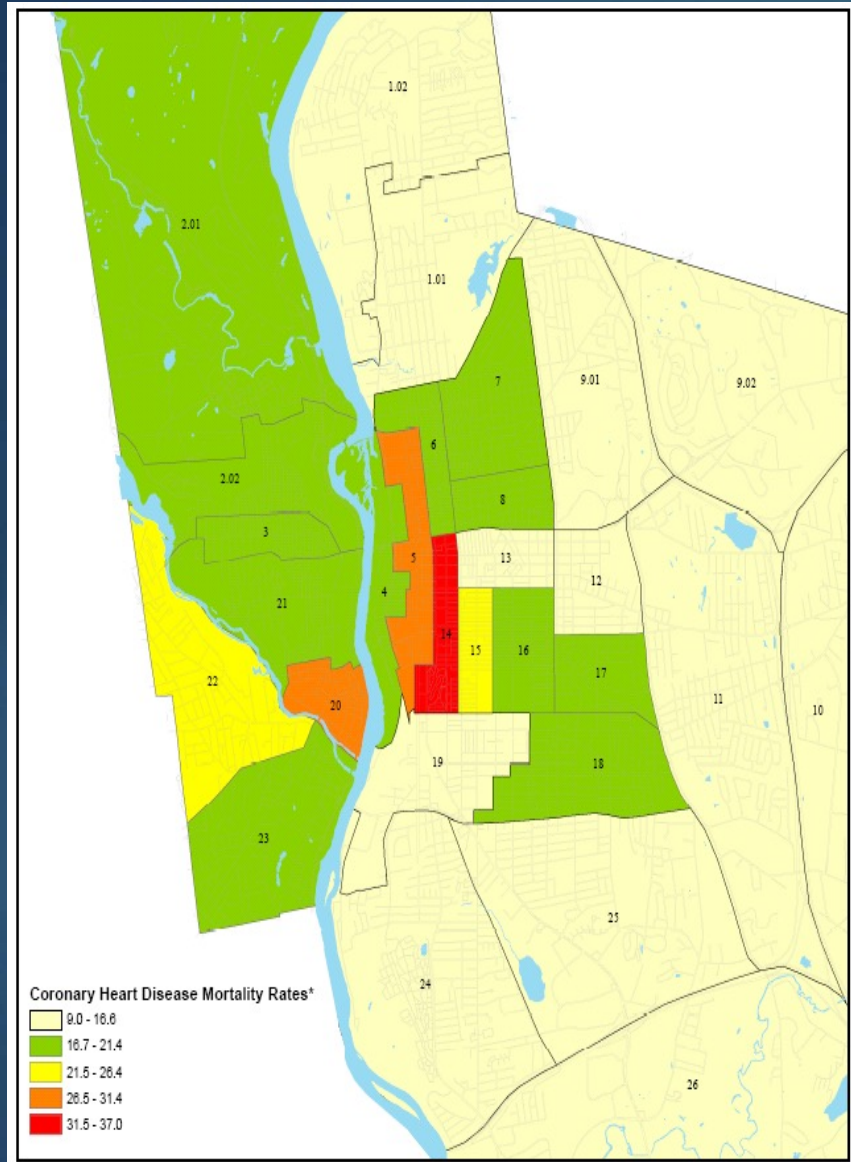
At your table, as you hear about other tables' group meaning:

1. **Jot down** which words/meanings were similar across tables as you hear them
2. **Think about** about which themes resonate across tables
3. **Reflect** on which of these themes may also resonate with some of the communities you work with.
4. **Jot down** these words/ideas too. You may also wish to draw arrows or connections (or use your stickers) to identify common themes.



What does the  
Transformational Resilience  
Look Like in Communities?

Connecting to Engagement  
and Advocacy



(1995-2005)

Rates per 10,000 population

## Example: Manchester, NH Age-Adjusted Coronary Heart Disease Mortality by Census Tract

Citation: Aytur, SA., Butcher, R., Carlson, C., & Schifferdecker, K. (2014). Creating safe neighborhoods for obesity prevention: Perceptions of urban youth. In: Brennan, V., Kumanyika, S., & Zambrana, R. (eds). *Obesity Interventions in Underserved US Populations: Evidence and Directions*. Johns Hopkins University. (Peer reviewed book chapter; November, 2014). ISBN 978-1-4214-1544-4.



*“I love this picture because I think it is beautiful. It shows the beauty of the West side of Manchester. It shows that some people’s thoughts about the West side are wrong. If you are looking for the good in something, you will find it. But if you are focused on the bad, you will only see the negative”.*

*- Manchester Youth Photovoice Participant, age 15,*

Citation: Aytur, SA., Butcher, R., Carlson, C., & Schifferdecker, K. (2014). Creating safe neighborhoods for obesity prevention: Perceptions of urban youth. In: Brennan, V., Kumanyika, S., & Zambrana, R. (eds). *Obesity Interventions in Underserved US Populations: Evidence and Directions*. Johns Hopkins University. (Peer reviewed book chapter; November, 2014). ISBN 978-1-4214-1544-4.



## Photovoice: Perspectives on Access to natural resources

“The greenery is important so people can go to breathe pure air, to walk.”

Adachi Mejia, Aytur, Williams et al. (2019). Photovoice as a tool for exploring active living from the perspectives of older adults of color and language minorities.

[https://scholars.unh.edu/faculty\\_pubs/920/#:~:text=Bhutanese%20participants%20emphasized%20the%20importance,for%20themselves%20and%20their%20communities.](https://scholars.unh.edu/faculty_pubs/920/#:~:text=Bhutanese%20participants%20emphasized%20the%20importance,for%20themselves%20and%20their%20communities.)

# What is Blue Space?

**Blue space refers to natural and built environments that are comprised of waterbodies or water resources.**

**Emerging research suggests that blue spaces are associated with many positive physical and mental health benefits**

**“Blue Care”- Using blue space in nature-based therapeutic interventions**

"Blue Space" Storymap (Aytur, Bucci, et al)  
<https://storymaps.arcgis.com/stories/ba7c636e6da14b0498db986b5e40419e>

Bruce, S.A., Aytur, S.A., Andam, C.P. *et al.* Metagenomics to characterize sediment microbial biodiversity associated with fishing exposure within the Stellwagen Bank National Marine Sanctuary. *Sci Rep* **12**, 9499 (2022).

<https://doi.org/10.1038/s41598-022-13409-5>

Easkey Britton, Gesche Kindermann, Christine Domegan, Caitriona Carlin, Blue care: a systematic review of blue space interventions for health and wellbeing, *Health Promotion International*, Volume 35, Issue 1, February 2020, Pages 50–69, <https://doi.org/10.1093/heapro/day103>

Yan Zhou, Liuqi Yang, Jianing Yu, Shiyi Guo. (2022) Do seasons matter? Exploring the dynamic link between blue-green space and mental restoration. *Urban Forestry & Urban Greening* **73**, pages 127612.

Aytur, Bucci, Bruce, Andam (2022).

<https://chhs.unh.edu/blog/2022/06/blue-space-connecting-ocean-health-human-health-national-marine-sanctuary>

White, MP; Lewis R. Elliott, Mireia Gascon, Bethany Roberts, Lora E. Fleming, Blue space, health and well-being: A narrative overview and synthesis of potential benefits, *Environmental Research*, **191**, 2020,

<https://doi.org/10.1016/j.envres.2020.110169>



## Partnerships and Possibilities: Nurturing Collective Action

# New Partnerships and New Possibilities: Examples

- **NH Healthcare Workers for Climate Action (NH HWCA):** <https://www.nhclimatehealth.org/who-we-are-nh-healthcare-workers-for-climate-action>
  - Video: [https://www.dropbox.com/s/ogloyyiwotcbpbm/TNC\\_NHHealthcare\\_5a\\_mix.mp4?dl=0](https://www.dropbox.com/s/ogloyyiwotcbpbm/TNC_NHHealthcare_5a_mix.mp4?dl=0)
- **Indigenous NH Collaborative Collective (INHCC):** <https://indigenousnh.com/>
- **Storymap:**  
<https://www.arcgis.com/apps/MapJournal/index.html?appid=693c9b595c5847cfb07d100935e423ef>
- **Northeast Passage (NEP):** <https://www.nepassage.org/>
- **Sustainable Food Collaborations:** NH Food Alliance: <https://www.nhfoodalliance.org/>
- **Conservation Law Foundation (CLF):** <https://www.clf.org/serving-new-england/new-hampshire/>

# Upcoming Events:

## Project ECHO registration link: “Connecting Mental Health, Climate Justice, and Nature”

### Featured Speakers include:

- **November 2** - Dr. Larissa Dooley (See Change Institute)
- **November 16\*** - Dr. Bob Doppelt (The Resource Innovation Group)
- **November 30** - Dr. Seoka Salstrom (Hanover Cognitive Behavioral Therapy)
- **Dec. 15** - Tye Thompson (Northeast Passage)
- **All sessions are free, virtual (via zoom), 12:00-1:00 pm EST.**
- Continuing Education credits are available.
- **ECHO Registration link:**  
[https://unh.az1.qualtrics.com/jfe/form/SV\\_bIMoHqSgxIddPBY](https://unh.az1.qualtrics.com/jfe/form/SV_bIMoHqSgxIddPBY)

\*Dr. Bob Doppelt wrote the book on Transformational Resilience.

[ECHO will run from Nov. 2-Dec. 14, every other Wednesday from 12:00-1:00 \(free, via zoom\).](#)

[Continue the discussion of Transformational Resilience!](#)

[Bob Doppelt will speak on Nov. 16.](#)

# Upcoming Virtual Events:

## NHHWCA Guest Speaker- Dr. Mónica Ramírez-Andreotta

- [Partnering for Action: Cultivating Science and Environmental Justice](#)
- Oct. 5, 6:00 PM 7:00 PM
- Register at:
- <https://www.nhclimatehealth.org/our-events>

# Conclusion

- “Care deeply, act collectively”



Elizabeth Wathuti at Cop 26: <https://www.youtube.com/watch?v=VMvzJu79WG0>

Sandra Almonte, Manchester NH, Outstanding Women in Business, 2022 Award recipient:

<https://www.nhbr.com/sandra-almonte2022-outstanding-women-in-business-recipient/>

# Thank you!

Please take a moment to fill out this survey

[https://unh.az1.qualtrics.com/jfe/form/SV\\_1SuNwXv2bJK6tF4](https://unh.az1.qualtrics.com/jfe/form/SV_1SuNwXv2bJK6tF4)

# Additional Slides, References, and Resources

# References

- Doppelt B, (2016). Transformational Resilience: How Building Human Resilience to Climate Disruption Can Safeguard Society and Increase Wellbeing. Greenleaf Publishing. <http://www.theresourceinnovationgroup.org/transformational-resilience/>
- Bob Doppelt's Website: <http://www.theresourceinnovationgroup.org/intl-tr-coalition/>
- Aytur SA, Ray KL, Meier SK, Campbell J, Gendron B, Waller N, Robin DA. Neural Mechanisms of Acceptance and Commitment Therapy for Chronic Pain: A Network-Based fMRI Approach. *Front Hum Neurosci*. 2021 Feb 5;15:587018. doi: 10.3389/fnhum.2021.587018. PMID: 33613207; PMCID: PMC7892587.
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# Planetary health resources

- GeoHealth, A Case for Planetary Health/GeoHealth 2017
- The Environmentalist Papers, Preventive Medicine for the Planet and Its Peoples April 2017
- The Lancet, Safeguarding Human Health in the Anthropocene Epoch 2015
- The Lancet, From Public to Planetary Health: A Manifesto 2014
- The Economist, Special Edition on Planetary Health 2014
- Proceedings of the National Academy of Sciences (PNAS), Human Health Impacts of Ecosystem Alteration 2012

# Review: Key Elements of Building Capacity for Transformational Resilience

Age, culturally, and demographically appropriate:

## Trauma-Informed Skills

- Basic information on how trauma and toxic stress can affect mind, body and behaviors—and behaviors of groups
- Awareness of symptoms in self and others

## Presencing Skills (self-regulation)

- Bio-psycho-emotional self-regulation skills
- Robust personal, social, and ecological supports
- Cognitive awareness and control skills

## Purposing Skills (adversity-based growth)

- Learning and meaning-making
- Values-based decisions
- Active engagement to harvest hope

(Doppelt B, (2016). Transformational Resilience: How Building Human Resilience to Climate Disruption Can Safeguard Society and Increase Wellbeing. Greenleaf Publishing. See ITRC Library.)

Aytur SA, Roy G, Doyle M, Ray KL, Meier SK, Robin DA. (2022).  
In: Patel V.B., Preedy V.R. (eds) *Handbook of Substance Misuse – From Biology to Public Health*. Springer, Cham.  
[https://link.springer.com/referenceworkentry/10.1007/978-3-030-67928-6\\_33-1?noAccess=true](https://link.springer.com/referenceworkentry/10.1007/978-3-030-67928-6_33-1?noAccess=true)

# Definitions of Resilience

## Individual-level:

- Resilience had been defined as “the process of adapting well in the face of adversity, trauma, tragedy, threats, or even significant sources of stress” – The American Psychological Association (2014), (para. 4).

American Psychological Association. *The road to resilience*. Washington, DC: American Psychological Association; 2014. Retrieved from <http://www.apa.org/helpcenter/road-resilience.aspx>.

Southwick, S. M., Bonanno, G. A., Masten, A. S., Panter-Brick, C., & Yehuda, R. (2014). Resilience definitions, theory, and challenges: interdisciplinary perspectives. *European journal of psychotraumatology*, 5, 10.3402/ejpt.v5.25338. <https://doi.org/10.3402/ejpt.v5.25338>

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Kim-Cohen J, Turkewitz R. *Dev Psychopathol*. 2012 Nov; 24(4):1297-306.

# Community Resilience

- “The ability of communities to prepare for, withstand, and recover from public health incidents in both the short and long term.”
- Determinants of resilience include **biological, psychological, social and cultural factors** that interact with one another to determine how one responds to stressful experiences.

Sources: CDC, State and Local Readiness. (2021). <https://www.cdc.gov/cpr/readiness/capabilities.htm>.  
U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response. (2015). <https://www.phe.gov/Preparedness/planning/abc/Pages/community-resilience.aspx>.  
*Kim-Cohen J, Turkewitz R. Dev Psychopathol. 2012 Nov; 24(4):1297-306.*

# Syndemics

## Sources:

Singer, M/ (1996). A dose of drugs, a touch of violence, a case of AIDS: conceptualizing the SAVA syndemic. *Free Inq Creat Sociol.* ; 24: 99-110

Caron RM, Adegboye ARA. COVID-19: A Syndemic Requiring an Integrated Approach for Marginalized Populations. *Front Public Health.* 2021 May 11;9:675280. doi: 10.3389/fpubh.2021.675280. PMID: 34046392; PMCID: PMC8144466.

DHHS. (2021).  
<https://www.hhs.gov/blog/2021/05/27/syndemics-commitment-quitting-equitably.html>

“Synergistic pandemics” or multiple epidemics that co-occur in relation to harmful environmental and social conditions that interact to exacerbate risk

1990s Singer – SAVA syndemic (substance abuse, violence, and AIDS)

Syndemics are heightened by health inequities attributable to poverty, structural racism, violence, and stigmatization.

Addressing climate change and environmental factors will help to prevent future syndemics, as a large proportion of emerging global disease threats are associated with climate-related zoonotic diseases.

# Multisolving

- **Multisolving** is a strategic approach to solving the interconnected problems facing the climate and human society
- A multisolving policy or project is one that generates multiple benefits (e.g., climate change, health, the economy, equity, disaster resilience)

Source: Swain, E., Climate Interactive. Multisolving at the Intersection of Health and Climate.

<https://www.multisolving.org/wp-content/uploads/2022/01/Multisolving-at-the-Intersection-of-Health-and-Climate-1.pdf>

MULTISOLVING POLICY AREAS		
	Examples of Climate Benefits (long term, global)	Examples of Health Benefits (short term, local)
Climate adaptation	Increased resilience to extreme events	Community-based public health response services also provide benefits during non-emergency conditions
Urban design	Reduced CO <sub>2</sub> emissions from transportation	Increased physical activity from walking and cycling reduces obesity and chronic disease
Fossil fuel free	Reduced CO <sub>2</sub> emissions from energy generation	Reduced air and water pollution from mining, refining, and burning fossil fuels reduces asthma and respiratory disease, heart disease, and premature birth
Energy efficiency	Reduced CO <sub>2</sub> emissions from built environment	More comfortable homes provide health benefits, and reduced home energy costs allow low-income residents greater spending on other needs
Food and diet	Plant-based foods have a lower carbon footprint	Reducing the fraction of meat in diets provides health benefits
Nature-based solutions	Plants sequester carbon and are protective against climate impacts	Presence of trees and green space reduces air pollution and improves mental health and opportunities for recreation and physical activity

**FIGURE 1-5**

Examples of six different categories of multisolving, each with climate and health benefits.

# Transformational Resilience: Engagement, Adaptation, and Advocacy

- Change can only happen when the people who bear the brunt of unjust policy decisions are at the table and empowered to have their voices heard and acted upon.
  - Move from “JEDI” to “Belonging”
- Improve diverse representation in the ways in which we work and make decisions.

# What makes a Resilient Community?

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Socially connected

Accessible social and environmental systems that support health

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Trauma-Informed & Resilience-Skilled Leaders

Promotion of physical, behavioral, and social interventions and planning processes that strengthen communities

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Co-Learning opportunities to “promote social narratives, shift cultural norms and practices & make their groups safe, healthy, just, and equitable resilience-enhancing entities.” –*Doppelt, 2016*

---

Collective action to plan and utilize resources that reduce the impact of major disturbances and help protect people’s health (e.g., access greenspace, food, housing, healthcare, mental health services)

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Source: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response,. (2015).  
<https://www.phe.gov/Preparedness/planning/abc/Pages/community-resilience.aspx>.

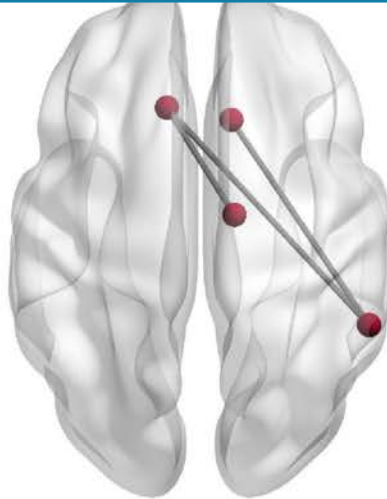
# More information about mindfulness

- For folks who are curious here are the videos we talked about:
  1. some [common misconceptions about mindfulness](https://www.youtube.com/watch?v=E_gXW9bo3uQ) [https://www.youtube.com/watch?v=E\\_gXW9bo3uQ](https://www.youtube.com/watch?v=E_gXW9bo3uQ)
  2. [three happiness myths](https://www.youtube.com/watch?v=93LFNtcR1Ok&t=2s) that can kind of trap us into a cycle of struggle <https://www.youtube.com/watch?v=93LFNtcR1Ok&t=2s>
- If you benefit from a guided approach to mindfulness here are some options:
- Mindfulness audio files from Russ Harris about “dropping anchor” a practice of drawing attention as an observer to all the things we are experiencing
  - Dropping Anchor [40 secnds](https://res.cloudinary.com/psychwire/video/upload/v1519263959/pw.com/resources/harris/Drop_Anchor_Audio_Exercise_40_secs.mp3)  
[https://res.cloudinary.com/psychwire/video/upload/v1519263959/pw.com/resources/harris/Drop\\_Anchor\\_Audio\\_Exercise\\_40\\_secs.mp3](https://res.cloudinary.com/psychwire/video/upload/v1519263959/pw.com/resources/harris/Drop_Anchor_Audio_Exercise_40_secs.mp3)
  - Dropping Anchor [2 min](https://res.cloudinary.com/psychwire/video/upload/v1519263959/pw.com/resources/harris/Drop_Anchor_Audio_Exercise_2_minutes.mp3)  
[https://res.cloudinary.com/psychwire/video/upload/v1519263959/pw.com/resources/harris/Drop\\_Anchor\\_Audio\\_Exercise\\_2\\_minutes.mp3](https://res.cloudinary.com/psychwire/video/upload/v1519263959/pw.com/resources/harris/Drop_Anchor_Audio_Exercise_2_minutes.mp3)
  - Dropping Anchor [7 min](https://res.cloudinary.com/psychwire/video/upload/v1540433114/pw.com/ACT/resources/Drop_Anchor_Audio_Exercise_7_minutes.mp3)  
[https://res.cloudinary.com/psychwire/video/upload/v1540433114/pw.com/ACT/resources/Drop\\_Anchor\\_Audio\\_Exercise\\_7\\_minutes.mp3](https://res.cloudinary.com/psychwire/video/upload/v1540433114/pw.com/ACT/resources/Drop_Anchor_Audio_Exercise_7_minutes.mp3)
- Additionally, at <https://www.mindful.org/> you can find more information about a relationship with [Mindfulness and Meditation](#)
  - There are many different recorded practice meditations.
  - At the bottom of the live link to Mindfulness and Meditation there are a couple 5 min breathing/body scan mindfulness meditation practices, but of course feel free explore

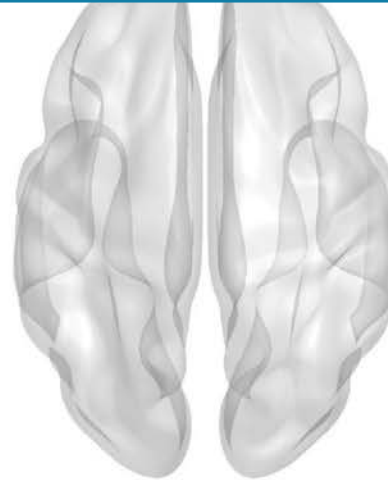
# Emotional Agility, feelings and needs cards

- Feelings wheel <https://www.mindbodygreen.com/articles/emotion-wheel>
- Needs card:  
[https://www.malindaelizabethberry.net/uploads/8/4/7/8/84786408/needs\\_cards.pdf](https://www.malindaelizabethberry.net/uploads/8/4/7/8/84786408/needs_cards.pdf)
- Feelings cards:  
[https://www.malindaelizabethberry.net/uploads/8/4/7/8/84786408/feelings\\_cards\\_10\\_22.pdf](https://www.malindaelizabethberry.net/uploads/8/4/7/8/84786408/feelings_cards_10_22.pdf)
- The Center for Nonviolent communication <https://www.cnvc.org/>
- Brown, Brené (Host). (2021, March 1) The Dangers of Toxic Positivity, Part 1 of 2 with Dr. Susan David. [Audio Podcast] <https://brenebrown.com/podcast/brene-with-dr-susan-david-on-the-dangers-of-toxic-positivity-part-1-of-2/>
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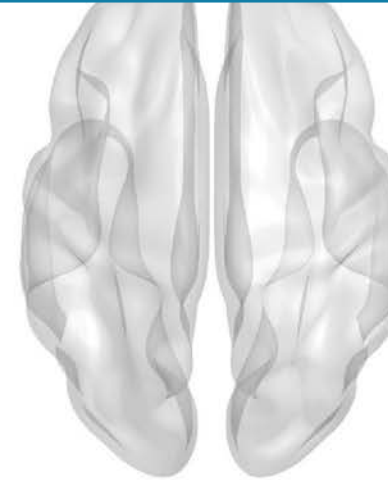
# This is Your Brain on ACT



Saliency

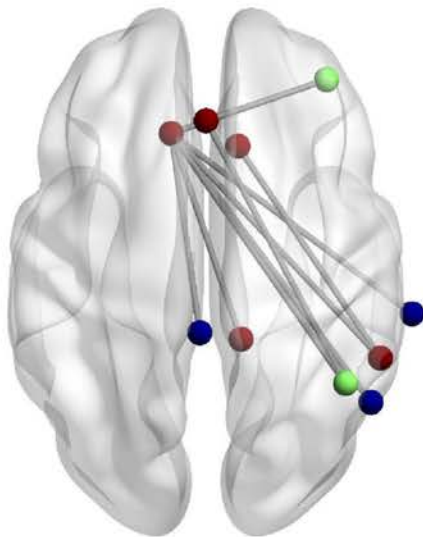


DMN

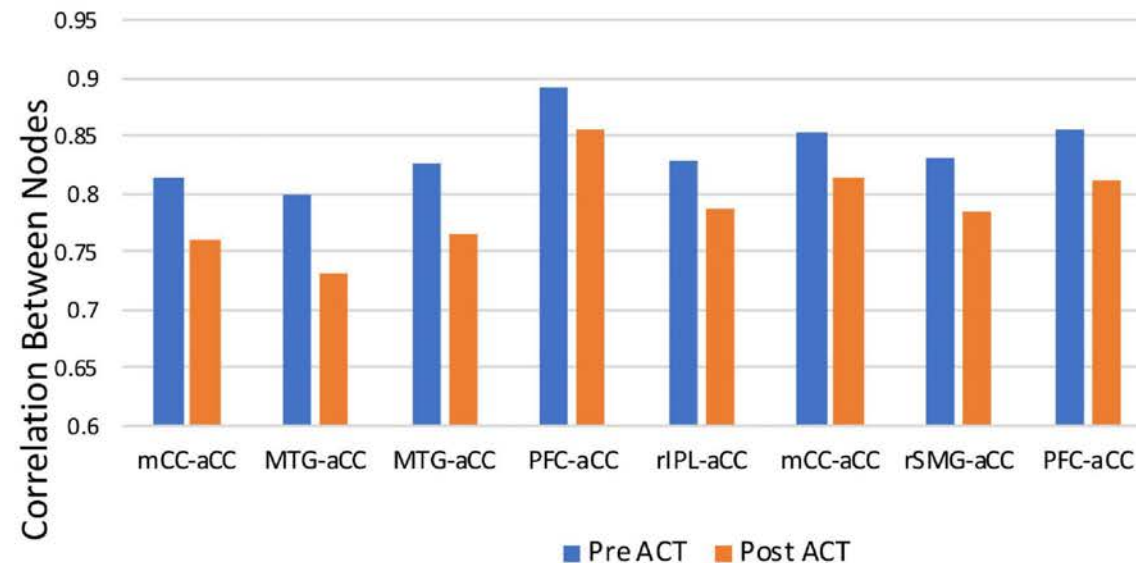


FPN

## B Between Network Effects of ACT : Pre-ACT < Post-ACT



Triple Network

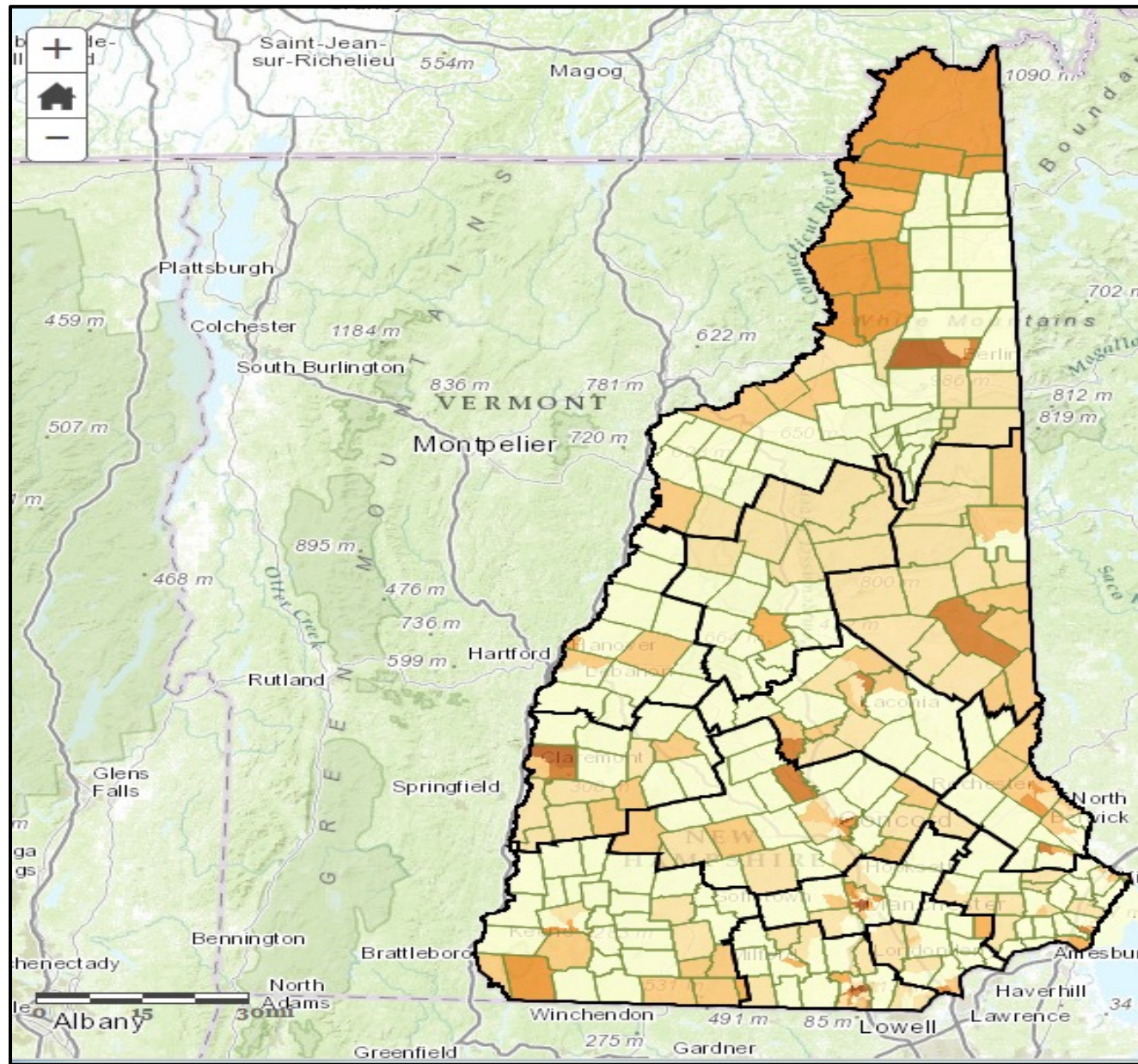


### RESULTS:

Behavioral change scores from pre-to post-ACT showed statistically significant improvements in clinically relevant outcomes, including depression

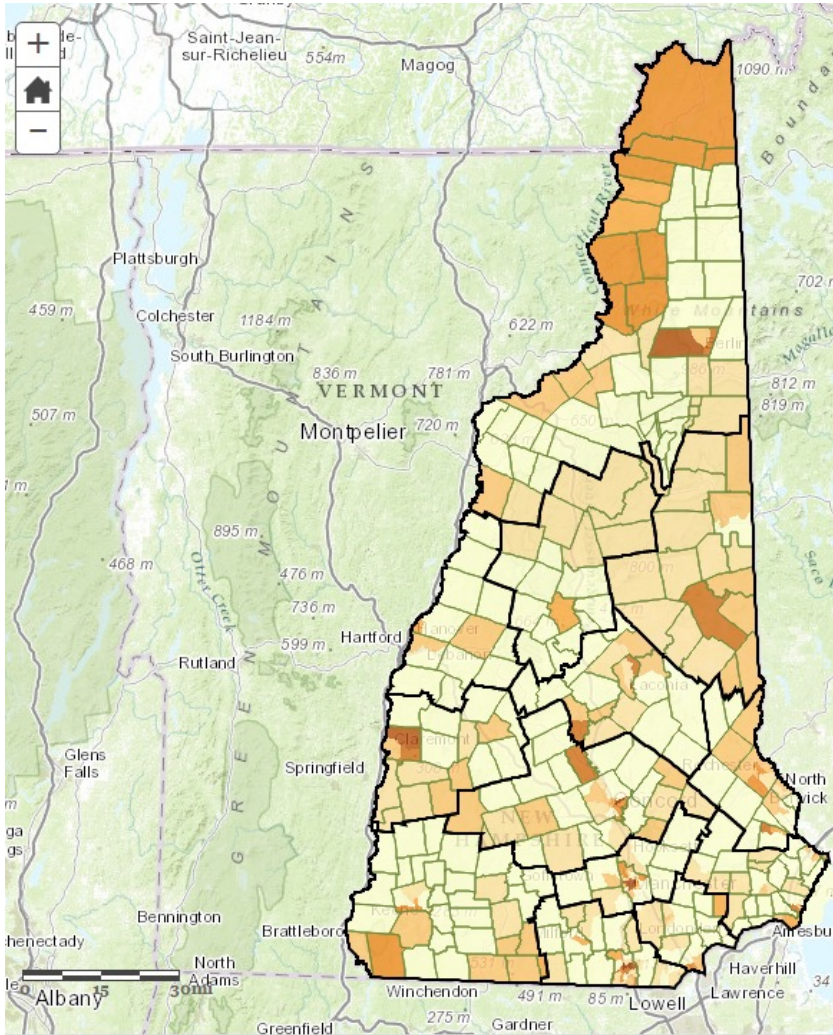
Functional MRI (fMRI) data using network-based statistics compared brain functional connectivity (FC) (pre-ACT vs post-ACT).

Aytur SA, Ray KL, Meier SK, Campbell J, Gendron B, Waller N, Robin DA. Neural Mechanisms of Acceptance and Commitment Therapy for Chronic Pain: A Network-Based fMRI Approach. *Front Hum Neurosci.* 2021 Feb 5;15:587018. doi: 10.3389/fnhum.2021.587018. PMID: 33613207; PMCID: PMC7892587



# Social Vulnerability Index, NH

Source: Holt, D. (2014). Measuring Social Vulnerability. NH DHHS,  
[https://svi.cdc.gov/Documents/Publications/SVI\\_Community\\_Materials/Measuring%20social%20vulnerabilities%20holt\\_09Sep'14.pdf](https://svi.cdc.gov/Documents/Publications/SVI_Community_Materials/Measuring%20social%20vulnerabilities%20holt_09Sep'14.pdf)



END

# Social Vulnerability Index, NH

Source: Holt, D. (2014). Measuring Social Vulnerability. NH DHHS,

[https://svi.cdc.gov/Documents/Publications/SVI\\_Community\\_Materials/Measuring%20social%20vulnerabilities%20holt\\_09Sep'14.pdf](https://svi.cdc.gov/Documents/Publications/SVI_Community_Materials/Measuring%20social%20vulnerabilities%20holt_09Sep'14.pdf)