

Challenges of linking science and action and the role, network and impact of FloridaWCA”

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FWCA WORKSHOP

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Linking science to action

- ▶ What do we mean by “linking science to action?”
- ▶ Share scientific findings
- ▶ Increase knowledge and understanding of the science related to a specific issue
- ▶ Influence people’s opinions, behaviors and policy preferences
- ▶ Engage diverse groups so that their perspectives about science related to important issues can be considered in seeking solutions to societal problems

Scientific information and the "Deficit Model"

- ▶ Premise that audiences do not accept scientific claims or support policies consistent with scientific evidence because they lack information or understanding of science itself
- ▶ "If they only understood the science behind...."
- ▶ Research indicates people may understand what scientists know and want to convey, but they choose not to believe
- ▶ Lay audiences consider their beliefs, values, past experiences along with scientific information being presented

Science and action

- ▶ The role of science is traditionally seen as that of providing evidence, not engaging in action
- ▶ Scientific objectivity can engender trust
- ▶ When scientists seek to interpret scientific information in order to inform policy development, it can be seen as “taking sides”

The education/information paradigm

- ▶ When scientists say they want to educate the public, it can be viewed by some as an attempt to persuade
- ▶ When communicating about controversial issues, evidenced based scientific information can be interpreted as being one sided, if it supports one viewpoint over another
 - ▶ GMOs
 - ▶ Vaccines
 - ▶ Climate
- ▶ Scientists versus advocates
- ▶ Paradox – the more compelling the evidence is, and the more of it, the more resistant some will be to accept it, if it disagrees with a pre-existing perspective

Public engagement

- ▶ Facilitating the exchange of information among expert and lay audiences
 - ▶ Grunig – public information model
 - ▶ Stakeholder approaches
 - ▶ Common ground
 - ▶ Stakeholder engagement
 - ▶ Community Based Participatory Research (CBPR)
 - ▶ Organizational approaches
 - ▶ Extension
 - ▶ Scientist-stakeholder groups

Florida WCA as a scientist-stakeholder partnership

- ▶ Academics and various types of stakeholders may form organizational partnerships and collaborations to disseminate their science and inform the public and policy.
- ▶ These groups possess advantages such as technical expertise, however, such groups often face challenges in communicating effectively and establishing their reputation.
- ▶ FWCA is a group of scientists, water resource managers, planners and researchers in water and climate related fields in Florida formed in 2012. The mission of the XWCA is to strive to provide climate science tools and findings to inform water and climate related decision making.

Role, network and impact of FWCA

- ▶ A study was conducted to investigate the communication effectiveness and impact of FWCA through a citational analysis of:
 - ▶ number of journal article citations by group members and the types and number of articles that cite members' work
 - ▶ the journals in which members publish, the number of languages in which members publish their work and the frequency of internal citations by members
 - ▶ Online mentions of FWCA
- ▶ Citation analysis is a common method used to measure research impact and thus a way to assess the reputation of a scientist-based organization.

Results

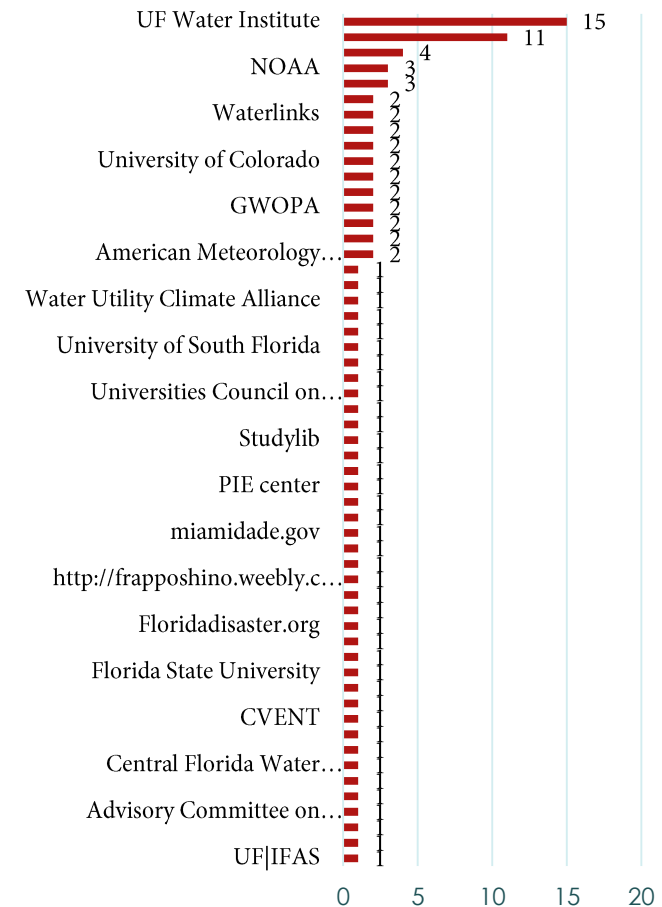
- ▶ FWCA members published a total of 28 peer reviewed journal articles between 2012-2016.
- ▶ Out of that total, 25 were cited in other scholarly articles, with a total of 246 overall citations of FWCA members' work.
- ▶ The most cited FWCA article yielded 29 citations.
- ▶ The average number of citations of all 28 articles is 8.67

Results

- ▶ A total of 173 journal articles in 89 different journals have cited FWCA member published articles. The Journal of Hydrometeorology and Hydrology and Earth System Sciences cited FWCA member published articles 14 times, the highest number of citations among all other journals. The Journal of Hydrology cited FWCA member published articles 13 times.
- ▶ Fifty-four journals had at least one of their journal articles citing one of the FWCA member published articles.
- ▶ A majority of articles were published in the English language
- ▶ Among the 173 journal articles that cited FWCA published articles, 35 articles cited two, or more than two, FWCA articles, while 138 articles cited one FWCA article. Nineteen out of the 35 articles (54.2%) were authored by one or more FWCA affiliated members.

Online mentions

- ▶ Mentions of FWCA were mainly found on websites of organizations, governments, universities, and in social media. The UF Water Institute website mentioned FWCA 15 times, followed by 11 times on the Tampa Bay Water website. Figure 3 presents the specific sources that have mentioned FWCA.



Reccomendations

- ▶ As the organization seeks to further enhance its reputation, it might be valuable to invest some resources in developing and promoting its identity, core messages and visibility with key audiences.
- ▶ FWCA could develop an informational package that could include media releases, member bios, key accomplishments, highlights from previous workshops, key trends or takeaways from members' research/workshop presentations, infographics, state of the science briefings for leaders and policymakers, etc.
 - ▶ More visibility on mass media and social media
 - ▶ Develop strategic communication plan (objectives, target audiences, strategies, message and media tactics) and revisit it yearly