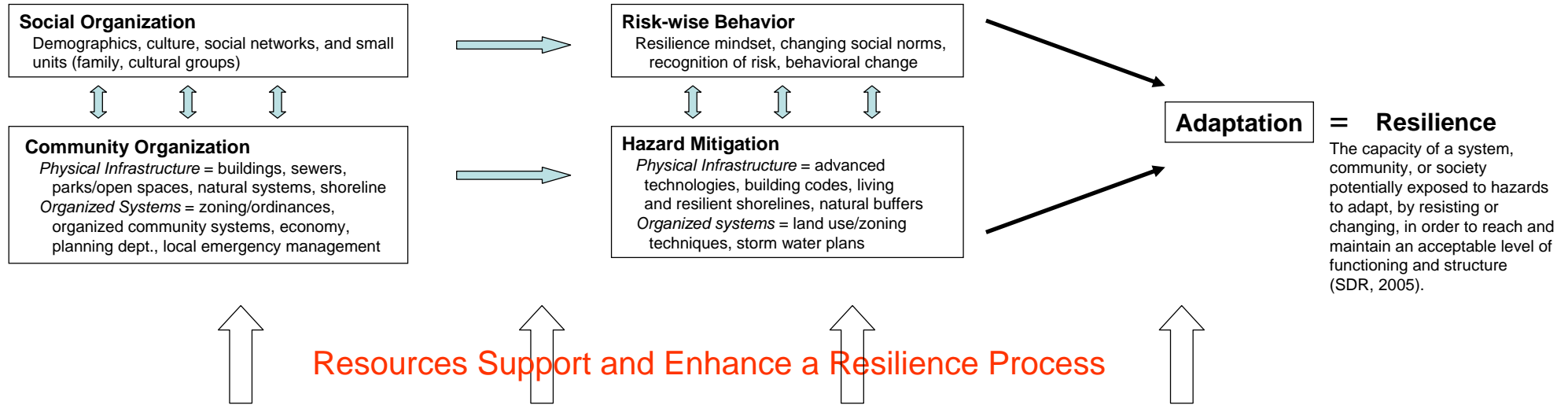
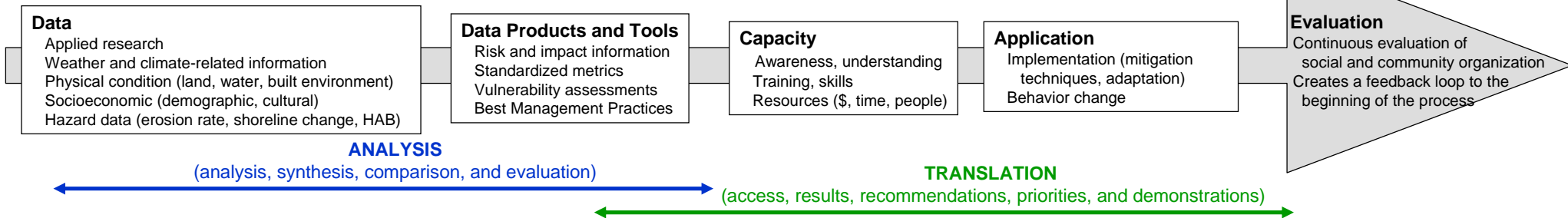


# Hazard Resilience Framework

## Communities



## Resources\*



\*to which NOAA is a major contributor

Note: Resilience is not a finite outcome, but it is indicative of a feedback loop that returns to evaluation of social and community organization for continuous assessment and improvement

## Short-term Outcomes

**Social Organization:** Demographics, culture, social networks, and small units (family, cultural groups)

## Mid-term Outcomes

**Risk-wise behavior:** Resilience mindset, changing social norms, recognition of risk, behavioral change

## Long-term Outcomes

**Resilience:** The capacity of a system, community, or society potentially exposed to hazards to adapt, by resisting or changing, in order to reach and maintain an acceptable level of functioning and structure (SDR, 2005).

**Communities, decision-makers, and individuals engage in long-term actions to reduce hazard risk, loss of life and property, and recovery time**

**Risk-Wise Decision-Making**  
Coastal Communities:  
• make risk-wise decisions (public & private) using best data & information  
• integrate risk-wise decision-making into a broad range of planning activities (transportation, land use, resource protection)  
• elect leaders willing to support risk-wise behavior and strategically reduce risk  
• have a vision for their future

**Community Leadership and Support**  
Coastal Communities:  
• have zoning that reflects hazard risk and comprehensive planning  
• make elected officials aware of vulnerability and approaches to reduce risk  
• have incentives for risk-wise behavior  
• support adoption of pro-active efforts to reduce vulnerability  
• are supported by state & federal policies/products to help reduce vulnerability

**Awareness and Change**  
Coastal Communities:  
• value the importance of long-term resilience  
• are aware of economic benefits of addressing vulnerabilities and consequences of inaction  
• change land use and response plans because of hazard data and info  
• incorporate knowledge gained during a hazard event into plans for the next occurrence

**Education and Communication**  
Coastal Communities:  
• have training that enables them to access and use data and tools for planning and response  
• receive technical and management assistance to incorporate efforts to reduce vulnerability into community plans  
• effectively communicate hazard risk and vulnerability to public and at-risk populations  
• have outreach and training programs that are coordinated and funded  
• share best practices with communities with similar vulnerabilities

**Hazard data and derived data products are used by coastal communities for planning and response efforts**

**Coastal communities adopt and implement strategies to encourage use of disaster-resilient coastal development techniques and coastal conservation measures**

**Coastal communities recognize and reduce vulnerabilities of populations and critical infrastructure**

## Community Organization:

(1) *physical infrastructure:* buildings, sewers, hospitals, parks, natural systems  
(2) *organized systems:* zoning boards, economic drivers, planning departments

## Hazard Mitigation:

(1) *physical infrastructure:* advanced technologies, building codes, living and resilient shorelines, natural buffer  
(2) *organized systems:* land use, zoning techniques, storm water plans

**Access and Understanding**  
Coastal Communities:  
• understand benefits of vulnerability assessment  
• have standardized definitions of vulnerability and risk  
• have access to and understanding of vulnerability analysis metrics  
• establish baseline measurements of community, economic & natural resources (comparable across areas)  
• understand local and regional trends (economic, demographic, land use)

**Capacity**  
Coastal Communities:  
• are aware of, understand, and have access to resources (data, expertise, \$, skills) and capacity for conducting vulnerability analyses  
• can identify high-hazard areas, critical infrastructure, vulnerable populations, and vulnerable economic drivers in community

**Coastal communities conduct vulnerability assessments using standard metrics**

**Information Resources**  
Datasets and Information:  
• are collected according to needs of the coastal management community  
• are coordinated and collected at appropriate spatial and temporal scales  
• are standardized for hazard applications (e.g. damage assessment)  
• are widely accessible  
• are delivered to communities via appropriate mechanisms  
• continually being improved through management-applicable research

**Data:**  
Research, weather and climate, physical condition, socioeconomic, hazard data

**Data Products and Tools:**  
Risk and impact information, standardized metrics, vulnerability assessments

**Capacity:**  
Awareness, understanding, training, skills, resources (time, \$, people)

**Application:**  
Implementation of strategies to reduce risk and change behavior

**Evaluation:**  
Continuous evaluation of social and community organization  
Creates a feedback loop to the beginning of the process

ANALYSIS

TRANSLATION

Note: Resilience is not a finite outcome, but it is indicative of a feedback loop that returns to evaluation of social and community organization for continuous assessment and improvement

For each of the two pieces of community (Social Organization and Community Organization), blue arrows represent the process of becoming more resilient for each piece (Adaptation and Hazard Mitigation)

Green arrow indicates the range of information resources necessary to feed into the Adaptation and Hazard Mitigation processes to produce hazard resilient communities

COMMUNITIES

RESOURCES