

Communicating About Water in the Floridan Aquifer Region: Part 4—The Media’s Role in Water Perceptions¹

Sadie Hundemer and Shenara Ramadan²

Local and regional news media can have a major impact on public awareness of and interest in water challenges. It is not simply what the media reports that affects public perceptions, but also how they frame it. As described by communication professor, Robert Entman (1993, p. 52), “To frame is to *select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation* for the item described.” Thus, frames affect how water problems are defined, morally evaluated, and addressed.

A study on 9 years of water reporting from six newspapers in the Floridan Aquifer region revealed a hierarchy of frames used to relate water conditions to human interests. In local and regional newspapers, the value frames used to generate reader interest about water conditions included economics, human health, and ecosystem impacts (in that order), the last of which received comparatively little journalistic attention. Ecosystem impacts include the effects of water conditions on the natural world, such as the degradation of natural spaces and harm to wildlife.

The relatively low attention given to ecosystem impacts may have unintended consequences, including low levels of public interest in water issues. In addition, if ecosystem impacts are not emphasized in the media, they may not be adequately attended to in governance.

This publication is intended for journalists, Extension professionals, and other water communicators who aim to connect water issues with the interests of diverse audiences and provide a comprehensive picture of water challenges.

Environmental Value Orientations

Values are guiding principles that affect the things in which people have interest, the attitudes they adopt, and the choices they make (Schwartz, 1992; Steg, 2016; Stern, 2000; Stern & Dietz, 1994). When journalists design a compelling story about water resources, they do so through the application of values. For example, water news may be presented as a story of economic risk, human health concern, or ecosystem impact. Through this type of value framing, journalists can stimulate personal and public action toward new water management approaches (Bechtel et al., 2015; Brewer, 2002; Davis, 2016; Lakoff, 2010; Mossler et al., 2017; Nelson & Oxley, 1999). However, people differ in their value priorities and, as a result, may react differently depending on the values invoked.

There are at least three environmental value orientations—i.e., dominant values that guide environmental interests and decision-making. A person may be primarily *egoistic*, *social-altruistic*, or *biospheric* (de Groot & Steg, 2008; Stern, 2000). As described below, people of all three orientations may engage in pro-environmental behaviors but for differing motivations. As a result, the way journalists present

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2. Sadie Hundemer, assistant professor; and Shenara Ramadan, graduate assistant; Department of Agricultural Education and Communication, UF/IFAS Extension, Gainesville, FL 32611.

news stories can cause people in these groups to react in different ways.

- **Egoistic Individuals:** Most likely to engage in water protective actions when there is a personal benefit, such as individual financial savings or a personal reduction in disease risk.
- **Social-Altruistic Individuals:** Most likely to engage in water protective actions when the benefit is accrued by society, such as community financial gain or improved human health across the region.
- **Biospheric Individuals:** Most likely to engage in water protective actions when benefits are realized by ecosystems or nonhuman species.

How Was Water News Examined?

In total, 335 water news articles published from 2010 to 2018 in six local and regional newspapers were qualitatively analyzed. Florida newspapers included the Gainesville Sun, Jacksonville’s Florida Times-Union, and the Tallahassee Democrat; Georgia newspapers included the Albany Herald, Atlanta Journal-Constitution, and Valdosta Daily Times. The content of each news item was evaluated, line-by-line, to identify the values used to create reader engagement. News stories covered nine water topic categories: weather, residential behavior, agriculture, algae, industry, springs, energy, municipalities, and fecal matter. These papers are located near vulnerable regions of the Floridan Aquifer that are most vulnerable to groundwater contamination and include both rural and urban areas.

Three Value Frames Dominated Water Coverage

Hierarchy of water values in news coverage included:

1. *Economic: Implications of water conditions on present economic well-being and future economic growth.*
2. *Human health: Implications of water conditions on human health and safety.*
3. *Ecosystem: Implications of water conditions on the natural world.*

Journalists conveyed the importance of regional water resources and related issues using three core values: economics, human health, and ecosystems. Table 1 summarizes the value frames emphasized by article category.

Economic values, associating water conditions with present economic well-being and implications for future economic growth, were prominent (appearing in either a dominant or secondary position) across all article categories. In four of the nine categories, human health values were prominent, highlighting safety concerns such as raw sewage or toxic chemicals in the water. Also prominent in four categories were ecosystem values, which conveyed the degradation of special places or damage to the natural world. Although the same number of categories emphasized human health and ecosystems, ecosystem implications were not presented with the same level of importance as human health implications.

Table 1. Value Frames by Article Category.

Category	Value Frames		
	Economics	Human Health	Ecosystems
Weather	Dominant		Secondary
Residential	Dominant (water use)		Dominant (water contamination)
Agriculture	Secondary		Dominant
Algae	Dominant	Secondary	
Industry	Secondary	Dominant	
Springs	Secondary		Dominant
Energy	Secondary	Dominant	
Municipal	Dominant		
Fecal matter	Secondary	Dominant	

Matching News Values to Human Value Orientations

Comparing the water values used by news media with human value orientations (illustrated in Figure 1) reveals a possible shortcoming in water reporting: inadequate attention to the interests of biospheric individuals who are highly concerned with impacts to ecosystems and nonhuman species. The two dominant water news values—economics and human health—are human centric. Therefore, they are most likely to resonate with egoistic and social-altruistic individuals who are concerned about human outcomes (whether for themselves personally or for society in general). But the relative scarcity of ecosystem news values suggests that biospheric individuals may not receive the type of information most compelling to them through local/regional newspapers.

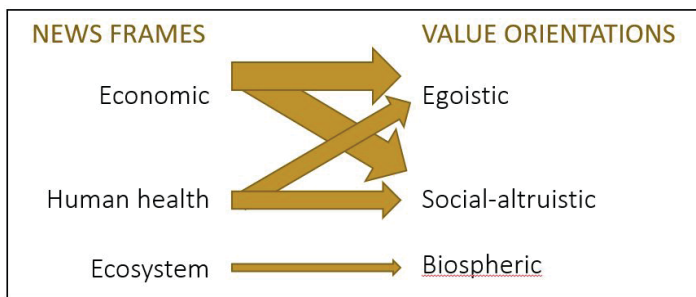


Figure 1. Relationship between news frames and human value orientations.

Credits: Sadie Hundemer, UF/IFAS

Potential Implications of a Scarcity of Ecosystem Values in Newspaper Reporting

Biospheric individuals may be inadequately motivated to engage in water protective behaviors based on newspaper reporting alone. Newspaper reporting is only one way that people receive information on local and regional water topics, but to the extent that they rely on the news, biospheric individuals may be less aware of how water issues affect the things they care about. As a consequence, biospheric individuals may engage in fewer water protective actions than they otherwise would.

Water policies may inadequately consider ecological risk. Water management strategies are developed in response to perceived problems or risks. If human health and economic risks are presented most prominently, then water policy may address those concerns without also addressing ecological risk.

Water trade-off decisions could be unbalanced. Water is a limited resource and, therefore, requires trade-offs. Water used by cities does not remain in rivers, streams, springs, and lakes. Likewise, water contamination resulting from activity that is economically essential may be ecologically harmful. These trade-offs can be effectively made only if the full range of value implications are cognitively available to decision makers and society at large.

How to Use this Information

Be a good source. Journalists are overextended. Often the reporter covering science and environmental issues also works on several other news topics (Barthel, 2019). As a result, journalists may have limited understanding of the range of public values associated with water issues (Archibald, 1999). Individuals and organizations who are cited and interviewed by the media can help journalists represent a range of environmental values by speaking in those terms. Also, due to limited resources, news media may rely heavily on easily accessible content such as press

releases and governmental reports (Autzen, 2014). The values represented in these resources are more likely to be represented in the news.

Include journalists at appropriate points in the water policy process. Journalists can only report on what they know. It can, therefore, be useful to provide them with access to the water decision-making process as value implications are discussed. When including journalists, be careful that their presence does not impede the willingness of stakeholders to freely participate.

How NOT to Use this Information

Don't overcorrect and underemphasize economic and human health implications. Everyone has some investment in health and economic outcomes. This may be why journalists heavily emphasize health and economics. The issue is not that economic and human health implications are prominent but that biospheric values are not also prominently presented on water topics to which they apply.

Don't focus solely on newspapers. News reporting is only one of many sources that influence water interests and behavior. Potential biases in water issue presentation can and should be considered across a wide range of media types, including mainstream platforms such as radio and television, and also online channels such as blogs, podcasts, and social media.

Summary

Relative to economic and human health frames, ecosystem frames were underrepresented in local and regional newspaper water reporting in the highlighted study. As a result, readers may not be informed about the effects of water conditions on natural spaces and wildlife. In addition, news stories may fail to connect with people who have biospheric value orientations. Water communicators can improve water reporting by considering the range of values they include when presenting water information.

For more information on this study, see “A Scarcity of Biospheric Values in Local Regional Reporting of Water Issues: Media Coverage in the Floridan Aquifer Region” at <https://doi.org/10.4148/1051-0834.2424> (Hundemer et al., 2022).

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