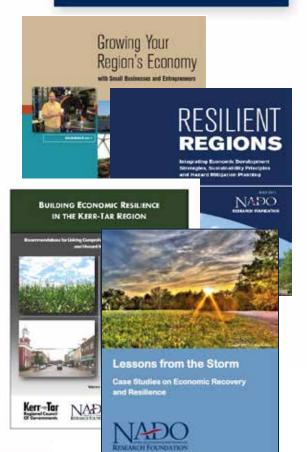
# Planning for a More Resilient Future



# NADO Research Foundation

Founded in 1988, the NADO Research Foundation is the non-profit research affiliate of the National Association of Development Organizations (NADO).





Shares best practices from small metropolitan areas and rural America through training, peer exchange, research, and other capacity-building activities.

#### **Focus Areas:**

- Economic Development
- Organizational Support
- Rural Transportation
- Sustainable Communities
- Regional Resilience





## Regional Resilience

With support from EDA, the NADO Research Foundation provides capacity-building services to RDOs and local governments around building regional resilience to natural disasters and other economic shocks.



These services include training workshops, peer exchanges, technical assistance, webinars, and research on best practices.

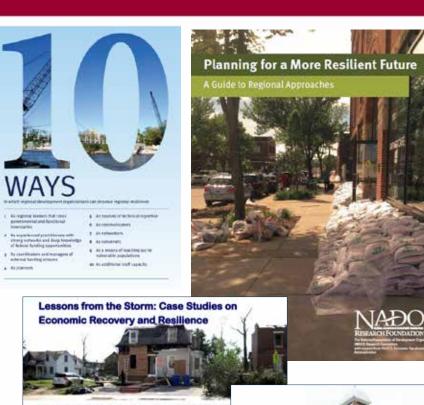


We make our resources and lessons learned available to the public—visit <a href="www.nado.org">www.nado.org</a> or contact <a href="mailto:sjames@nado.org">sjames@nado.org</a>.



# Today's Webinar

- Brian Dabson, Associate Dean of Policy and Outreach, Research Professor, Institute of Public Policy, Harry S Truman School of Public Affairs, University of Missouri (Columbia, MO)
- Catherine Ratté, Principal Planner, Section Manager, Pioneer Valley Planning Commission (Springfield, MA)



Southwestern Massachusetts: Strengthening Businesses and Communities through Disaster Recovery

A Disservery Year

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#### apporting Local Recovery Efforts

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RESEARCH FO

#### Southwestern Massachusetts

A major tornado hit the town of Monson, MA in June 2011 causing irreparable damage to many historic buildings including the town hall. One of the challenges of recovery was that the existing zoning ordinances would prevent rebuilding the town center in ways that would retain its historic character. With a small staff and a volunteer planning board the town turned to the Pioneer Valley Planning Commission for help in updating the master plan and designing new zoning ordinances with the engagement of the local community. The result is new development that reflects the community of seize to preserve their architectural heritage (MADO Research Foundation, 2015).

# Webinar Logistics





Please type any questions you have for the speakers in the **question box** on the side panel throughout the presentation.

The webinar is being recorded and will be posted along with the PowerPoint slides on the NADO website at <a href="https://www.nado.org">www.nado.org</a>.

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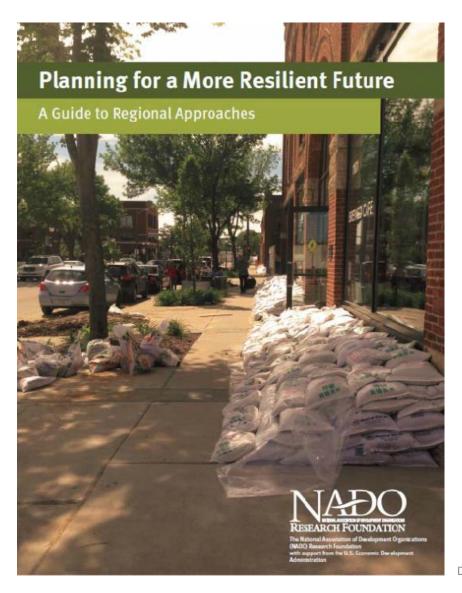
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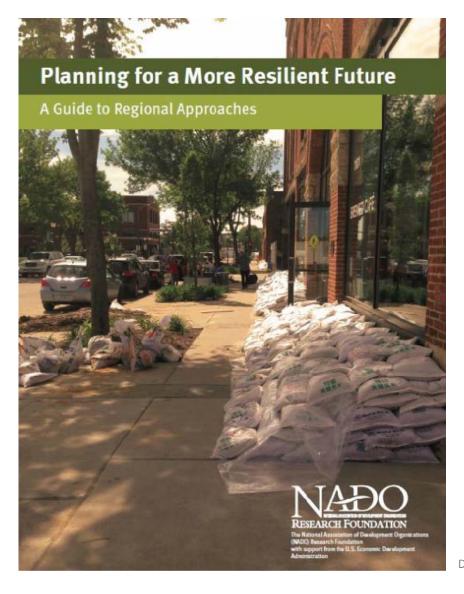
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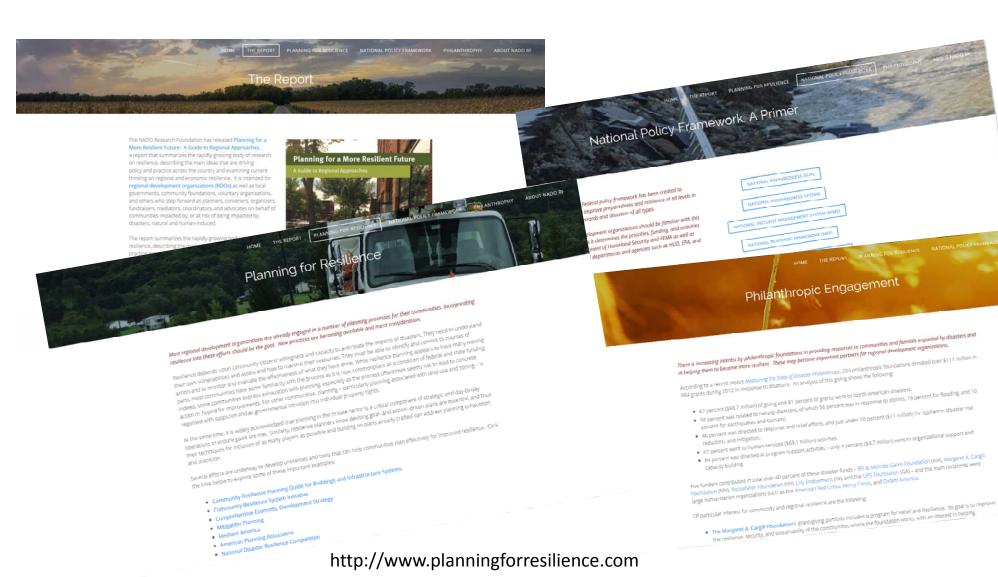


#### Brian Dabson

NADO Research Foundation Webinar December 3, 2015



- Understanding Resilience
- Dimensions of Resilience
  - Regional
  - Economic
- Measuring Resilience
- Planning for Resilience
- Role of Regional Development Organizations





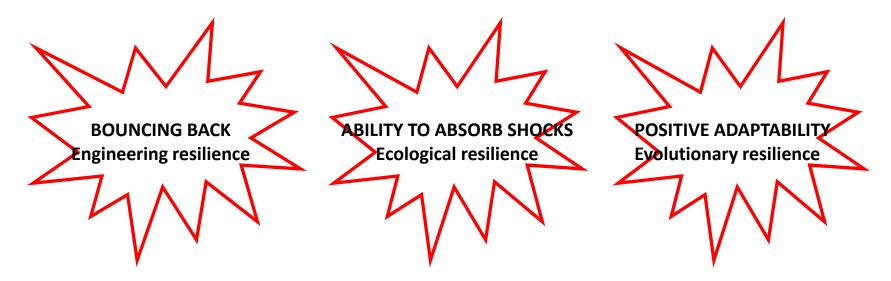






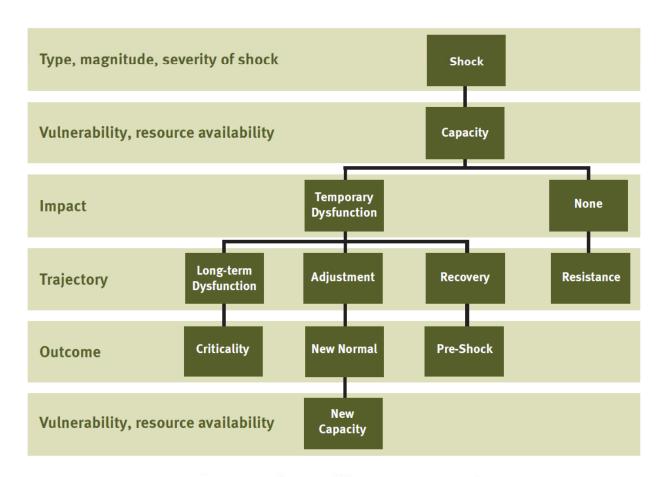






"Community resilience is the capability to anticipate risk, limit impact, and recover rapidly through survival, adaptability, evolution, and growth in the face of turbulent change."

White et al (2015]



#### The Resilience Framework

Source. Derived from Norris et al. (2008)

#### • Shock

- Types: natural, human, medical, economic
- Severity: emergencies, disasters, catastrophes

#### Capacity

- Vulnerability: physical, economic, social
- Resources: adaptability and robustness

#### Impact

Degree and speed of recovery

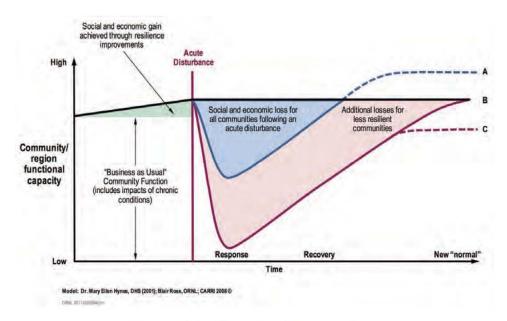


Figure 2: Resilience Loss Recovery Curve

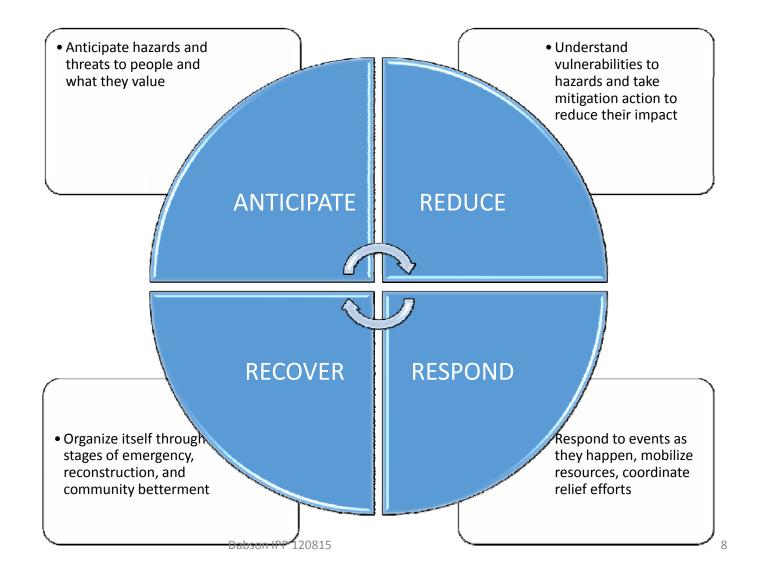
Source: White et al. (2015), p. 203

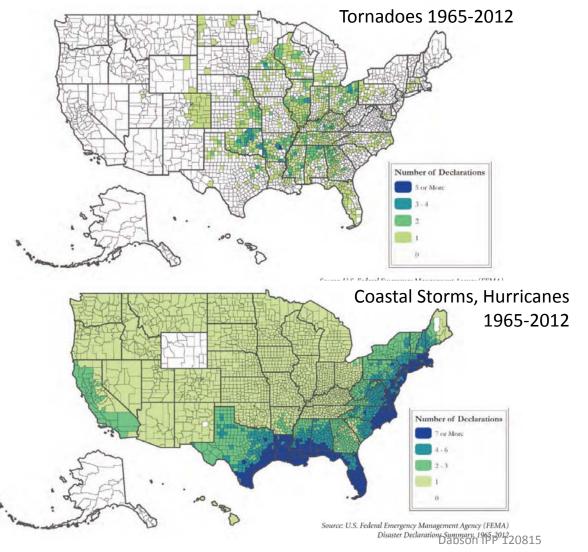
Adapted from model developed by M.E Hynes, B. Ross, and CARRI (2008), presented at the DHS University Summit, Washington, DC

- A. Some communities with high levels of resilience will recover faster and reduce their vulnerability to future shocks
- B. Some will return to preshock conditions
- C. A few less resilient communities will emerge more vulnerable to future shocks

A resilient community is one that can...

**CARRI** 





# Regional Resilience

- Disasters do not respect jurisdictional boundaries – resilience required at both local and regional levels
- Critical need for wellestablished relationships to manage regional flows of information, supplies, resources, and people

## **Economic Resilience**

#### **Business Resilience**



Credit: SIM-CI.com/the-business-case-for-resilience

- Focus on business operations and behavior immediately after disaster is critical for long-term community recovery
- Particular focus on survival of small businesses
  - Supply chains and logistics:
    - supplies
    - distribution of products and services
    - access to customers
    - availability of workforce
  - Inherent tension:
    - short-term cost controls and profitability, versus
    - need to invest in advance planning, risk management, contingency measures

## **Economic Resilience**

#### **Economic Development**

- Resilient local and regional economies are those that adapt to changing conditions:
  - markets and competition
  - technologies
  - disasters
- One measure of resilience is diversity
- CEDS guidelines:
  - Responsive initiatives: pre-disaster recovery planning, open communication channels across governments and sectors, capacity-building
  - Steady-state initiatives: comprehensive planning, economic diversification



#### IN THIS SECTION:

Overview

Content

Summary Background

**SWOT Analysis** 

Strategic Direction

**Evaluation Framewor** 

Economic Resilience

Format

Preparation

Equivalent/Alternative Plans

T Full Report (PDF)





#### CONTENT

#### ECONOMIC RESILIENCE

It is becoming increasingly apparent that regional economic prosperity is linked to an area's ability to prevent, withstand, and quickly recover from major disruptions (se., 'shocks') to its economic base. Many definitions of economic resiliance limit its focus on the ability to quickly recover from a disruption. However, in the context of economic development, economic resilience becomes inclusive of three primary stributes: the ability to recover quickly from a shock, the ability to withstand as shock, and the ability to avoid the shock altogether. Establishing economic resilience in a local or regional economy requires the ability to anticipate risk, evaluate how that risk can impact key economic assets, and build a responsive capacity. Often, the shocks/disruptions to the economic base of an area or region are manifested in three ways:

- Downturns or other significant events in the national or international economy which impact demand for locally produced goods and consumer spending;
- Downturns in particular industries that constitute a critical component of the region's economic activity; and/or
- Other external shocks (a natural or man-made disaster, closure of a military base, exit of a major employer, the impacts of climate change, etc.).

At the regional or community level, economic development practitioners are instrumental in building the capacity for economic resilience. Economic development professionals and organizations often become the focal point for post-incident coordination, information dissemination, responding to external inquines, and the lead grant administrator for federallyfunded recovery initiatives.

In building economic resilience, it is critical that economic development organizations conside their role in the pre- and post-incident environment to include steady-state and responsive initiative.

## Measuring Resilience

- Metrics needed to identify priority needs for improvement, measure progress, and compare benefits of increasing resilience with associated costs.
- No generally agreed-upon metrics.
- Need a measurement system that:
  - is comprehensive across physical, economic, and social dimensions
  - incorporates rigorous procedures for data collection, analysis, weighting and combination, and
  - is open and transparent





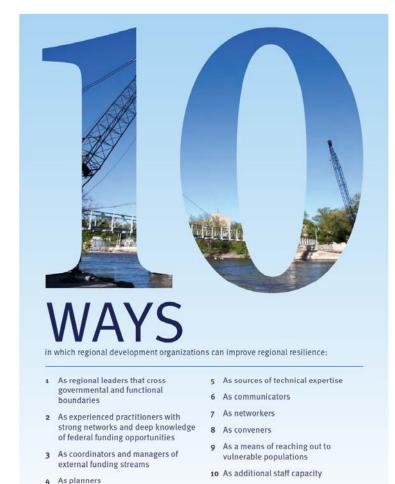
#### **NATIONAL ACADEMY OF SCIENCES**

What	How	Tools	Website
Resilience Capacity Index (Foster, 2011) - Developed by the University of Buffalo Regional Institute	Enables a comparison across all metropolitan regions	Based on a composite measure of regional economic, socio-demographic, and community connectivity factors that influence a region's ability to bounce back after a shock	http://brr.berkeley.edu/rci/ data/ranking
Community Assessment of Resilience Tool (CART) (Pfefferbaum et al., 2011) - National Consortium for the Study of Terrorism and Responses to Terrorism	Helps communities assess and build resilience	Includes: survey instrument, focus group guidelines, method for creating a community profile	www.start.umd.edu/researc projects/community- assessment-resilience-tool- cart
Community Disaster Resilience Index (Peacock, 2010)	Develops a composite index of resilience for Gulf of Mexico coastal counties	Combines the four phases of the disaster management cycle (preparedness, response, recovery, and mitigation) with community capital assets (social, economic, physical, human, and natural) to compute scores and a composite index of resilience	http://hrrc.arch.tamu.edu/ publications
Baseline Resilience Indicator for Communities (BRIC) (Cutter et al., 2010)	Seeks to measure community resilience across five dimensions. One application has been the the spatial distribution of resilience over 736 counties within FEMA Region IV.	Studies social, economic, institutional, infrastructural, and community factors, combining them into a single composite score	http://artsandsciences.sc. edu/geog/hvri
SPUR Performance Goals (SPUR, 2008) Developed by the San Francisco Planning and Urban Research Association	Measures the prospects for recovery from earthquakes in the Bay Area	Uses specific time-to-recovery objectives for critical response facilities, utilities, transportation, housing, businesses, and neighborhood services	www.spur.org
Coastal Resilience Index (Emmer et al., 2008)	Determines the likely impact of storms	Community self-assessment tool that examines transportation systems and critical infrastructure and facilities, as well as measures of community participation, ongoing mitigation efforts, business continuity, and social networks. The measures are converted into a rating system for both individual components and the community as a whole.	http://masgc.org/coastal- storms-program/resilience- index
Social Vulnerability Index (Cutter et al., 2003)	Enables the comparison of capacity of preparedness, response, and recovery across county and sub-county levels	Uses statistically-derived measures combined into a single index - socio-economic status, race and ethnicity, gender, age, and housing tenure are important indicators of inherent vulnerability prior to a shock.	http://artsandsciences.sc. edu/geog/hvri
Community Rating System (FEMA, 1990)	Recognizes and encourages community flood plain management activities over and above the requirements of the National Flood Insurance program (NFIP).	The system is used to determine flood insurance premiums for residents, and points are awarded for a range of activities related to public information, mapping and regulations, flood damage reduction, and warning and response. The more points accrued, the greater the discounts for residents.	www.fema.gov/national- flood-insurance-program- community-rating-system

## Planning for Resilience

- Resilience is not an end in itself. It is an ongoing aspect of community life.
- It requires communities to be:
  - willing to plan for and adapt to economic, social, and environmental changes as they develop.
  - flexible and to weigh competing short and long-term priorities.
- No necessity for a separate "resilience plan" as resilience can/should be integrated into other planning – zoning and land use, transportation, housing, economic development





# 1. As regional leaders that cross governmental and functional boundaries

- RDOs work in urban, suburban, rural settings
- Wide-ranging functions economic development, transportation planning, housing, infrastructure, emergency preparedness
- Positioned to provide regional leadership before, during, and after disasters

# 2. As experienced practitioners with strong networks and deep knowledge of federal funding opportunities

- Funding relationships with multiple federal agencies
- Strong networks with officials in DC and regions
- Knowledge to help local governments, businesses, communities navigate funding opportunities

### 3. As coordinators and managers of external funding streams

- Guiding homeowners and local businesses for government assistance
- Prioritizing funding allocation across region
- Tracking and reporting use of external funds
- Managing revolving loan funds

15

### 4. As planners

- Preparing and updating CEDS, which now includes economic resilience
- Opportunity to integrate other planning processes: hazard mitigation, land use, transportation...

#### 5. As sources of expertise

- Centers of demographic, economic, and hazard vulnerability data, with GIS expertise, statistical analysis
- Conducting initial disaster impact assessments, economic and environmental impact assessments, asset maps, measures of vulnerability and resilience

#### 6. As communicators

- Building on relationships across region and communities and networks with federal and state agencies to create communications hubs
- Growing proficiency with social media

#### 7. As networkers

 Connecting with business community, with philanthropy, nonprofits, volunteers, developing high levels of trust (social capital), as well as with peers (NADO, IEDC) that will be critical in times of emergency

#### 8. As conveners

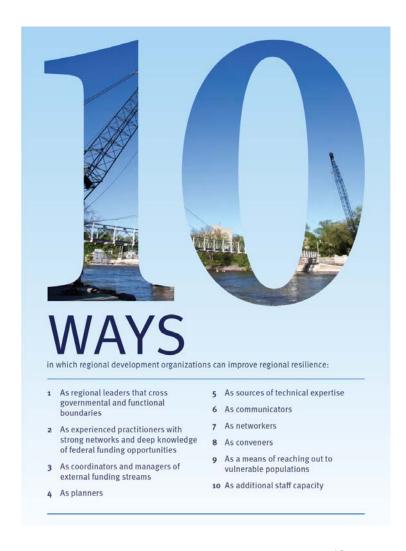
- Helping to facilitate often contentious debate over resource allocations before, during, and after disasters; provide safe space for difficult conversations
- Forging a vision for a more resilient communities, bringing all stakeholders to the table

#### 9. As a means of reaching out to vulnerable populations

 Engaging with minority populations, low-income residents, the elderly, people in institutions

### 10. As additional staff capacity

- Providing technical and organizational staff support to fill gaps at local level, especially in rural areas
- Managing volunteers and supplementing emergency management capacity in times of disaster.





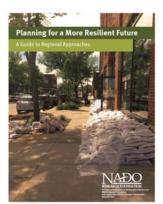
The NADO Research Foundation has released Planning for a More Resilient Future: A Guide to Regional Approaches. A report that summarizes the rapidly-growing body of research on resilience, describing the main ideas that are driving policy and practice across the country and examining current thinking on regional and economic resilience. It is intended for regional development organizations (RDOs) as well as local governments, community foundations, voluntary organizations, and others who step forward as planners, comments on behalf of communities impacted by, or at risk of being impacted by, disasters, natural and human-inducing disasters, surfact and human-inducing disasters.

The report summarizes the rapidly-growing body of research on resilience, describing the main ideas that are driving policy and practice across the country, and examining in particular current thinking on regional and economic resilience. Click to download the full report (PDF) or the executive summary (PDF).

#### Key Takeaways:

On resilience and regional development organizations. The financial, social, and environmental costs of disasters continue to rise. Regional development organizations are in a unique position to guide and support communities and regions towards greater resilience.

On understanding resilience It is vital that regional development



## www.planningforresilience.com www.nado.org http://ipp.missouri.edu

# Regional Dev Organizations Role in Resilience

Pioneer Valley Planning Commission

# NADO 10 ways to improve resilience

- 1. Regional Leaders
- Experienced Practitioners w/ Networks & Knowledge of Funding
- 3. Coordinators/Managers of external funding
- 4. Planners
- 5. TA

- 6. Communicators
- 7. Networkers
- 8. Conveners
- Reach out/Engage Marginalized/Vulnerable
- 10. Additional staff capacity

Regional Leaders	Experienced Practitioners w/ Networks & Knowledge of Funding
Coordinators/Managers of External Funding	Planners
Technical Assistance	Communicators
Networkers	Conveners
Reach out/Engage Marginalized/Vulnerable	Additional Staff Capacity

# Regional Context



- 43 Cities & Towns
- 625,718 people
- Sibling regions-FRCOG
   (north) CRCOG (south-popl >
   1 million & > 100 munis
- North/South Rail and Interstate (91); East/West MassPike

Regional Leaders	Experienced Practitioners w/ Networks & Knowledge of Funding
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# Some Examples

- Engagement of vulnerable/marginalized residents in City of Springfield National Disaster Resilience Competition (NDRC) application
- Grant Writing, Project

   Facilitation, & Strategic
   Planning-post disasters in W.
   Spfld & Monson

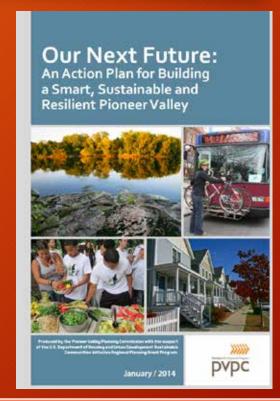
- Our Next Future: An Action Plan for a Smart Sustainable, and Resilient Region
- Economic Development Recovery Assistance-South End Springfield post tornado & grant writing assistance to EDA

- Health Impact Assessment (HIA) Climate Plan Recommendations
- Hazard Mitigation Planning

Regional Leaders	Experienced Practitioners w/ Networks & Knowledge of Funding
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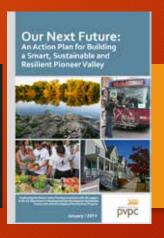
## Our Next Future

- Funding: US HUD
- How/Why? We applied w/ CRCOG
- Involved at ground floor of project idea with Senator Dodd
- Funded in 1st round



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- Climate Action/Clean Energy
- Green Infrastructure
- Brownfields
- Food Security
- Sustainable Transportation
- Land Use
- Environment
- Housing
- Engagement/Capacity Building
- Fair Housing Equity Assessment

 Recruited Muni Reps and other key Stakeholders to volunteer time on Advisory Committees to oversee plan development as well as whole projectè educates reps who return and 'infect' their colleagues (we hope) w/ commitment to resilience



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# Engagement of vulnerable/marginalized residents City of Springfield National Disaster Resilience Competition (NDRC) application



#### Funding?

City CDBG and State DLTA that comes from MA DHCD

#### How/Why?

- Established relationships
- Proven expertise in subject area
- Positive previous work experiences/examples
- Trust
- Ease of procurement
- Efficient use of limited resources: limited travel; already knowledgeable of specifics, established working relationships with CBOs..., and,
- We offered

Regional Leaders	Experienced Practitioners w/ Networks & Knowledge of Funding
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# HIA-Climate Action Plan Recommendations

### Funding?

CDC via M DPH

## How/Why?

 Pre-approved on State Contract several years ago = ease procurement, build relationships, establish trust



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# Grant Writing, Project Facilitation, & Strategic Planning-post disasters in West Springfield & Monson

## Funding?

 State funding from DHCD

## How/Why?

 Municipalities ask and we offer

Reach out/Engage Marginalized/Vulnerable



Regional Leaders	Experienced Practitioners w/ Networks & Knowledge of Funding
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Additional Staff Capacity

# Economic Development Recovery Assistance - South End Springfield post tornado & grant writing assistance to EDA



Zonin's Market staff in new space after Tornado

### Funding?

EDA and State funds via DHCD

### How/Why?

 Established relationships with not for profits, ongoing work in community, fits into regional Economic Development plan, collaborative approach

Regional Leaders	Experienced Practitioners w/ Networks & Knowledge of Funding
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# Hazard Mitigation Planning

### Funding?

FEMA via MEMA

## How/Why?

 Wrote large grant to get Hazard Mitigation planning started in region in 2006; established trust and expertise

Regional Leaders	Experienced Practitioners w/ Networks & Knowledge of Funding
Coordinators/Managers of External Funding	Planners
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## Resilience

- Anticipate threats
- Reduce vulnerabilities
- Mobilize resources & assets
- Plan for a better future



Regional Leaders	Experienced Practitioners w/ Networks & Knowledge of Funding
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Reach out/Engage Marginalized/Vulnerable	Additional Staff Capacity

# Thank you!

- Catherine Ratte' Pioneer Valley Planning Commission
- 413/285-1174, <u>cratte@pvpc.org</u>
- www.pvpc.org

Regional Leaders	Experienced Practitioners w/ Networks & Knowledge of Funding
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## **Questions?**

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#### Speakers:

- Brian Dabson, Associate Dean of Policy and Outreach, Research Professor, Institute of Public Policy, Harry S Truman School of Public Affairs, University of Missouri (Columbia, MO)
- Catherine Ratté, Principal Planner / Section Manager, Pioneer Valley Planning Commission (Springfield, MA)

The recording of this webinar, along with the PowerPoint slides, will be made available at <a href="https://www.nado.org">www.nado.org</a>.



With questions or comments, please contact:

Sara James

sjames@nado.org

202.624.5257