

# Communicating Risk



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# Communicating Risk

- Why do we care?
- Why is it so complex?
- Research findings and models
- Best practices
- Additional resources



# Why Do We Care About Communicating Risk?

- Foster personal preparedness and resilience behaviors
- Foster support for community level action and investments



Photo: <http://keysnews.com/node/42973>



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# Why is Communicating Risk Complex?

“The crux of risk communication is understanding how risk is perceived”

– Dr. Betty Morrow

- Risk = Hazard x Exposure x Probability
- But risk perception includes a host of other variables...



# Interpretive Frames

Risk = Hazard x Exposure x Probability

PLUS...



# Feelings Influence Risk Perception and Risk Behavior

Analytic  
Processing

Experiential  
Processing



# Risk Perception and Communication Research



# Theories / Models of Belief and Behavior Change

- Mental models
- Transtheoretical model (stages of change)
- Global warming's six Americas
- Social marketing and community-based social marketing



# Mental Models

- Built over time based on experiences and social interactions
- Used as a “lens” when we get new information or are faced with a new situation
- Help us apply memory to new tasks
- BUT we tend to ignore new data that does not fit, and seek out data that confirms our model

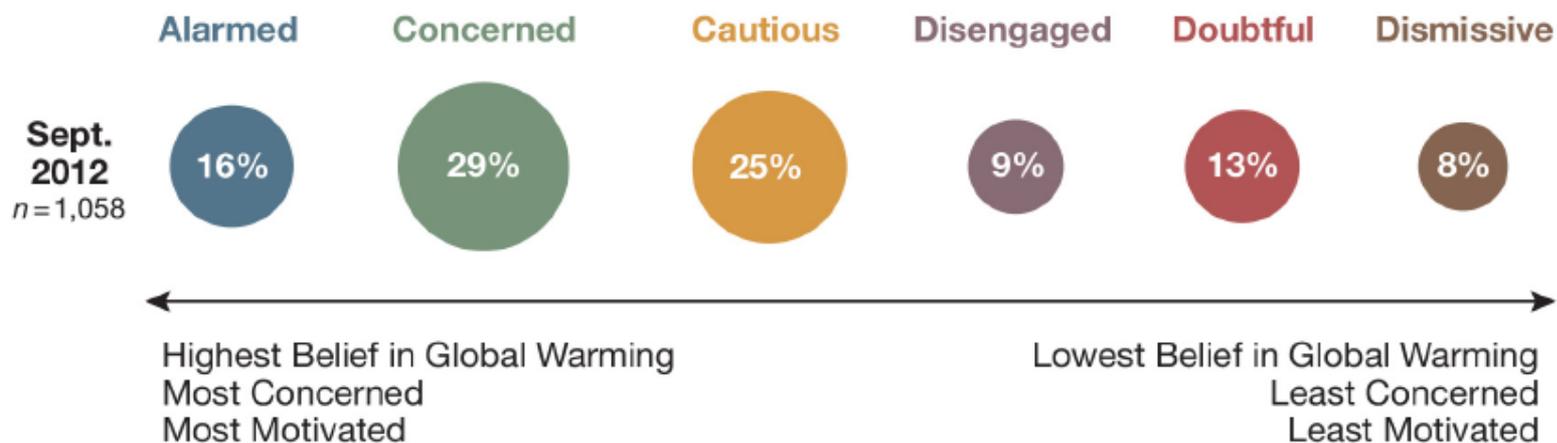


# Transtheoretical Model (Stages of Change)



# Global Warming's Six Americas

## The Six Americas Audience Segments



*Proportion represented by area*

Source: Yale / George Mason University



# Social Marketing

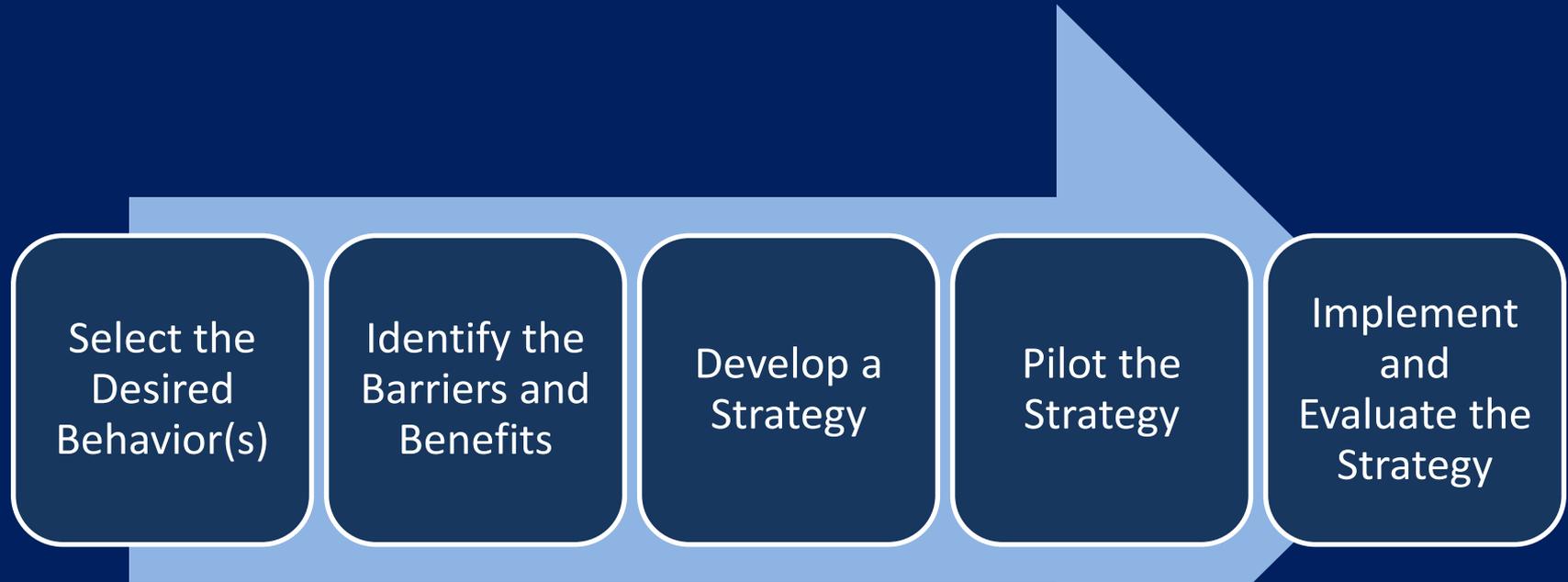
“The planning and implementation of programs designed to bring about social change using concepts from commercial marketing.”

- The Social Marketing Institute

- Influence behaviors and actions
- Information alone rarely changes behaviors
- Focuses on decreasing barriers and increasing benefits



# Community Based Social Marketing



Modified from  
*Fostering Sustainable Behavior, 1999,*  
*McKenzie-Mohr and Smith*



# Community-Based Social Marketing

Use a combination of behavior-changing tools

- Commitment (a signed pledge)
- Prompts (signs and flyers)
- Social norms (group behaviors)
- Communication and information (persuasion and vivid messages)
- Incentives (money, time)
- Removing external barriers (removing inconvenience and cost)





# Specific Research Findings

- Confirmation bias and optimism bias
- Uncertainty can be hard to communicate; emphasize what is known
- Fear-based communication alone does not lead to action
- Refuting false statements can serve to reinforce them
- Social norms are powerful



# Specific Research Findings



Dr. Dennis Mileti

- Department of Homeland Security study on public preparedness
- 3300 Respondents



# Dr. Mileti's Research

## Two Factors Drive Public Preparedness

### 1. INFORMATION "Received" IF:

- FROM: multiple sources
- OVER: multiple communication channels
- ABOUT: what preparedness actions to take
- EXPLAINS: how actions cut losses
- THAT IS: consistent across messages

### 2. INFORMATION "Observed":

- CUES: seeing others take actions



# Best Practices



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# 1. Consider Your Goal

- Information and education
- Behavior change and protective action
- Disaster warnings and emergency information
- Joint problem solving and conflict resolution



## 2. Learn About Your Audiences

- Values, interests, attitudes, and beliefs
- Current perception of risk, past experiences
- Preferred information sources
- Barriers and benefits to taking action



# 3. Speak to Your Audiences' Interests



# 4. Engage Your Audiences, Start a Dialog



# 5. Use Trusted Sources



## 6. Use Multiple Sources

## 7. Make Messages Consistent

## 8. Partner



# 9. Include Messages About What People Can DO

# 10. Explain How Taking Action Will Provide Benefits (or Reduce Costs)



# 11. Test Your Messages

# 12. Evaluate Your Campaigns

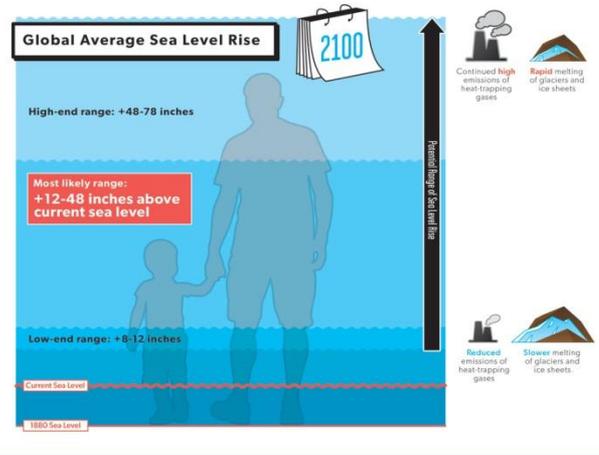


# 13. Use Visuals, and

# 14. GET CREATIVE!

## SCIENCE CONNECTIONS → SEA LEVEL RISE & GLOBAL WARMING

The choices we make **today** will determine how high sea level rises this century, how fast it occurs, and how much time we have to protect our communities.



© Union of Concerned Scientists 2013; [www.ucsusa.org/sealevelrise](http://www.ucsusa.org/sealevelrise)



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# For More Information: New Training Webinar

- Seven Best Practices for Risk Communication  
[www.coast.noaa.gov/digitalcoast/training/risk-communication](http://www.coast.noaa.gov/digitalcoast/training/risk-communication)
- Offered quarterly



# For More Information

- Morrow, Betty. 2009. *Risk Behavior and Risk Communication: Synthesis and Expert Interviews*. Final Report for NOAA.
- Leiserowitz, A., Maibach, E., Roser-Renouf, C., Feinberg, G. & Howe, P. (2013) *Global Warming's Six Americas, September 2012*. Yale University and George Mason University. New Haven, CT: Yale Project on Climate Change Communication.
- Mileti, Dennis et al. 2006. *Annotated Bibliography For Public Risk Communication On Warnings For Public Protective Actions Response And Public Education*. University of Colorado Natural Hazards Center.



# For More Information

- McKenzie-Mohr, Doug. 2011. *Fostering Sustainable Behavior: An Introduction to Community-Based Social Marketing (Third Edition.)* New Society Publishers.
- Social Science Tools for Coastal Programs Publication Series  
<http://coast.noaa.gov/digitalcoast/publications/social-science-series>
- Video in PBS “It’s Okay to Be Smart” Series: *Why People Don't Believe In Climate Science.*  
<https://www.youtube.com/watch?t=33&v=y2euBvdP28c>





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