

The Communication Effectiveness of Scientist-Stakeholder Partnerships Addressing Agriculture and Natural Resources Issues: An Analysis of the Media Attention and Media Framing of the Florida Water and Climate Alliance

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Abstract

Scientist-stakeholder partnerships are formed by scientists from academic institutions and industry representatives in an effort to address contingent science issues such as climate change, inform the public and influence public policies. Such organizations often lack expertise in communicating to the public and conducting outreach which are crucial components to building a good reputation. This study selected Florida Water and Climate Alliance [FWCA] as an example of such an organization, exploring its media attention and media framing to assess the visibility and reputation of [FWCA]. Results showed very limited media attention had been devoted to [FWCA]. The framing analysis results indicated that the coverage of [FWCA] is mostly introductory and descriptive information from public institutions, collaborators and funding agencies. These results demonstrate the need for such organizations to increase media visibility and build their reputations through strategic communication. Scientist-stakeholder partnership organizations like FWCA could gain from strategic collaborations with agricultural communications professionals and academic researchers. To better assist in building the reputation for these organizations, recommendations include developing strategic communication plans and conducting research about stakeholders' and collaborators' perceptions of an organization's reputation.

Keywords

Scientist-stakeholder partnerships, media attention, visibility, framing, reputation

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Cover Page Footnote/Acknowledgements

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The public debate surrounding many agricultural and natural resources (ANR) issues has become more heated. Public opinion and policy decisions on ANR issues tend to rely largely on political elites' cues instead of relying on science (Darmofal, 2005; Brulle, Carmichael, & Jenkins, 2012). Indeed, the scientific evidence and facts are sometimes dismissed or even called into question. Scientists know they need to communicate their findings and the impacts of their work, but they have not been trained to do so. At the same time, practitioners and decisionmakers are looking for the best available science, but sometimes find the work of academic scientists to be impractical and hard to apply to real-world problems.

In response to these challenges, scientists and practitioners have tried to work together more closely and formally to create actionable science that informs policy. One version of this is the scientist-stakeholder partnership, which is formed by scientists from academic institutions and lay representatives seeking to collaborate with other stakeholders who share the same interest (Hallett et al., 2017; Jacobs, Garfin, & Lenart, 2005; Wall, McNie, & Garfin, 2017). The goal of these partnerships is not only to collaborate on research but to educate and communicate to the public about specific science-related issues in an effort to influence public opinion and policy on those issues (Hallett et al., 2017; Jacobs, et al, 2005; Wall et al, 2017). These groups are usually self-directed, with a decentralized organizational structure. Such organizations share the characteristics of a Self-Directed Work Team (SDWT), and therefore possess the advantageous characteristics of being flexible, responsive and cost-efficient (Daft, Bettenhauser, & Tyler, 1993; Manz & Sims, 1995; Quinn, 1992), as well as the challenges of limited hierarchical authority to reinforce organizational implementation and management, including communication outreach.

To achieve their goals and make a greater impact on issues of interest, these organizations need to build a good reputation and become known and credible sources of expertise. However, the responsibilities, educational backgrounds, and training of scientists and stakeholders involved in scientist-stakeholder partnerships most likely preclude team members themselves from doing extensive communication and outreach to generate awareness. The limited resources of such organizations often prevent them from hiring professional communication specialists. Previous research has shown that members of these groups are productive at producing scholarly articles (Qu, Irani, & Lindsey, 2018). However, it is not clear how effective the scientist-stakeholder partnerships are in leveraging their credibility to communicate to lay audiences with respect to the issues on which they are focused.

To become a known credible source, an organization must first develop a reputation, which is defined as a crucial, intangible asset organizations' need to achieve the desired impact (Bell, 1984; Hall, 1992). Media coverage can have a profound impact on the organization's reputation. Unless an individual has direct experiences with an organization, his or her evaluation of an organization's reputation must rely solely on the organization's public relation activities and media coverage (Fombrun & Shanley, 1990; Hutton et al., 2001). A scientist-stakeholder partnership organization could gain mass media coverage by sharing members' expert opinion of certain issues or by participating in an issue-advocacy event or campaign. Such exposure could increase awareness of the organization and potentially allow it to gain credibility from its publics. In addition, reputation is crucial to an organization, especially for an organization that is in a developmental stage and is

still building its reputation (Fischer & Reuber, 2007). Media has the power to emphasize selected aspects of an organization, whether on its facts or values, and can make them salient with audiences (Kjærgaard, Morsing, & Ravasi, 2011).

In the digital age, organizations that have limited resources use social media to communicate and interact with their audiences. The interactive nature of social media offers scientist-stakeholder partnership organizations an ability to create and share content on social media platforms and discuss with their audiences in a timely and interactive fashion. Opportunities to make impacts with audiences arise when such organizations utilize social media effectively.

Therefore, evaluating the levels of media attention and framing of scientist-stakeholder partnership organizations becomes crucial. Within agricultural communication, such organizations that are focused on ANR issues conduct valuable research and strive to communicate to their intended audiences. Evaluating media attention and assessing how these organizations are framed by the media will provide valuable recommendations for these organizations to enhance their reputation and expand their influence.

Theoretical Framework and Literature Review

Agenda Setting Theory

Agenda setting theory has told us that mass media does not tell people what to think, but what to think *about* (Shaw & McCombs, 1977). In other words, the way in which media emphasizes an issue or entity leads the public to pay attention to that issue or entity (McCombs & Shaw, 1972; McCombs & Ghanem, 2001; McLeod, Becker, & Byrnes, 1974; Shaw and McCombs, 1977). Agenda-setting research has been centered on the construct of media salience, which is the relative importance of an issue covered in the media. Media attention is one of the essential aspects that measure media salience.

From agenda-setting theory, the more attention one organization receives from the media, the greater the recognition the organization will receive from its media audiences. The amount of effort different types of organizations put into increasing media attention varies. Corporations often engage in extensive efforts to actively seeking out media attention by investing in PR, media relations, and other publicity activities to increase visibility (e.g. Schafraad et al., 2016). In contrast, it's considered more challenging for public sector organizations to improve their reputation through media attention (Deacon & Monk, 2001). As a result, public sector organizations often shy away from actively seeking media attention (Deacon & Monk, 2001). Public sector organizations, however, have been found to actively react to negative media coverage by correcting errors in media information or justifying their decisions (Schillemans, 2012). The results of passively reacting to negative comments are not often satisfactory or effective. Research studies have suggested that NGOs and public sector organizations such as most scientist-stakeholder partnership type organizations should consider using media as strategic resources to communicate with the public and their stakeholders about issues of concern, to enhance reputation and build mutual understanding with the public and their stakeholders (Andrews & Caren, 2010).

Social media has demonstrated great potential to increase the media attention of organizations that utilize these platforms effectively. Social media, including Facebook, Twitter, and Instagram, allow their users to post content, comment and share content among followers. Social media has been considered as one of the most transformative technologies for organizations to communicate and collaborate with their stakeholders and the public (Aral, Dellarocas, & Godes, 2013). However, strategic use of this transformative technology needs to be applied to truly take advantage of this

tool. Research studies have shown that many NGOs have attempted to create a presence and inform organizational activities using social media in the hope of achieving high visibility and interactions among their intended audiences on social media virtual platforms, but the results have not been found satisfactory (Raja-Yusof, Norman, Abdul-Rahman, & Mohd-Yusoff, 2016). For example, Facebook pages were found not to foster participation in scientific education, which arguably resulted from the fact that Facebook users mainly interact with friends rather than strangers (Fauville, Dupont, von Thun, & Lundin, 2015).

Framing Theory

Second-level agenda-setting, the framing process, plays a critical role in public perceptions of an organization and significantly shapes its reputation. The sociological approach of framing theory states that because of the incapability of human beings to fully understand the world, we use the information available to make sense of the world around us, to form opinions, and make decisions (Goffman, 1974; Heider, 1959). Media frames allow individuals to “locate, perceive, identify and label” issues they experience and events beyond what they physically encounter (Benford & Snow, 2000, p. 614). How an organization or any entity is portrayed in the media subsequently influences people’s perceptions of it and forms their evaluations about it. This is especially true when people do not have direct experience with the entity (Ader, 1995; Zucker, 1978). Stakeholders use media to form opinions about an organization’s reputation when direct experience is difficult to obtain (Einwiller, Carroll, & Korn, 2010). The aspects emphasized in the media about an organization have the power to increase the salience of the organization for the audience.

Similar media effects also apply to social media. Social media provide an additional forum for organizations to manage their reputation. The way an organization is portrayed in social media can greatly shape or alter its reputation among its audiences (Ott & Theunissen, 2015). The interactive nature of social media provides both opportunities and challenges because comments and posts can be spread in a much faster way by the functions of sharing and commenting. Organizations should be aware as to what messages about them on traditional media, as well as online media, help them most effectively and strategically manage their reputation and build connections with their intended audiences.

Studies about media management of scientist-stakeholder partnership organizations are limited. However, such studies become increasingly critical considering the crisis of public trust with respect to certain politicized science issue topics, such as climate change, and the capacity these organizations have with respect to managing their reputation. This study aims to fill the gap in this research by fulfilling the following purpose and objectives.

Purpose and Objectives

This study aimed to investigate the media attention and media framing of a specific scientist-stakeholder partnership organization that follows the SDWT model working in the domain of climate change. The specific objectives are to:

1. Explore media attention with respect to a climate science focused scientist-stakeholder partnership/self-directed organization from mass media, social media, and other websites on the Internet.

2. Identify the themes of media framing of content focused on a climate science focused scientist- stakeholder partnership/self-directed organization found in mass media, social media, and other websites on the Internet.

Methods

To fulfill the objectives of this study, the researchers utilized a single case study design of an existing organization, the Florida Water and Climate Alliance (FWCA) as an example of a scientist-stakeholder partnership. Florida Water and Climate Alliance (FWCA) was formed by a group of scientists, water resource managers, planners and researchers in water and climate-related fields in the Florida area in 2010. The stated mission of the FWCA is to strive to provide climate science tools and findings to inform water and climate-related decision making in Florida (The Florida Water and Climate Alliance, 2016). By August 2016, FWCA had 158 affiliated members, 20 of which were active members. Research areas that FWCA scientists have focused on include studies of changes over time in precipitation, evapotranspiration, temperature, extreme weather and sea level rise/change, as well as predictions related to seasonal scale forecasts, long-term forecasts, and projections. Members of FWCA strive to make contributions to not only the academic field, but also to a variety of lay audiences by conducting communication outreach via workshops, presenting in seminars, and being a source for information in media.

FWCA was selected for four reasons: (a) It is scientist based; (b) it is a self-directed work team type of organization; (c) it advocates issues related to climate and water, which are important ANR issues for agricultural communicators; (d) communicating climate and water-related knowledge to the public is one of the emphases of its mission.

Data Collection

Media attention is measured by the volume of stories and space that is given to an issue in the media (Kiousis, 2004). To identify the attention paid to FWCA in mass media, the researchers searched LexisNexis, a database providing transcripts from major TV and radio networks as well as newspapers with the keywords "Florida Water and Climate Alliance", "FloridaWCA", and "FWCA". After an initial search with these three key phrases, the researchers discovered 18 other organizations and groups that shared the same acronym "FWCA" such as "Family and Workforce Centers of America", "Family Worship Christian Academy", and "Friends Who Care Association". Keywords of these 18 organizations were removed for the accuracy of searching. The researchers chose to assess the media attention of FWCA over the life of the organization, which began in 2012. The search timeframe was therefore 2012-2016.

To collect the data, the researchers searched for the same keywords "Florida Water and Climate Alliance" in the Google search engine. The researchers opened each search result and identified and collected all relative information regarding FWCA. A meaning unit about FWCA is treated as the unit of analysis in this study. A meaning unit can be of any length, from part of a sentence, several sentences, or one or a few paragraphs that pertain to only one meaning (Lindseth, & Norberg, 2004), and has been used as a coding unit and content unit (Baxter, 1991).

To further reveal FWCA related information, the researcher searched "Florida Water and Climate Alliance" in combination with one of the 158 FWCA affiliated members one at a time (example of search term: "Florida Water and Climate Alliance" AND "Alison Adams.") The researchers identified and removed the highly similar, irrelevant information as well as information from FWCA's official website.

Professionals in the field suggested a few professional society websites and funding agency websites to search for the potential mention of FWCA within their websites. Specifically, suggestions included the American Meteorology Society as a professional organization, United States Department of Agriculture (USDA), National Institutes of Health (NIH), and National Science Foundation (NSF). Besides these suggestions, researchers searched the Google search engine with a combination of the keywords "water", "climate", "organization", and "society" to gather more related websites. In terms of the professional society/organization websites, a total of 19 websites were found. Some examples of these websites include the American Meteorology Society, the Association of Climate Change Officers, and the Natural Resources Defense Council. Search engines were available on some of these websites, but not on others. Researchers searched "Florida Water and Climate Alliance", "FloridaWCA", and "FWCA" when a search engine was found within the websites. Four potential funders' websites were suggested by professionals and were used to search for potential mention of FWCA. These websites were the official websites of NIH, NSF, USDA, and the National Oceanic and Atmospheric Administration (NOAA).

Social media properties were searched to further identify the media attention related to FWCA. The researchers specifically searched keywords "Florida Water and Climate Alliance", "FloridaWCA", and "FWCA" on Facebook, Twitter, Instagram, YouTube, and Snapchat. To broaden the search within social media, Social Mention, a social media analytics tool, was added to the search process. Social Mention allows its users to search social media with keywords and analyses the searched content (Social Mention, n.d.). Social Mention stated that it monitors more than 80 social media channels directly, such as Twitter, Facebook, FriendFeed, YouTube, Digg, and Google etc. This tool can be used to track and measure the social media content available about the topic of the users' interest, such as a product or an organization. Search terms utilized to search in Social Mention included "Florida Water and Climate Alliance", "FloridaWCA", and "FWCA".

Data Analysis

In order to measure the media attention received by FWCA, the researchers used frequency counts to analyze the volume/amount of attention from each type of media source, including traditional mass media, social media and other websites that mentioned FWCA. Each website URL and its phrases, sentences or paragraphs regarding FWCA were copied and pasted to an Excel sheet. For research objective two, because many of the search results overlapped among Google search, social media search, LexisNexis, and professional websites, the researchers combined all search results in one spreadsheet to facilitate conducting a framing analysis. The constant comparative method (Lincoln & Guba, 1985) was utilized to look for similar phrases describing [FWCA], which were grouped as emergent themes. The constant comparative method involved the researcher examining the qualitative data for emergent themes that could be grouped into categories, while constantly comparing to the themes and categories of themes identified previously. The primary researcher kept an audit trail and recorded the emergent themes into categories. The primary researcher and co-researcher then discussed the themes and exchanged feedback to maintain confirmability of the research findings.

Results

Objective 1: Explore Media Attention With Respect to a Climate Science Focused Scientist-Stakeholder Partnership/Self-Directed Organization from Mass Media, Social Media, and Other Websites on the Internet

To achieve Objective 1, volume and amount of media attention were assessed using search engine results (SE Table 1).

Table 1

Search Results of Florida Water and Climate Alliance (FWCA)

	Number of articles regarding FWCA
Mass media	
Newspaper	1
Social Media	
Facebook	2
Twitter	3
YouTube	1
Instagram	0
Snapchat	0
Websites	87

Results showed that one article about FWCA was found through a search of mass media. The article, entitled *Tampa Bay among top 10 regions most threatened by climate change, Sierra Club Chapter Says*, was published in the Tampa Bay Times on Friday, February 26, 2016. The Tampa Bay Times reports news concerning west-central Florida both in print and online. An identical article was also found on Politifact.com. No FWCA related news was found in other newspapers, broadcast transcripts, or magazines.

FWCA was mentioned in two Facebook posts, one YouTube description, and three tweets. No mentions of FWCA were found on Instagram or Snapchat. Two posts mentioning FWCA were found on Facebook. The UF|IFAS Center for Public Issues Education shared an Orlando Sentinel article that described the mission of FWCA and the work FWCA has done to achieve their goals. USAID Philippines posted a photo and a paragraph describing a Filipino water experts' meeting with FWCA members and learning from FWCA experts about climate change. Three tweets were found mentioning FWCA. Tampa Bay Water posted twice. UF|IFAS Pinellas SG and UF Water Institute each posted once. UF|IFAS Miami U.C.U shared a post from Tampa Bay Water about a project collaboration. These tweets promoted workshops and research collaborations and raised awareness of the organization in general. One YouTube video, posted by username Kenny Malone, showed a presentation given by an FWCA member.

A total of 87 sites containing FWCA-related information were found. Mentions of FWCA were found on websites of organizations, governments, and universities. The UF Water Institute website

mentioned FWCA 15 times, followed by 11 times on the Tampa Bay Water website. NOAA and USAID mentioned FWCA three times. Eleven websites mentioned FWCA twice, such as USDA and University of Colorado; thirty-eight websites mentioned FWCA once, including Water Resource Institute and Harvard University.

Objective 2: Identify the Themes of the Media Framing of Content Focused on a Climate Science Focused Scientist-Stakeholder Partnership/Self-Directed Organization Found in Mass Media, Social Media, and Other Websites on the Internet.

Among the sources that have mentioned FWCA, researchers were able to identify seven themes, including descriptions of FWCA, FWCA as a contributing organization, FWCA as a source of scientific evidence, FWCA presentation/workshop announcement, funder's descriptions/updates on project progress and impact, and FWCA member highlight.

Theme 1: Description of FWCA.

Many of the online sources mentioned FWCA as a contributing organization and a partnership and included a description of FWCA's goal and mission, with an emphasis on conducting climate and water research. For example, the UF Water Institute introduced FWCA as "The Florida Water and Climate Alliance (FloridaWCA) is a stakeholder-scientist partnership focused on increasing the relevance of climate science, data, and tools for water resource planning and supply operations.

Similarly, Acclimatise, a "consulting, communications and digital application company" providing climate change oriented services, wrote the following in their news story about FWCA:

.... the University of Florida and other regional stakeholders have come together to form the Florida Water and Climate Alliance. The alliance of six Florida-based water utilities, state water managers and university scientists aims to improve local-level data collection and availability and take action to adapt to protect the region's water supplies in the coming year.

Theme 2: Listing FWCA as a contributing organization (without description of FWCA).

A number of websites listed FWCA as one of the contributing partners, mentor programs, participants of event/activity. In USAID's annual report, FWCA was mentioned several times. One example is:

The Water Operator Partnership between the Florida Water and Climate Alliance and PAWD was established to enhance the climate resilience of water utilities by creating a COP-CC.... The result was a winning partnership between Florida Water and Climate Alliance (FWCA) and PWAD-CoP CC.

The Florida Climate Institute at Florida State University recognized FWCA in a special issue in the journal *Regional Environmental Change* entitled "Multi-disciplinary assessment of the Southeastern US climate". This article says, "This is a result of a vibrant interdisciplinary environment in the Southeastern US for several years fostered by several groups like the Florida Climate Institute, the Southeast Climate Consortium, and the Florida Water and Climate Alliance."

Theme 3: Citing FWCA document as supporting source.

An online feature article published on POLIFACT Florida reported Tampa Bay's Sierra Club Chapter's comments on a proposal named "Go Hillsborough." This proposal advocated a transportation sales tax referendum that would be used to build more roads, adding more cars to

the transportation system. This article explained the Sierra Club Chapter's opposing position about this proposal and provided information to support the Sierra Club Chapter's position. One FWCA workshop document was cited as a source to support the Sierra Club Chapter's position. The article was listed in the FWCA source of "Florida Water and Climate Alliance, "Seeing Beyond Sea Level Rise: Visualizing Local Climate Change in Tampa Bay," November 2014."

Similarly, a report of the Water Service Association of Australia named "Developing robust strategies for climate change and other risks: A water utility framework" mentioned FWCA as an example of an effort to address regional climate change and used a member's article as a supporting source.

Theme 4: FWCA presentation/workshop announcement.

FWCA presentations, workshops, and seminars with a variety of water and climate-related topics were posted online by various organizations and universities to encourage the participation of a targeted population. For example, the Southeast Florida Utility Council announced an FWCA workshop about public water supply utilities on its website. The announcement says: "Florida Water and Climate Alliance (WCA) Workshop. March 30, 2016 8:45am to 4pm."

Theme 5: Funder's description/update on project progress and impact.

The websites of the National Oceanic and Atmospheric Administration (NOAA) and United States Department of Agriculture (USDA) updated FWCA projects they funded on their official websites. For example, NOAA described FWCA projects and the impact as:

As a result of our interaction with the Florida Water and Climate Alliance (FloridaWCA) and demonstration of the usefulness of seasonal climate forecast the Peace River Manasota Regional Water Supply Authority (Peace River Authority) developed the Aquifer Storage and Recovery (ASR) initiation index.

Similarly, USDA also briefly described an FWCA project they funded and its potential impact: "This project is fully integrated with the working group, Florida Water and Climate Alliance (FloridaWCA) and has engaged stakeholders both in planning and sharing interim results, contributing to mutual learning and adaptation of research."

Theme 6: FWCA member highlight.

A few websites recognized the members of FWCA and provided their affiliation to FWCA. One example is an introduction of Dr. Alison Adams as an event speaker by the American Water Works Association – Florida Section.

Alison Adams, Ph.D., P.E. is the Chief Technical Officer for Tampa Bay Water.... Dr. Adams is the past chair of the Water Utility Climate Alliance and represents Tampa Bay Water as a founding member of the Florida Water and Climate Alliance.

Dr. Tirusew Asefa was introduced as a member of a speakers and organizing committee in an online file detailing a workshop hosted in the University of South Florida at St. Petersburg.

Tirusew Asefa, Ph.D., P.E., D.WRE (TAsefa@tampabaywater.org) leads the Modeling and Systems Decision Support group at Tampa Bay Water.... Tirusew co-chairs the Florida Water and Climate Alliance.... Tirusew has authored 25+

peer-reviewed articles, and 100+ reports and conference publications in the area of water resources management and currently he oversees the agency's climate change research projects with UF and USF.

Conclusion

This study selected Florida Water and Climate Alliance to explore the media attention and media framing related to a specific scientist-stakeholder partnership organization working in the domain of climate change that follows the SDWT model. Results indicated that only one newspaper article was found in a mass media coverage search, and 6 results were found in a social media search including Facebook (2 times), YouTube (1 time), and Twitter (3 times). This finding suggested that FWCA received very limited mass media and social media attention since 2010 when it was first established. Considering the nature of FWCA as an organization founded by scientists, researchers, and other stakeholders who work closely with public institutions, this result aligns with Deacon and Monk's (2001) finding that public sector organizations tend not to actively seek media attention as corporations do. FWCA does not have active accounts for any of the social media outlets included in this study. Even though social media provides potential and opportunity to reach targeted audiences and develop an organizational presence, not many scientist-stakeholder partnership organizations choose to utilize social media in this way. This could largely be attributed to limited funding for these groups to be able to hire professional communication specialists and limited time for the members of the organization to manage communication and outreach on their own. In this study, a total of 87 online sites mentioned FWCA. The majority of the mentions were on the websites of public entities such as universities, and government funding agencies.

The themes identified from the media and website coverage of FWCA showed that the majority of the online information is descriptive and introductory. These introductions usually included the goal and mission of FWCA. The wording of these introductions is often highly similar to the FWCA's introduction of the organization on its official website. Many online sources mentioned FWCA as a partner in a project or an effort in the water and climate-related field without describing FWCA in depth. Announcements about FWCA workshops have been found posted on a variety of websites, such as a university Extension site and a local water utility site. FWCA members' work accomplished through FWCA has been recognized by members' other affiliations, such as their university and professional associations. The themes identified appear to be neutral when the content was introductory and appear to be positive when showcasing achievements.

Recommendations and Implications

Because of low media attention, mass and social media do not seem to contribute much to the reputation of scientist-stakeholder partnership organizations like FWCA. Previous research has shown that direct experience and media exposure shape consumers' perceptions of an organization's reputation (Fombrun & Shanley, 1990; Hutton et al., 2001). Therefore, to further evaluate the reputation of a scientist-stakeholder partnership organization, researchers should evaluate the attitudes and perceptions of stakeholders, participants of workshops conducted by the organization, and other audiences who had direct experience with the organization itself. Qualitative research approaches such as interviews and focus groups could be used to collect

stakeholders' opinions and perceptions of the organization's reputation. Factors such as trust, source credibility and willingness to engage could be utilized to assess organizational reputation and effectiveness. Such research studies will bring in outsiders' insights which can be valuable in terms of managing organizational reputation.

Organizations with low levels of media attention and visibility are not able to influence the public and media agendas very effectively, so they will have difficulty achieving their goals of informing and educating the public and policymakers to achieve desired policy change. Since such organizations are comprised of scientists and stakeholders who typically lack communication backgrounds and expertise, in addition to limited time to conduct outreach, members of such organizations may not see the importance of influencing agendas and may lack the capacity to do so. To address this challenge, we recommend scientist-stakeholder partnership organizations like FWCA collaborate with communications researchers and practitioners from the field of agricultural communications, a communications field ideally suited to working with scientists and stakeholders focused on ANR issues. On the other hand, agricultural communicators and academic researchers should seek out such partnerships and raise members' awareness of the field of ag communications. Research studies examining members' perceptions of ag communications as a discipline and practice are needed to better understand how to help these organizations communicate more effectively.

To foster greater organizational impact with respect to influencing public opinions and public policy regarding climate change, scientist-stakeholder partnership organizations like FWCA should increase their visibility in various forms of media. A strategic communication plan is necessary to help with achieving this goal. The strategic communication plan should have clear objectives, including the level of impact this organization should achieve in a certain time frame, who are the primary and secondary target audiences they should focus on, and what message and media tactics they need. Such a plan should be revisited periodically to evaluate if and to what extent the goals are being achieved as necessary.

Based on current content in the media about FWCA, more positive media content about the positive impacts a scientist-stakeholder partnership organization like FWCA is making on local, regional, national and international levels would be helpful to create awareness and build the reputation of the organization. Depending on the target audience of the organization, establishing social media profiles and using social media strategically to reach out to target audiences may also be helpful to increase awareness of the organization.

This study focused on one case of a scientist-stakeholder partnership organization. Considering the nature of such qualitative studies, the transferability from this case to other cases may be low. Researchers should examine a variety of such scientist-stakeholder partnership organizations to enhance the transferability of the study results.

Ader, C. R. (1995). A longitudinal study of agenda setting for the issue of environmental pollution. *Journalism & Mass Communication Quarterly*, 72(2), 300-311. doi: [10.1177%2F107769909507200204](https://doi.org/10.1177%2F107769909507200204)

Andrews, K. T., & Caren, N. (2010). Making the news: Movement organizations, media attention, and the public agenda. *American Sociological Review*, 75(6), 841-866. doi: [10.1177%2F0003122410386689](https://doi.org/10.1177%2F0003122410386689)

Aral, S., Dellarocas, C., & Godes, D. (2013). Introduction to the special issue: Social media and business transformation: A framework for research. *Information Systems Research*, 24(1), 3-13. doi: [10.1287/isre.1120.0470](https://doi.org/10.1287/isre.1120.0470)

- Baxter, L. A. (1991) Content analysis. In: Montgomery, B.M. and Duck, S. Eds., *Studying Interpersonal Interaction*, The Guilford Press, New York, London, 239-254.
- Bell, C. (1984). Building a reputation for training effectiveness. *Training and Development Journal*, 38(5), pp. 50-54. Retrieved from: <https://eric.ed.gov/?id=EJ306227>
- Benford, R. D., & Snow, D. A. (2000). Framing processes and social movements: An overview and assessment. *Annual Review of Sociology*, 26(1), 611-639. [doi:10.1146/annurev.soc.26.1.611](https://doi.org/10.1146/annurev.soc.26.1.611)
- Brulle, R. J., Carmichael, J., & Jenkins, J. C. (2012). Shifting public opinion on climate change: An empirical assessment of factors influencing concern over climate change in the US, 2002–2010. *Climatic Change*, 114(2), 169-188. [doi: 10.1007/s10584-012-0403-y](https://doi.org/10.1007/s10584-012-0403-y)
- Daft, R. L., Bettenhausen, K. R., & Tyler, B. B. (1993). *Implications of top managers' communication choices for strategic decisions*. In G. P. Huber & W. H. Glick (Eds.), *Organizational Change and Redesign: Ideas and Insights for Improving Performance* (112-146). Oxford: Oxford University Press.
- Darmofal, D. (2005). Elite cues and citizen disagreement with expert opinion. *Political Research Quarterly*, 58(3), 381-395. [doi: 10.1177%2F106591290505800302](https://doi.org/10.1177%2F106591290505800302)
- Deacon, D., & Monk, W. (2001). Quangos and the Communications Dependent Society': Part of the process or exceptions to the rule? *European Journal of Communication*, 16(1), 25-49. [doi: 10.1177%2F0267323101016001002](https://doi.org/10.1177%2F0267323101016001002)
- Einwiller, S. A., Carroll, C. E., & Korn, K. (2010). Under what conditions do the news media influence corporate reputation? The roles of media dependency and need for orientation. *Corporate Reputation Review*, 12(4), 299-315. [doi: 10.1057/crr.2009.28](https://doi.org/10.1057/crr.2009.28)
- Fauville, G., Dupont, S., von Thun, S., & Lundin, J. (2015). Can Facebook be used to increase scientific literacy? A case study of the Monterey Bay Aquarium Research Institute Facebook page and ocean literacy. *Computers & Education*, 82, 60-73. [doi: 10.1016/j.compedu.2014.11.003](https://doi.org/10.1016/j.compedu.2014.11.003)
- Fischer, E., & Reuber, R. (2007). The good, the bad, and the unfamiliar: The challenges of reputation formation facing new firms. *Entrepreneurship Theory and Practice*, 31(1), 53-75. [doi: 10.1111%2Fj.1540-6520.2007.00163.x](https://doi.org/10.1111%2Fj.1540-6520.2007.00163.x)
- Fombrun, C., & Shanley, M. (1990). What's in a name? Reputation building and corporate strategy. *Academy of Management Journal*, 33(2), 233–258. [doi: 10.5465/256324](https://doi.org/10.5465/256324)
- Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. Harvard University Press.
- Hall, R. (1992). The strategic analysis of intangible resources. *Strategic Management Journal*, 13(2), 135–144. [doi:10.1002/smj.4250130205](https://doi.org/10.1002/smj.4250130205)
- Hallett, L. M., Morelli, T. L., Gerber, L. R., Moritz, M. A., Schwartz, M. W., Stephenson, N. L., ... & Woodhouse, C. A. (2017). Navigating translational ecology: creating opportunities for scientist participation. *Frontiers in Ecology and the Environment*, 15(10), 578-586. [doi: 10.1002/fee.1734](https://doi.org/10.1002/fee.1734)
- Heider, F. (1959). *The psychology of interpersonal relations* (2nd ed.). New York: Wiley.
- Herbig, P., & Milewicz, J. (1995). The relationship of reputation and credibility to brand success. *Journal of Consumer Marketing*, 10(3), 18-24. [doi: 10.1108/EUM0000000002601](https://doi.org/10.1108/EUM0000000002601)
- Hutton, J., Goodman, M., Alexander, J., & Genest, C. (2001). Reputation management: The new face of corporate public relations? *Public Relations Review*, 27(3), 247–261. [doi: 10.1016/S0363-8111\(01\)00085-6](https://doi.org/10.1016/S0363-8111(01)00085-6)

- Jacobs, K., Garfin, G., & Lenart, M. (2005). More than just talk: Connecting science and decisionmaking. *Environment: Science and Policy for Sustainable Development*, 47(9), 6-21. doi: [10.3200/ENVT.47.9.6-21](https://doi.org/10.3200/ENVT.47.9.6-21)
- Kjærgaard, A., Morsing, M., & Ravasi, D. (2011). Mediating identity: A study of media influence on organizational identity construction in a celebrity firm. *Journal of Management Studies*, 48(3), 514-543. doi: [10.1111/j.1467-6486.2010.00954.x](https://doi.org/10.1111/j.1467-6486.2010.00954.x)
- Kiousis, S. (2004). Explicating media salience: A factor analysis of New York Times issue coverage during the 2000 US presidential election. *Journal of Communication*, 54(1), 71-87. doi: [10.1111/j.1460-2466.2004.tb02614.x](https://doi.org/10.1111/j.1460-2466.2004.tb02614.x)
- Lindseth, A., & Norberg, A. (2004). A phenomenological hermeneutical method for researching lived experience. *Scandinavian Journal of Caring Sciences*, 18(2), 145-153. doi: [10.1111/j.1471-6712.2004.00258.x](https://doi.org/10.1111/j.1471-6712.2004.00258.x)
- Manz, C. C., & Sims, H. P. (1995). *Business without bosses: How self-managing teams are building high-performing companies*. New York, John Wiley & Sons, Inc.
- McCombs, M. E., & Shaw, D. L. (1972). The agenda-setting function of mass media. *Public Opinion Quarterly*, 36(2), 176-187. doi: [10.1086/267990](https://doi.org/10.1086/267990)
- McCombs, M., & Ghanem, S. I. (2001). The convergence of agenda setting and framing. In S. D. Reese, O.H. Gandy Jr. & A. E. Grant (eds.), *Framing public life: Perspectives on media and our understanding of the social world* (67-81). New York: Routledge
- McLeod, J. M., Becker, L. B., & Byrnes, J. E. (1974). Another look at the agenda-setting function of the press. *Communication Research*, 1(2), 131-166. doi: [10.1177%2F009365027400100201](https://doi.org/10.1177%2F009365027400100201)
- Ott, L., & Theunissen, P. (2015). Reputations at risk: Engagement during social media crises. *Public Relations Review*, 41(1), 97-102. doi: [10.1016/j.pubrev.2014.10.015](https://doi.org/10.1016/j.pubrev.2014.10.015)
- Qu, S., Irani, T., & Lindsey (2018). The communication effectiveness of scientist-stakeholder partnerships addressing agriculture and natural resources issues: A citation analysis of the Florida water and climate alliance. *Journal of Applied Communications*, 102(1). doi: [10.4148/1051-0834.1755](https://doi.org/10.4148/1051-0834.1755)
- Quinn, J. B. (1992), *Intelligent Enterprise: A Knowledge and Service Based Paradigm for Industry*. New York, NY, Free Press.
- Raja-Yusof, R.-J., Norman, A. A., Abdul-Rahman, S. S., Nazri, N., & Mohd-Yusoff, Z. (2016). Cyber-volunteering: Social media affordances in fulfilling NGO social missions. *Computers in Human Behavior*, 57, 388-397. doi: [10.1016/j.chb.2015.12.029](https://doi.org/10.1016/j.chb.2015.12.029)
- Schafraad, P., van Zoonen, W., & Verhoeven, P. (2016). The news value of Dutch corporate press releases as a predictor of corporate agenda building power. *Public Relations Review*, 42(3), 451-458. doi: [10.1016/j.pubrev.2015.11.014](https://doi.org/10.1016/j.pubrev.2015.11.014)
- Schillemans, T. (2012). *Mediatization of public services: How public organizations adapt to news media*. Peter Lang, Frankfurt.
- Shaw, D., & McCombs, M. (1977). *The emergence of American political issues: The agenda-setting function of the press*. St. Paul, MN: West Publishing.
- Social Mention. (n. d.). *Social Mention is a social media search and analysis platform that aggregates user-generated content from across the universe into a single stream of information*. [Social Mention Website]. Retrieved from: <http://socialmention.com/about/>
- Wall, T. U., McNie, E., & Garfin, G. M. (2017). Use-inspired science: Making science usable by and useful to decision makers. *Frontiers in Ecology and the Environment*, 15(10), 551-559. doi: [10.1002/fee.1735](https://doi.org/10.1002/fee.1735)

Zucker, G. H. (1978). The variable nature of news media influence. *Annals of the International Communication Association*, 2(1), 225-240. [doi: 10.1080/23808985.1978.11923728](https://doi.org/10.1080/23808985.1978.11923728)

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