The Evolving Weather Service: Relationship Dimensions that Drive Strong Partnerships

Since the tragic tornado outbreaks in Central Alabama and Joplin, Missouri in 2011, the National Weather Service (NWS) has increasingly emphasized the importance of supporting community partners who help protect public safety.[1] Through impact-based decision support services (IDSS), NWS forecasters develop relationships with their core partners to meet their partners' decision-making needs. These core partners include broadcast meteorologists and emergency managers.

As part of the National Oceanic and Atmospheric Agency's VORTEX-SE program[2], we conducted a survey examining how NWS forecasters and managers assess their relationships with core partners. Here we present the survey instrument from this project, with items adapted from Shen (2017).[3] This instrument can be used by forecasters and others to assess the strength of their relationships with core partners.

Part A, which we employed in our project, measures how NWS forecasters and managers perceive their office's relational culture with core partners. Part B measures partners' perceptions of their relationship with the NWS.

Part A: Protocol for Measuring Perceptions of Office's Relational Culture with Core Partners

Instructions: We are interested in your thoughts on the relationships between your office and your core partners (emergency managers and broadcast meteorologists). For each of the partner groups below, indicate the extent to which you agree or disagree with each of the following items, on a scale from 1- strongly disagree to 7 – strongly agree.

Trust

1. Whenever my office makes an important decision, I know it will be concerned about our emergency managers/broadcast meteorologists.

	1 – strongly disagree	2	3	4	5	6	7 – strongly agree
Emergency managers							
Broadcast meteorologists							

[1] Uccelini, L. W., and J. E. Ten Hoeve, 2019, October. Evolving the National Weather Service to build a weather-ready nation: Connecting observations, forecasts, and warnings to decision-makers through impact-based decision support services. *Bulletin of the American Meteorological Society*, **100**, 1923-1942. https://doi.org/10.1175/BAMS-D-18-0159.1

[2] How forecasters decide to warn: Insights on tornado risk communication from the Southeast U.S. National Oceanic and Atmospheric Administration (NOAA). September 2017-August 2019. Award No. NA17OAR4590194 [PI Brooke Fisher Liu; Co-PI Anita Atwell Seate].

[3] Shen, H., 2017. Refining organization-public relationship quality measurement in student and employee samples. *Journalism and Mass Communication Quarterly*, **94**, 994-1010. https://doi.org/10.1177%2F1077699016674186

2. Our emergency managers/broadcast meteorologists can rely on my office to keep promises.

	1 – strongly disagree	2	3	4	5	6	7 – strongly agree
Emergency managers							
Broadcast meteorologists							

Distrust

1. I am skeptical about whether my office will keep our emergency managers'/broadcast meteorologists' interests in mind when it makes decisions.

	1 – strongly disagree	2	3	4	5	6	7 – strongly agree
Emergency managers							
Broadcast meteorologists							

2. I feel that my office will exploit our emergency managers'/broadcast meteorologists' vulnerability given the chance.

	1 – strongly disagree	2	3	4	5	6	7 – strongly agree
Emergency managers							
Broadcast meteorologists							

3. I feel that my office will engage in damaging and harmful behavior to our emergency managers/broadcast meteorologists to pursue its own interests.

	1 – strongly disagree	2	3	4	5	6	7 – strongly agree
Emergency managers							
Broadcast meteorologists							

Control Mutuality

1. This office and our emergency managers/broadcast meteorologists are attentive to what each other say.

	1 – strongly disagree	2	3	4	5	6	7 – strongly agree
Emergency managers							
Broadcast meteorologists							

2. My office believes the opinions from our emergency managers/broadcast meteorologists are legitimate.

	1 – strongly disagree	2	3	4	5	6	7 – strongly agree
Emergency managers							
Broadcast meteorologists							

Commitment

1. My office does NOT treat our emergency managers/broadcast meteorologists like "part of the family" (reverse coded).

	1 – strongly disagree	2	3	4	5	6	7 – strongly agree
Emergency managers							
Broadcast meteorologists							

2. My office tries to create a great deal of personal meaning for our emergency managers/broadcast meteorologists.

	1 – strongly disagree	2	3	4	5	6	7 – strongly agree
Emergency managers							
Broadcast meteorologists							

3. My office tries to create a long-lasting bond between my office and our emergency managers/broadcast meteorologists.

	1 – strongly disagree	2	3	4	5	6	7 – strongly agree

Emergency managers							
Broadcast meteorologists							

Satisfaction

1. I am happy with what my office does for and with our emergency managers/broadcast meteorologists.

	1 – strongly disagree	2	3	4	5	6	7 – strongly agree
Emergency managers							
Broadcast meteorologists							

2. I believe that our emergency managers/broadcast meteorologists are happy in their interactions with my office.

	1 – strongly disagree	2	3	4	5	6	7 – strongly agree
Emergency managers							
Broadcast meteorologists							

Part B: Protocol for Measuring Partners' Perceptions of Their Relationship with the Organization

Instructions: The following questions ask about your perceptions about your relationships with [name of organization, e.g., NWS Nashville Weather Forecast Office]. Please indicate the extent to which you agree or disagree with each of the following items, on a scale from 1- strongly disagree to 7 – strongly agree.

Trust

1. Whenever [name of organization] makes an important decision, I know it will be concerned about its partners/name of partner group.
2. [Name of organization] can be relied on to keep its promises to partners/name of partner group.

Distrust
1. I am skeptical about whether [name of organization] will keep its partners/name of partner group interests in mind when it makes decisions.

2. I feel that [name of organization] will exploit its partners/name of partner group vulnerability given the chance.
3. I feel that [name of organization] will engage in damaging and harmful behavior its partners/name of partner group to pursue its own interests.

Control Mutuality

1. [Name of organization] and its partners/name of partner group are attentive to what each other say.
2. [Name of organization] believes the opinions from its partners/name of partner group are legitimate.
3. In dealing with its partners/name of partner group, [name of organization] has a tendency to throw its weight around (reverse coded).

Commitment

1. [Name of organization] does NOT treat its partners/name of partner group like "part of the family" (reverse coded).
2. [Name of organization] tries to create a great deal of personal meaning its partners/name of partner group.
3. [Name of organization] tries to create a long-lasting bond between themselves and its partners/name of partner group.

Satisfaction

1. I am happy with what [name of organization] does for and with its partners/name of partner group.
2. I believe most partners/name of partner group are happy in their interactions with [name of organization].