Jan. 2017

Final Report

The Impact of Florida Water and Climate Alliance: A Citation Analysis

With Florida Water and Climate Alliance

PWE2016.17-07

For More Information

Contact the Center for Public Issues Education at piecenter@ifas.ufl.edu or 352-273-2598

Suggested Citation

Qu, S., & Irani, T. (2017). The impact of Florida Water and Climate Alliance: A citation analysis. PIE2016/17-07. Gainesville, FL: University of Florida/Department of Family Youth and Community Sciences.

About the Authors

Tracy Irani, Ph.D. – Director, UF/IFAS Center for Public Issues Education; Interim chair, Department of Family, Youth, and Community Sciences; Professor, Department of Agricultural Education and Communication

Shuyang Qu, Ph.D. – Research assistant, UF/IFAS Center for Public Issues Education and Department of Agricultural Education and Communication

Acknowledgments

Funds for this project were made possible by the Peace River Manasota Regional Water Supply Authority.

Project collaborators include members of the Florida Water and Climate Alliance (FWCA) steering committee and the University of Florida Water Institute (UFWI):

Tirusew Asefa, FWCA

Ed Carter, FWCA

Chris Martinez, FWCA

Kevin Morris, FWCA

Lisette Staal, UFWI

Rob Teegarden, FWCA

Contents

List of Figures

List of Tables

Executive Summary

Client/Project

MONTH YEAR

Introduction

Scientists and researchers in the water and climate related fields in the Florida area formed the Florida Water and Climate Alliance (FWCA) in 2012 with the goal of "increasing the relevance of climate science data and tools at relevant time and space scales to support decision-making in water resource management, planning and supply operations in Florida" (FWCA, 2012). The purpose of this study is to assess the visibility and impact of the organization through citational impact analysis of academic and lay audience journals, publications, presentations, workshops and online materials. To conduct this study, FWCA partnered with researchers in the Department of Family, Youth, and Community Sciences at the University of Florida. Funding for the study was provided by the Peace River Manasota Regional Water Supply Authority.

The researchers examined the citations and incidence of mentions of FWCA and its members in published articles, workshops conducted by FWCA members, and information related to FWCA online, in mass media and in social media.

Findings

- FWCA members have published 28 articles. All 28 published articles are journal articles, 25 of which were cited in scholarly publications including journal articles, dissertations, theses, books and proceedings.
- FWCA published articles were cited 229 times in journal articles from 89 journals, 10 times in dissertations and theses, four times in books/book chapters, one in conferences and proceedings, and one in unpublished manuscripts.
- A total of 173 journal articles in 89 journals have cited FWCA published articles.
- Thirteen articles cited three, or more than three, FWCA articles. Nine out of these 13 articles were authored by at least one FWCA affiliated member.
- Mentions of FWCA were mainly found in websites of organizations, governments, universities, and social media. The UF Water Institute mentioned FWCA 15 times, followed by being mentioned 11 times by Tampa Bay Water.
- Among the online sources that have mentioned FWCA, seven themes were identified: 1) descriptions of FWCA, 2) listing FWCA as a contributing institute, 3) FWCA as a source for scientific evidence, 4) FWCA presentation/workshop announcement, 5) funder's descriptions/updates on project progress and impact, and 6) FWCA member highlight.

- On mass media, including newspaper, broadcast transcripts and magazines, only one result about FWCA was found. This was an article published in the Tampa Bay Times on Friday, February 26, 2016.
- On social media, FWCA was mentioned in two Facebook posts, one YouTube description, and three tweets. No mentions were found on Instagram and Snapchat.

Background

A group of scientists, water resource managers, planners and researchers in water and climate related fields in the Florida area formed the Florida Water and Climate Alliance (FWCA) in 2012. FWCA was facilitated by the University of Florida Water Institute, an interdisciplinary team of faculty members and staff aiming to address water issues through research, education and outreach. Since 2012, FWCA has collaborated with major public water supply utilities, water management districts in Florida, local government representatives and academic organizations. Examples of these partners are the Florida Climate Institute, Florida State University, South East Climate Consortium, UF/IFAS Center for Public Issues Education, and Tampa Bay Water (Florida Water and Climate Alliance, 2015 http://waterinstitute.ufl.edu/workinggroups/pwsu-ciwg.html).

FWCA strives to provide the climate science tools and findings to inform water and climate related decision making in Florida (The Florida Water and Climate Alliance, 2016). FWCA scientists have focused on research areas such as changes in precipitation and sea level rise. Members of FWCA strive to make contributions to not only to the academic field, but also to a variety of audiences by conducting workshops, presenting in seminars, and being a source for information in media.

This study aims to identify and assess the impact of FWCA and to better understand how self-directed organizations such as FWCA can achieve their full mission and make impact effectively.

Methods

To identify the visibility and the impact of FWCA, the research specifically focused on analyzing the citations of FWCA published journal articles, FWCA members' presentations, visibility of FWCA through mass media, social media, and websites of professional societies/organizations in the water and climate fields. By September 22, 2016, FWCA members have published 28 articles, 39 presentations, three reports, and seven working reports. Reports and working papers were not analyzed in this study.

Data Collection

Researchers of this report collected the FWCA published articles through the FWCA official website (http://floridawca.org/published-article). A total of 28 FWCA published articles were documented on this website. The publication years of the articles ranged from 2012 to 2016. To identify the impact of FWCA published articles, this study used citation analysis, a method commonly used to evaluate the impact of an article, an author and an institution (Reiman-Sendi, 2016). Based on the suggestion of Reiman-Sendi (2016), the researchers identified the articles that have cited FWCA published articles through two scholarly search tools, Google Scholar and Web of Science. Web of Science is "a comprehensive research platform database containing tools to search scholarly journals, books, proceedings, published dataset, and patents" (Clarivate Analytics, 2016, para. 2). Google Scholar is an open-access search tool for documents primarily in science and social science, "consisting of full-text journal articles, technical

reports, preprints, theses, books, and other documents, including selected Web pages that are deemed to be 'scholarly.' (Vine, 2006). The researchers analyzed the articles that have cited FWCA published articles by coding what content specifically was cited, in which year, and in what journal.

In addition, researchers investigated the mention of FWCA in scholarly publications. Web of Science and Google Scholar were used to search for the FWCA-related information among these publications. The key phrase "Florida Water and Climate Alliance" was used in the search. The researcher made a decision to use only this phrase because, in a scholarly article, the full name of an organization is typically used when the organization is first mentioned. Five journal articles introduced FWCA or simply listed FWCA as an example in related fields.

To identify the visibility of FWCA in mass media, the researchers searched LexisNexis, a database providing transcripts from major TV and radio networks as well as newspapers, with the key words "Florida Water and Climate Alliance", "FloridaWCA", and "FWCA". After initial search with these three key phrases, the researchers discovered a number of organizations and groups have shared the same acronym "FWCA". To further narrow the search result for accuracy, the following key words were removed: "Fish and Wildlife", "Family and Workforce Centers of America", "Fair Work Commission", "Foundation of Women and Child Assistance", "Florida West Coast Avian", "Fort Worth Contemporary Arts", "Florida's Workers' Compensation Act", "Florida Workmen's Compensation Act", "Family Worship Christian Academy", "Friends Who Care Association", "Florida Workers' Compensation", Fleming Meadows and Westbury Estate Civic Association", "Federal Water Pollution Control Act", "Folkes Worton Chartered Accountants", "Faith World Center of Augusta", "First Wellington Canyon Associates", "Fresh water content anomalies", and "Fairfax County Water Authority". One newspaper article from Tampa Bay Times on February 26, 2016 with the title "Tampa Bay Among Top 10 Regions Most Threatened by Climate Change, Sierra Club Chapter Says" was identified.

To uncover what and where FWCA was mentioned on the Internet, the researchers searched the same key words "Florida Water and Climate Alliance", "FloridaWCA" in the Google search engine. A total of 33 results were found; 45 were omitted from the search results because of high similarity. After revealing the 45 results, the researchers identified and removed the highly similar, irrelevant information as well as information from FWCA's official website. A total of 36 results were found. To further reveal FWCA related information, the researcher searched "Florida Water and Climate Alliance" in combination with one of the 158 FWCA-related individuals one at a time (example of search term: "Florida Water and Climate Alliance" AND "Alison Adams"). A total of 87 sites containing FWCA-related information were eventually discovered.

Professionals in the field suggested a few professional society websites and funders' websites to search for the potential mention of FWCA. 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 in the Google search engine with a combination of key words of "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 are: American Meteorology Society, Association of Climate Change Officers, and Natural Resources Defense Council. Search engines were available in some of these websites, but not in others. Researchers searched "Florida Water and Climate Alliance", "FloridaWCA", and "FWCA" when a search engine was found within the websites. The American Meteorology Society (https://www.ametsoc.org/ams/) was the only website from these 19 websites that contained FWCA-related information. Four potential funders' websites were suggested by professionals. These funders were NIH, NSF, USDA, and the National Oceanic and Atmospheric Administration (NOAA). FWCA was mentioned on the USDA and NOAA web sites, but not on the sites of NIH or NSF.

Social media properties were searched to further identify FWCA visibility. The researchers specifically searched key words "Florida Water and Climate Alliance", "FloridaWCA", and "FWCA" on Facebook, Twitter, Instagram, YouTube and Snapchat. Three results were found on Facebook, four on Twitter, one on YouTube, none on Instagram or Snapchat.

To broaden the search within social media, Social Mention was added in the search process. Social Mention allows its users to search social media with key words 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 about the topic of the users' interest such as a product and an organization. Search terms utilized to search in Social Mention included "Florida Water and Climate Alliance", "FloridaWCA", and "FWCA". One article was found through Social Mention.

Many of these search results from social media overlap across Google search, social media search, LexisNexis, and professional websites. Therefore, to identify themes, the researcher combined all website searches from these sources, and displayed in the results section the themes of the search results through online networks. After the theme discussion, FWCA related information on mass media and social media were discussed independently to show the visibility of FWCA in different media sources. Content from scholarly publications was not combined in the theme discussion.

Data Analysis

Both qualitative and quantitative methods were used to identify the impact of FWCA. Quantitatively, this study used descriptive statistics to identify number of publications, number of citations received by each FWCA article, number of journals that published FWCA articles, and number of websites that mentioned FWCA. Descriptive statistics provide basic descriptions and summaries about the sample and the measures of a study (Johnson & Christensen, 2012).

Qualitatively, themes of the FWCA-related information were analyzed through the constant comparative method (Guest et al., 2006). This method assists in making decisions concerning the collection of data based on the researcher's understanding of the phenomenon. Findings generated by this method inform the further development and exploration of the phenomenon (Glaser & Strauss, 1967; Strauss & Corbin, 1990). To conduct the thematic analysis, the researcher compared each new mention of FWCA with all previous mentions of FWCA. New mention of FWCA was either identified with a new theme or categorized with existing themes.

Findings

Citations of FWCA Published Articles

By September 22, 2016, FWCA has documented 28 published articles. All 28 published articles are journal articles, 25 of which were cited in scholarly articles. The most cited FWCA article, Trends in precipitation and temperature in Florida, USA published in Journal of Hydrology in 2012 authored by Martinez, Maleski, and Miller, was cited in 29 scholarly articles. Table 1 displays how many times each FWCA articles were cited by September 22, 2016.

Table 1. Citation frequency of FWCA published articles

Article Name	*f*
Trends in precipitation and temperature in Florida, USA	29
Quantitative Spatiotemporal Evaluation of Dynamically Downscaled MM5Precipitation Predictions over the Tampa Bay Region, Florida	20
Climate information use among southeast US water managers: Beyond barriers and toward opportunities	19
Forecasting Reference Evapotranspiration Using Retrospective Forecast Analogs in the Southeastern United States	17
One-way coupling of an integrated assessment model and a water resources model: evaluation and implications of future changes over the US Midwest	17
Evaluation of dynamically downscaled reanalysis precipitation data for hydrological application	15
Development and comparative evaluation of a stochastic analog method to downscale daily GCM precipitation	14

Assessment of the utility of dynamically-downscaled regional reanalysis data to predict streamflow in west central Florida using an integrated hydrologic model	12
Seasonal prediction of regional reference evapotranspiration based on climate forecast system version 2	11
Comparison of two analog-based downscaling methods for regional reference evapotranspiration forecasts	10
Early Adoption of Climate Information: Lessons Learned from South Florida Water Resource Management	9
Dynamic downscaling of the twentieth-century reanalysis (Misra et al. (2012 or 2013))	9
Projected climate change scenario over California by a regional ocean–atmosphere coupled model system	8
The GEFS-based daily reference evapotranspiration (ETo) forecast and its implication for water management in the southeastern United States	7
Thirty-two-year ocean–atmosphere coupled downscaling of global reanalysis over the Intra-American Seas	6
Statistical Downscaling Multimodel Forecasts for Seasonal Precipitation and Surface Temperature over the Southeastern United States	6
Hydrologic impacts of future climate change on Southeast US watersheds	5
Hydrologic implications of errors in bias-corrected regional reanalysis data for west central Florida	5
Pacific and Atlantic sea surface temperature influences on A119:B119 the Apalachicola–Chattahoochee–Flint river basin	5
Validating climate models for computing evapotranspiration in hydrologic studies: how relevant are climate model simulations over Florida	5
Reducing bias-corrected precipitation projection uncertainties: A Bayesian-based indicator-weighting approach	4
Assessment of alternative methods for statistically downscaling daily GCM precipitation outputs to simulate regional streamflow	4

The seasonal climate predictability of the Atlantic Warm Pool and its teleconnections	4
Forecasts of seasonal streamflow in West-Central Florida using multiple climate predictors	3
Validating ENSO Teleconnections on Southeastern U.S. Winter Hydrology	2
The NOAA MAPP Climate Prediction Task Force	0
Developing a surface water resiliency model for the 21 century	0
A level-of-service concept for planning future water supply projects under probabilistic demand and supply framework 1	0
Total	246

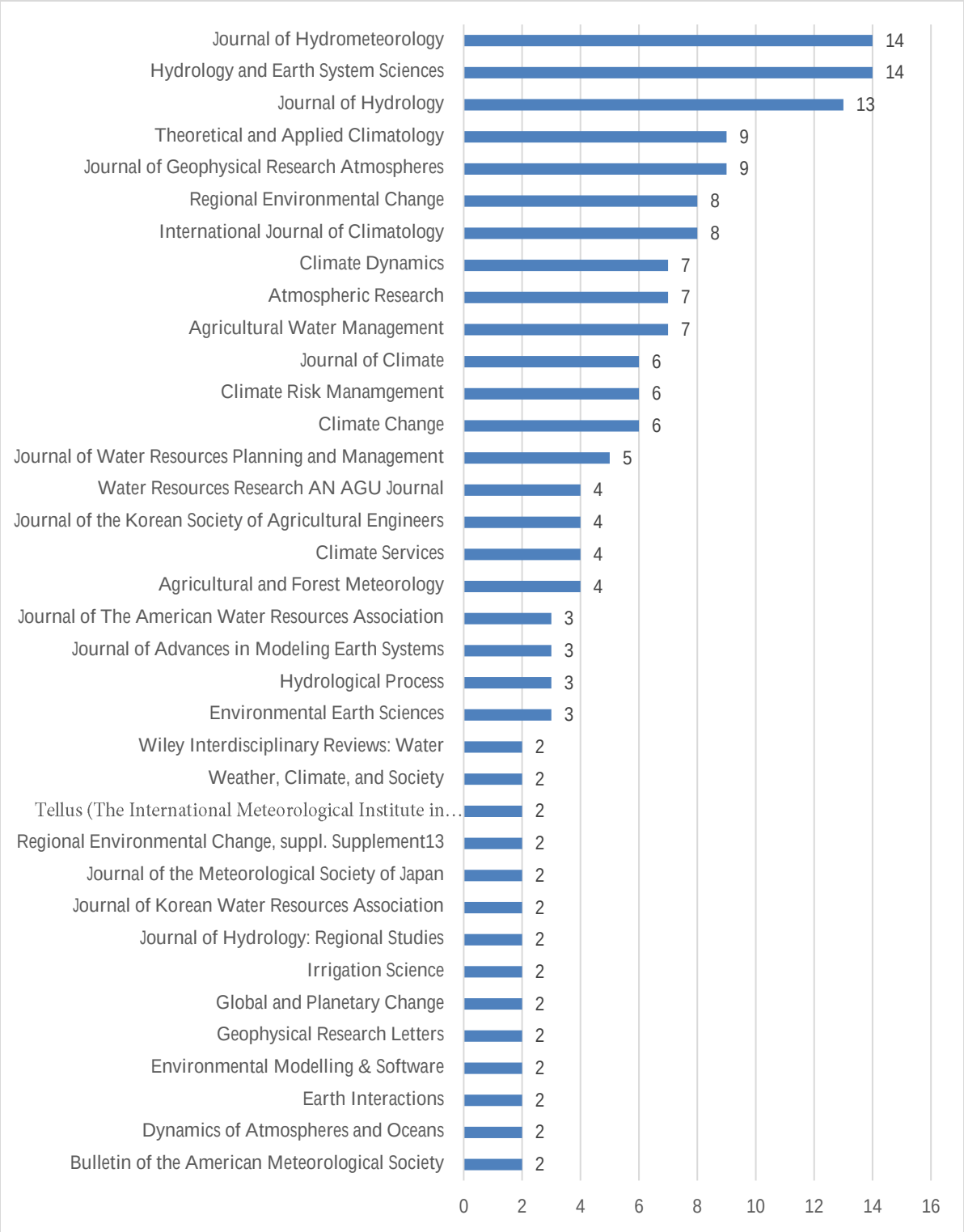
Scholarly articles that cited FWCA articles

The 25 FWCA published articles were cited 246 times (one FWCA article cited in one other scholarly article was counted once, even when this FWCA article was mentioned multiple times). Specifically, FWCA published articles were cited 229 times in journal articles from 89 journals, 10 times in dissertations and thesis, four times in books/book chapters, one in conferences and proceedings, and one in an unpublished manuscript.

Journals

A total of 173 journal articles in 89 journals have cited FWCA published articles. The Journal of Hydrometeorology and Hydrology and Earth System Sciences cited FWCA published articles 14 times, the highest number of citations among all other journals. Journal of Hydrology cited FWCA published articles 13 times. One time means one or multiple mentions of the FWCA published article in one other scholarly article. When one FWCA article is cited by multiple journal articles, it counted as many times as it appears in the number of journal articles. Therefore, two times on Figure 1 could mean two different FWCA articles cited in one other journal article in one journal. It could also mean two different FWCA articles cited in two other articles in the same journal. It could also mean one journal articles cited in two different articles in the same journal. Figure 1 displays the journals that have cited FWCA articles at least twice over these five years. Fifty-four journals had one of their journal articles that cited one of the FWCA articles.

Figure 1. Journals citing FWCA published articles two or more times



Language of the Journals

The majority (81 out of 89) of these articles were published in English language. Three of the articles are in Chinese language including 《南水北调》(South-to-North Water Transfers and Water Science & Technology), 《气象》(Meteorological Monthly), 《节水灌溉》(Water Saving Irrigation). Two journals are in the Korean language, including 한국농림기상학회지 (Korean Journal of Agricultural and Forest Meteorology) and Journal of the Korea Disaster Prevention Association. One journal, named Tecnología y Ciencias del Agua is in Spanish, and two in Portuguese, including Estudos Avançados, Pesquisa Agropecuária Brasileira (Table 2).

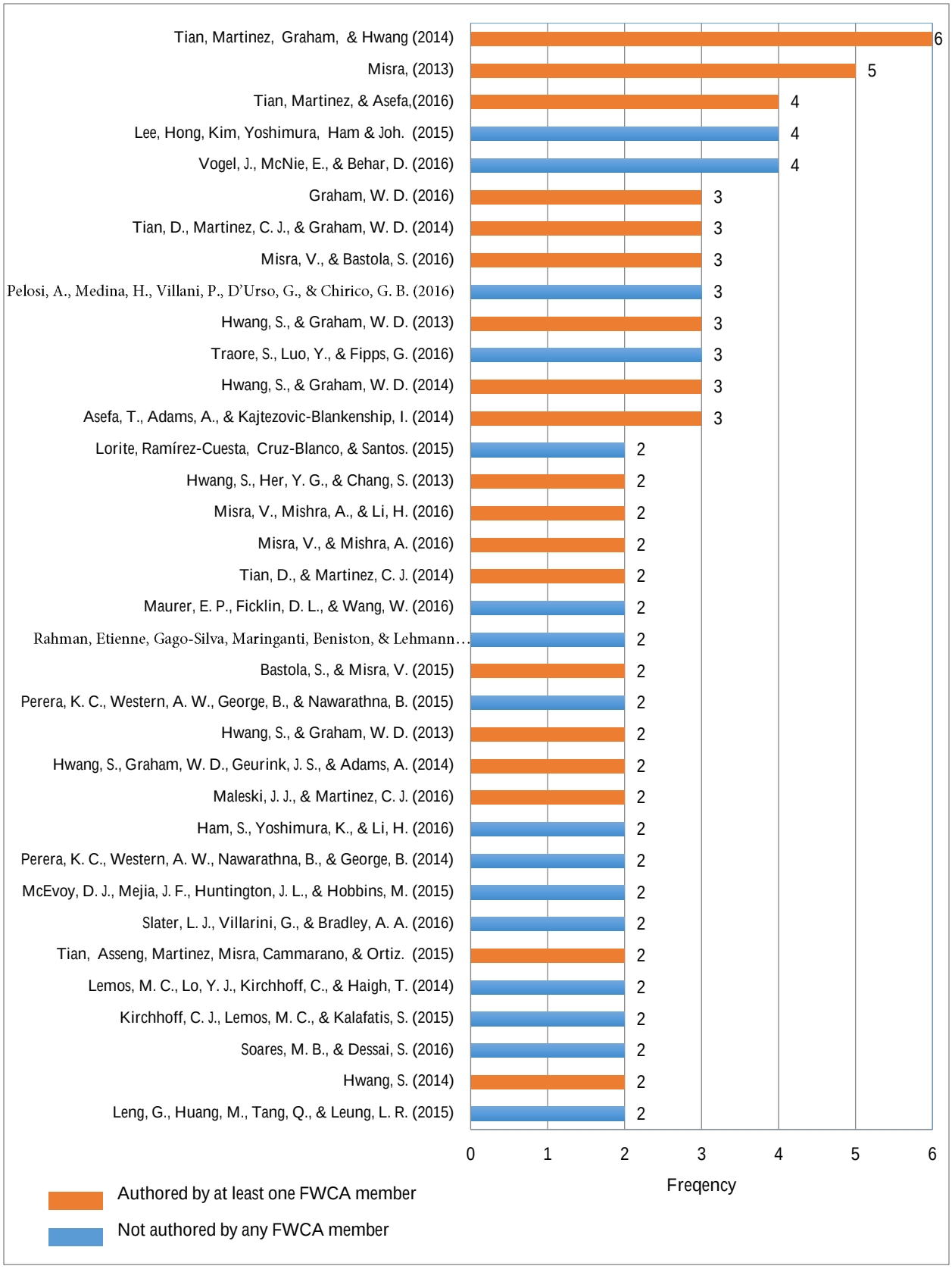
Table 2. Journals citing FWCA published articles that are in foreign languages

Languages	Journal Title
Chinese	《南水北调》 (South-to-North Water Transfers and Water Science & Technology) 《气象》 (Meteorological Monthly) 《节水灌溉》 (Water Saving Irrigation)
Korean	한국농림기상학회지 (Korean Journal of Agricultural and Forest Meteorology) Journal of the Korea Disaster Prevention Association
Spanish	Tecnología y Ciencias del Agua
Portuguese	Estudos Avançados Pesquisa Agropecuária Brasileira

Journal Articles

A total of 173 journal articles were found to cite FWCA published articles. Thirteen articles cited three, or more than three, FWCA articles. Nine out of these 13 articles were authored by at least one FWCA affiliated member. Twenty-two articles cited two FWCA articles, while 140 articles cited one FWCA article. Figure 2 showed the articles that cited two or more FWCA published articles.

Figure 2. Journal articles citing two or more FWCA published articles



Books and Book Chapters

Four books were found to cite FWCA published articles. Each of these books referenced one FWCA published article. Table 3 showed the four books and its cited FWCA article.

Table 3. Books that have cited FWCA articles

Books	Cited FWCA article
Introdução À Predictabilidade Sazonal De Secas	Tian, D., & Martinez, C. J. (2012).
Adaptation to Climate Change Through Water Resources Management: Capacity, Advances in Meteorology: Chapter 16: Barriers and aids to developing adaptive capacity in the water sector.	Bolson, J., & Broad, K. (2013)
Climate in Context: Science and Society Partnering for Adaptation	Bolson, J., Martinez, C., Breuer, N., Srivastava, P., & Knox, P. (2013)
Drivers of Change in Managed Water Resources: Modeling the Impacts of Climate and Socioeconomic Changes Using the US Midwest as a Case Study	Voisin, N., Liu, L., Hejazi, M., Tesfa, T., Li, H., Huang, M., ... & Leung, L. R. (2013).

Conferences and proceedings

FWCA published articles were also referenced in two conference proceedings. Each of the proceedings cited one FWCA published article. Table 4 showed the two proceedings and its cited FWCA article.

Table 4. Proceedings that have cited FWCA articles

Proceedings	Cited FWCA article
Trend of Climate Variability in North Carolina During the Past Decades Proceedings of the 2013 National Conference on Advances in Environmental Science and Technology, pp 13-19	Martinez, C. J., Maleski, J. J., & Miller, M. F. (2012).
21st century United States emissions mitigation could increase water stress more than the climate change it is mitigating	Voisin, N., Liu, L., Hejazi, M., Tesfa, T., Li, H., Huang, M., ... & Leung, L. R. (2013).

Dissertations and Thesis

FWCA published articles were also referenced in 10 dissertations and theses. Each of the proceedings cited one FWCA published article. Table 5 showed the 10 dissertations and theses and its cited FWCA article.

Table 5. Thesis/dissertations that have Cited FWCA articles

Thesis/dissertations	Cited FWCA article
Performance Assessment of Satellite Rainfall Products for Hydrologic Modeling	Bastola, S., & Misra, V. (2014).
On Initializing CGCMs for Seasonal Predictability of ENSO	Bastola, S., & Misra, V. (2014).
Water Management Efficiency in the Food and Beverage Industry	Bastola, S. (2013).
Perceived Risk Versus Actual Risk to Sea-Level Rise: A Case Study in Broward County, Florida	Obeysekera, J. (2013).
Exploring the Use of Physically Based Evaporative Demand Anomalies to Improve Seasonal Drought Forecasts (cited two FWCA articles)	Tian, D., & Martinez, C. J. (2012).; Tian, D., Martinez, C. J., & Graham, W. D. (2014).
Eco-Hydrology Driven Evaluation of Statistically Downscaled Precipitation CMIP5 Climate Model Simulations over Louisiana	Bastola, S. (2013).
Descente d'échelle probabiliste pour analogues météorologiques. Etude de la cohérence spatiale	Hwang, S., & Graham, W. D. (2013).
A New Open-Access HUC-8 Based Downscaled CMIP-5 Climate Model Forecast Dataset for the Conterminous United States	Hwang, S., & Graham, W. D. (2014).
Mitigating Climate Change Induced Increases in Rainfall Intensity and Frequency Using Lid Stormwater Techniques	Martinez, C. J., Maleski, J. J., & Miller, M. F. (2012).
A statistical assessment of drought variability and climate prediction for Kansas	Tian, D., Martinez, C. J., Graham, W. D., & Hwang, S. (2014).

FWCA Mentioned in Journal Articles

FWCA was mentioned in four journal articles. One of these articles introduced the mission of FWCA. From Asefa, T., Adams, A., & Kajtezovic-Blankenship, I. (2014). A tale of integrated regional water supply planning: Meshing socio-economic, policy, governance, and sustainability desires together. *Journal of Hydrology*, *519*(c), 2632-2641. doi:10.1016/j.jhydrol.2014.05.047

> "The Florida Water and Climate Alliance is a collaborative effort focused on increasing the relevance of climate change and variability data, and tools to the planning and operations of Florida's public water supply utilities. The partners are interested in learning how climate variability, climate change, and sea level rise may impact planning and operations of Florida's public water supply utilities. The collaborative working group promotes shared knowledge, data, models and decision-making tools among public water sup-pliers, water resource managers, climate scientists, and hydrologic scientists. Through involvement with these two coalitions, Tampa Bay Water is helping shape national, state, and local level conversations, and research regarding climate change and adaptation."

Three other articles mentioned FWCA as one of the groups contributing to climate or water related efforts. One example comes from Bolson, J., Martinez, C., Breuer, N., Srivastava, P., & Knox, P. (2013). Climate information use among southeast US water managers: beyond barriers and toward opportunities. *Regional Environmental Change*, *13*(1), 141-151.

> …there have been increasing efforts in Florida to respond to climate change across scales of governance, including the Florida water and climate alliance (FloridaWCA.org), the Southeast Florida Climate Compact (http://southeastfloridaclimatecompact.org/), and the establishment of a Florida Climate Institute (floridaclimateinstitute.org/).

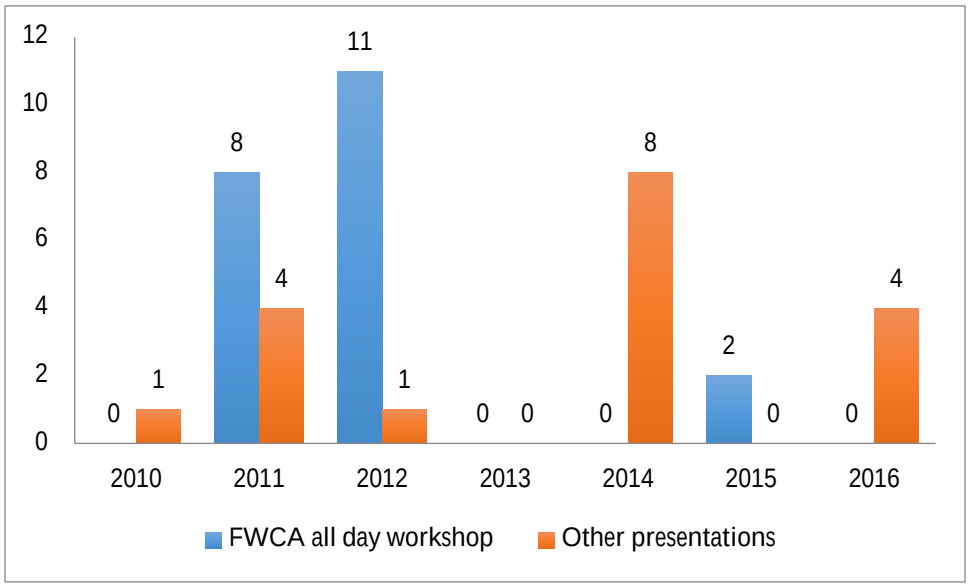
Another example is from Misra, V. (2013). A multi-disciplinary assessment of the southeastern United States climate. *Regional Environmental Change*, *13*, 1.

> This special issue is a manifestation of such an interest in the SUS with contributions from several climate-related inter-disciplinary groups including the Southeast Climate Consortium (SECC; http://seclimate.org/), the Florida Climate Institute (FCI; http://floridaclimateinstitute.org/), the University of Florida Water Institute (http://waterinstitute.ufl.edu/), and the Florida Water &Climate Alliance (FloridaWCA; http://www.floridawca.org)

Workshops/Conferences

The FWCA website documented 39 presentations conducted by the organization from 2010 to 2016. Of the 39 presentations, 21 were presented at FWCA sponsored all day workshops, while the rest 18 presentations were presented in other events. Figure 3 showed the number of presentations from FWCA sponsored all day workshops and presentations in other events each year over the past six years.

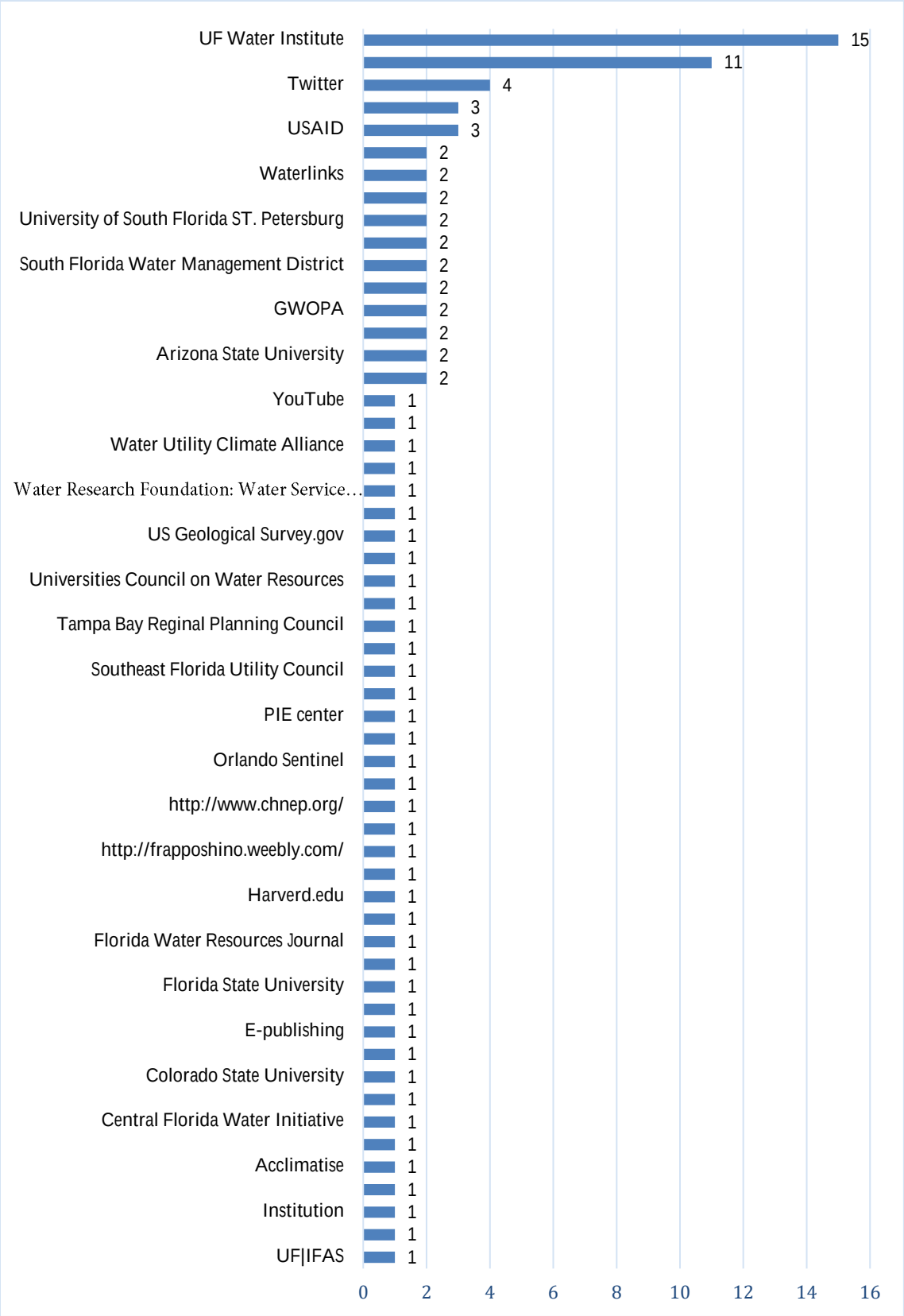
Figure 3. The number of presentations from FWCA all day workshops and other events from 2010 to 2016



Online Search Results for FWCA

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.

Figure 4. Frequencies of the sources that have mentioned FWCA



Themes

Among the sources that have mentioned FWCA, researchers identified seven themes, including descriptions of FWCA, listing 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 partnership with a description of FWCA's goal and mission. For example, the UF Water Institute introduced FWCA as follows:

> 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. A collaborative effort facilitated by the UF Water Institute, partners are working together to understand how climate variability/change and sea level rise may impact planning and operation of Florida's public water resources and supply, and refining and developing science based tools in seasonal scale and long term projections at a local scale.

Similarly, Acclimatise, a "consulting, communications and digital application company" providing climate change oriented services wrote the following in their news 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 years. Despite having felt the effects of climate change impacts for many years, the region's policy makers have failed to take decisive action on the issue, leaving companies little choice but to act….The Florida Water and Climate Alliance is a stakeholder-scientist partnership committed to increasing the relevance of climate science data and tools at relevant time and space scales to support decision-making in water resource management, planning and supply operations in Florida, with the participation of Palm Beach County Water Utilities (Florida's 3rd largest water utility).

The National Oceanic and Atmospheric Administration (NOAA) introduced FWCA in its annual report to NOAA regional Integrated Sciences and Assessment program as follows:

> Florida Water Climate Alliance--With initial funding from SARP in 2010 for the Public Water Supply Utilities Climate Impacts Working Group, this group has evolved in 2013 into the Florida Water Climate Alliance ……. The Florida Water and Climate Alliance is a stakeholder-scientist partnership committed to increasing the relevance of climate science data and tools at relevant time and space scales to support decision-making in water resource management, planning and supply operations in Florida. The collaborative Learning network is engaged in co-exploration and co-development of

actionable climate science. FloridaWCA Projects contribute to assessing and developing relevant climate data and tools and ensuring their usefulness to water supply and resource planning.

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, event/activity participants for recognition and acknowledgement.

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 twinning partnership between Florida Water and Climate Alliance (FWCA) and PWAD-CoP CC.

The Florida Climate Institute at Florida State University recognized FWCA for a special issue in the Journal of the Regional Environmental Change entitled "Multi-disciplinary assessment of the Southeastern US climate"

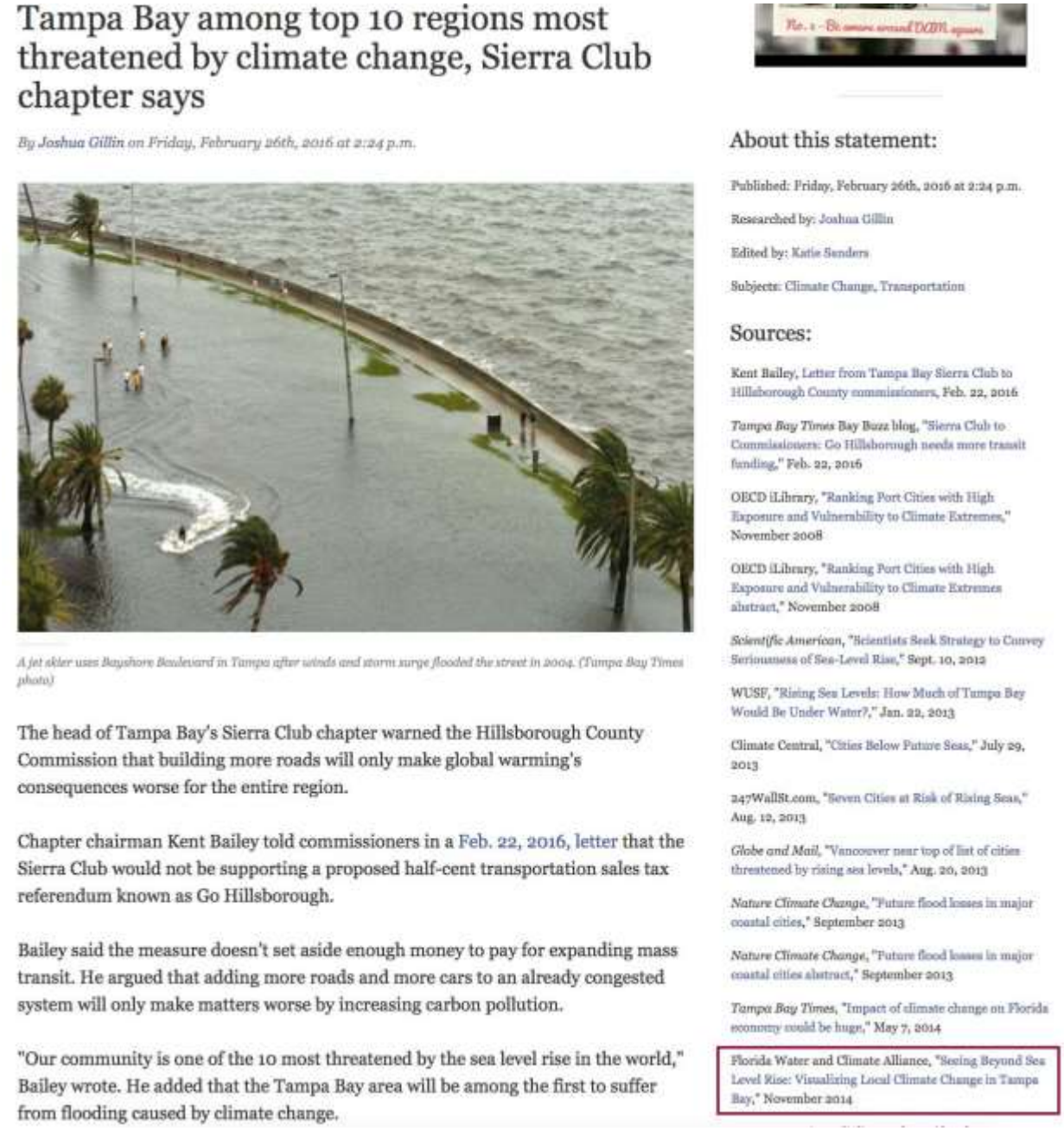
> This is a result of a vibrant inter-disciplinary environment in the Southeastern US for several years fostered by several groups like the Florida Climate Institute, the Southeast Climate Consortium, and the Florida Water and Climate Alliance.

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." (Article link: (http://www.politifact.com/florida/statements/2016/feb/26/sierra-club/tampa-bay-among-top-10-regions-most-threatened-cli/) This proposal advocated a half-cent transportation sales tax referendum and would be building more roads and 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. Figure 4 displayed a screen shot of this article and the FWCA source used as supporting evidence. The source list on the right of the screen shot showed the FWCA source:

> "Florida Water and Climate Alliance, "Seeing Beyond Sea Level Rise: Visualizing Local Climate Change in Tampa Bay," November 2014"

Figure 5. Feature article mentioning FWCA document as a supporting source



Tampa Bay among top 10 regions most threatened by climate change, Sierra Club chapter says

By Joshua Gillin on Friday, February 26th, 2016 at 2:24 p.m.

A jet skier uses Bayshore Boulevard in Tampa after winds and storm surge flooded the street in 2004. (Tampa Bay Times photo)

The head of Tampa Bay's Sierra Club chapter warned the Hillsborough County Commission that building more roads will only make global warming's consequences worse for the entire region.

Chapter chairman Kent Bailey told commissioners in a Feb. 22, 2016, letter that the Sierra Club would not be supporting a proposed half-cent transportation sales tax referendum known as Go Hillsborough.

Bailey said the measure doesn't set aside enough money to pay for expanding mass transit. He argued that adding more roads and more cars to an already congested system will only make matters worse by increasing carbon pollution.

"Our community is one of the 10 most threatened by the sea level rise in the world," Bailey wrote. He added that the Tampa Bay area will be among the first to suffer from flooding caused by climate change.

About this statement:

Published: Friday, February 26th, 2016 at 2:24 p.m.

Researched by: Joshua Gillin

Edited by: Katie Sanders

Subjects: Climate Change, Transportation

Sources:

Kent Bailey, Letter from Tampa Bay Sierra Club to Hillsborough County commissioners, Feb. 22, 2016

Tampa Bay Times Bay Buzz blog, "Sierra Club to Commissioners: Go Hillsborough needs more transit funding," Feb. 22, 2016

OECD iLibrary, "Ranking Port Cities with High Exposure and Vulnerability to Climate Extremes," November 2008

OECD iLibrary, "Ranking Port Cities with High Exposure and Vulnerability to Climate Extremes abstract," November 2008

Scientific American, "Scientists Seek Strategy to Convey Seriousness of Sea-Level Rise," Sept. 10, 2012

WUSF, "Rising Sea Levels: How Much of Tampa Bay Would Be Under Water?," Jan. 22, 2013

Climate Central, "Cities Below Future Seas," July 29, 2013

247WallSt.com, "Seven Cities at Risk of Rising Seas," Aug. 12, 2013

Globe and Mail, "Vancouver near top of list of cities threatened by rising sea levels," Aug. 20, 2013

Nature Climate Change, "Future flood losses in major coastal cities," September 2013

Nature Climate Change, "Future flood losses in major coastal cities abstract," September 2013

Tampa Bay Times, "Impact of climate change on Florida economy could be huge," May 7, 2014

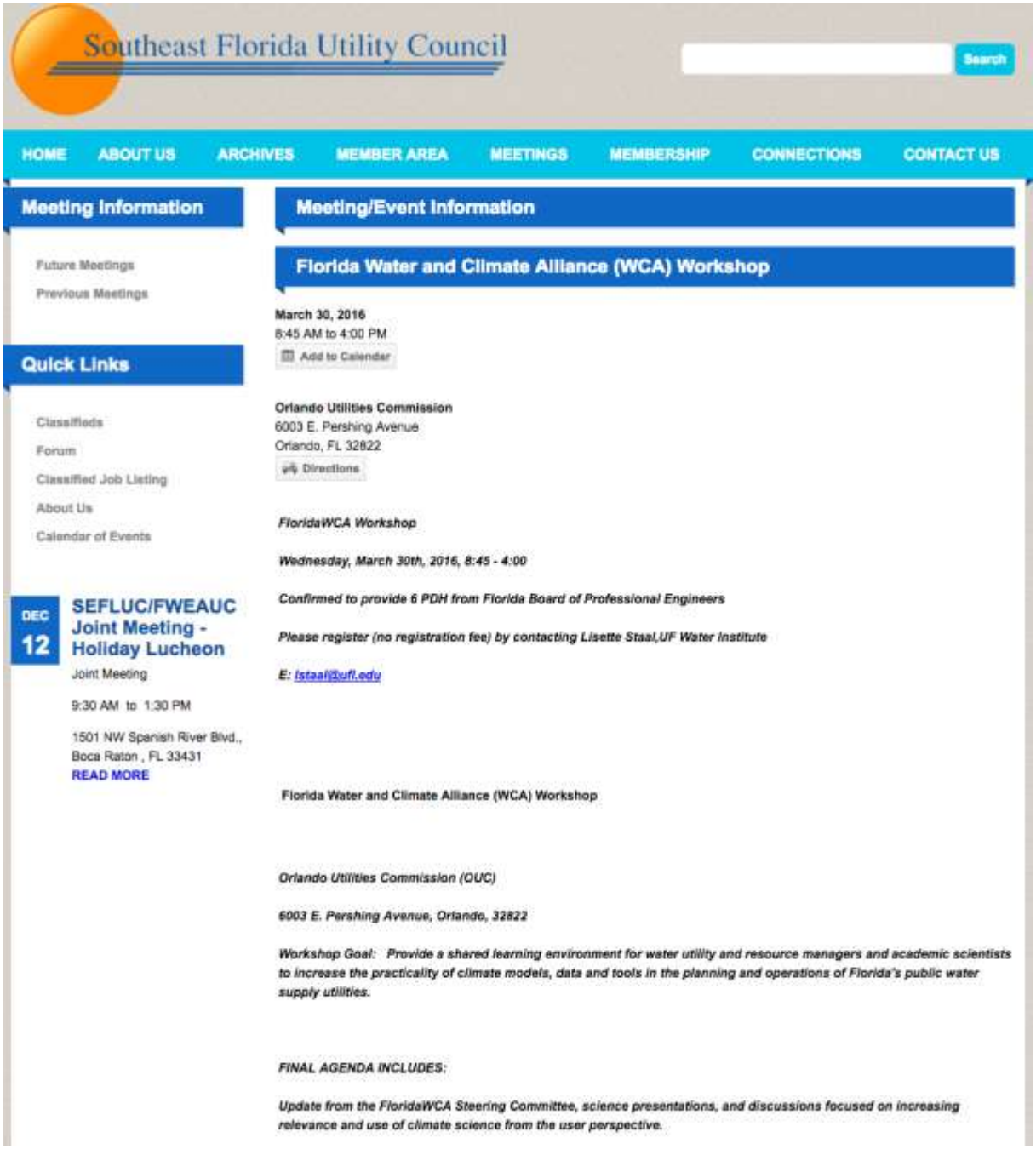
Florida Water and Climate Alliance, "Seeing Beyond Sea Level Rise: Visualizing Local Climate Change in Tampa Bay," November 2014

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

Many presentations, workshops, and seminars with a variety of water and climate related topics were posted online to encourage participation of a targeted population. For example, the Southeast Florida Utility Council announced an FWCA workshop about public water supply utilities on its website. Figure??

*Figure 6a. Screen shot of online announcement of an FWCA workshop**



*Screen shot from http://sefluc.org/meetinginfo.php?id=410&ts=1459194109

*Figure 6b. Screen shot of symposium abstract of a FWCA presentation**

4th UF Water Institute Symposium Abstract Back to Table of Contents

Irani, Tracy

Authors: **Tracy Irani**, Center for Public Issues Education
Erica Odera, Center for Public Issues Education
Lisette Staal, UF Water Institute

Category: Science, stakeholders and decision-making
Session Title: Stakeholder Engagement in Education and Decision Making

Creating Stakeholder Collaborations for Water Use Planning in an Uncertain Future: The Case of the Florida Water and Climate Alliance

The FloridaWCA, initiated in 2010, is a stakeholder-scientist group made up of hydrologists, public water suppliers, water resource managers, and climate scientists. Their shared goal is to make climate prediction models and sea level rise data more applicable and useful for decision-making amongst water and utility planners in Florida. In addition to the technical and scientific goals and outputs of the group, an overarching question and challenge was how can we build and sustain a community of scientists and stakeholders that can have wide-reaching impact for water supply planning in the face of climate uncertainties in Florida and beyond?

This presentation will focus on using the FloridaWCA working group as a case study in methods of how to sustain a group that will help translate the most current science around climate change into forms useful for practitioners and planners. It will examine the experiential learning framework that guides the process, the importance of understanding learning styles and communication differences of group members, the mechanisms used for knowledge management, and take an evaluative approach to how the group has worked towards reaching its mission. Through regular workshop meetings to discuss the needs of different group members and assessing the scientific tools that currently exist, the group has been able to begin critically determining whether or not the climate and sea level rise models will be useful for Florida based utility and water management planners.
The authors hope that by outlining the successes and challenges of the FloridaWCA group, other individuals interested in solving critical water issues through creating diverse stakeholder platforms may find lessons to learn from the FloridaWCA story.

*screen shot from http://waterinstitute.ufl.edu/symposium2014/downloads/bookofabstracts_2014.pdf

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) have updated FWCA projects they funded on their official websites. Figure 6a and figure 6b showed how NOAA described FWCA projects and their impact.

*Figure 7a. Screen shot FWCA update on funders' websites**

9. Key Outputs and Impacts

9.1. Climate forecasts for water managers

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 Aquifer Storage and Recovery (ASR) initiation index. This index employs ten variables: four operational variables, two hydrologic condition variables and four climate forecast products (Table 1). Each variable is given a weight based upon its typical range in context of the risk posed to water supply. The variables differ in importance and the respective weights factors reflect this. The index is recalculated weekly by Authority staff as a guide in making the decision on when to initiate ASR recovery operations.

*screen shots from http://cpo.noaa.gov/sites/cpo/RISA/SECC%20Annual%20Report%20(2014).pdf

*Figure 7b. Screen shot FWCA update on funders' websites**

7.3. Florida Water Climate Alliance

With initial funding from SARP in 2010 for the Public Water Supply Utilities Climate Impacts Working Group, this group has evolved in 2013 into the Florida Water Climate Alliance [http://floridawca.org]. The Florida Water and Climate Alliance is a stakeholder-scientist partnership committed to increasing the relevance of climate science data and tools at relevant time and space scales to support decision-making in water resource management, planning and supply operations in Florida. The collaborative Learning network is engaged in co-exploration and co-development of actionable climate science. FloridaWCA Projects contribute to assessing and developing relevant climate data and tools and ensuring their usefulness to water supply and resource planning.

*screen shots from http://cpo.noaa.gov/sites/cpo/RISA/SECC%20Annual%20Report%20(2014).pdf

Similarly, USDA also briefly described an FWCA project they funded and its potential impact (Figure 6c).

*Figure 7c. Screen shot FWCA update on funders' websites**

US.Project 2: Use of Seasonal Climate Forecasts to Minimize Short-Term Operational Risks for Water Supply. This project is fully integrated with the working group, Florida Water and Climate Alliance (FloridaWCA, and have engaged stakeholders both in planning and sharing interim results, contributing to mutual learning and adaptation of research. Project 3: Climate Variability to Climate Change: Extension Challenges and

*screen shots from http://www.usda.gov/wps/portal/usda/usdahome

Theme 6: FWCA member highlight

A few websites recognized the members of FWCA and provided their link 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, the largest wholesale public water supplier in the state of Florida. Dr. Adams, a water resources engineer, has

> work in Florida on largescale water supply and management problems for over 30 years…… 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 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 which is responsible for the design and implementation of water resources operation and planning tools…… Tirusew cochairs the Florida Water and Climate Alliance (www.FloridaWCA.org)—a stakeholder scientist partnership committed to increasing the relevance of climate science data and tools at relevant time and space scales to support decision-making in water resource management, planning and supply operations in Florida. 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. Tirusew is a registered professional engineer with the state of Florida and a Diplomat of the American Academy of Water Resources Engineers.

URex Sustainability Research Network on an Arizona State University website documented scholarly activities of its members. One FWCA member's presentation was recognized on this site.

> Kominoski, J. S. 2015. Urban resilience to extreme events: UREx Sustainability Research Network. Presentation at the Florida Water and Climate Alliance Meeting, Tampa, Florida.

FWCA in Mass Media

One result about FWCA was found through a search of mass media. An 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. Tampa Bay Times reports news concerning west-central Florida both in print and online. This identical article was also found on Politifact.com. This news article used FWCA as a source to support the Sierra Club Chapter's opposing opinion on a transportation proposal that would build more roads and add more traffic to the local region.

No FWCA related news was found on other newspapers, broadcast transcripts, or magazines.

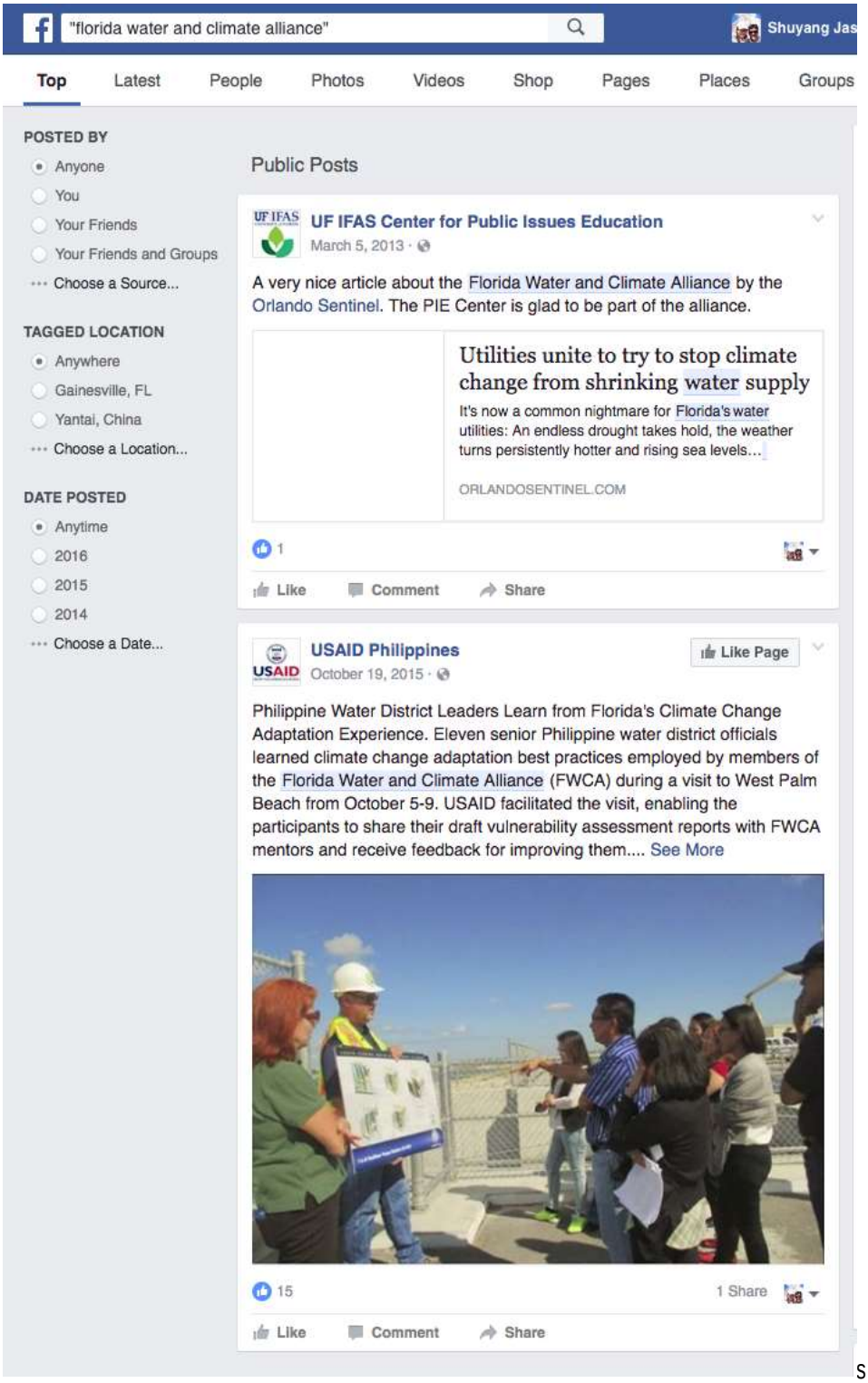
FWCA on Social Media

A few online mentions about FWCA have been shared on social media. Specifically, FWCA was mentioned in two Facebook posts, one YouTube description, and three tweets. No mentions of FWCA were found on Instagram and Snapchat.

Facebook

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 (Article link http://articles.orlandosentinel.com/2013-03-04/news/os-climate-worries-water-utilities-20130304_1_climate-change-national-climate-assessment-water-resources). In addition, USAID Philippines posted a photo and a paragraph describing Pilipino water experts meeting FWCA members and learning from FWCA experts about climate change.

Figure 8. Facebook posts about FWCA



S

YouTube

One YouTube video description stated "Obeysekera recently gave a presentation on that topic to the Florida Water and Climate Alliance. WLRN-Miami Herald News sat down with him afterwards to ask: What should the general public make of the array of sea-level rise projections?" This video was posted on November 8, 2013. By at 4:32pm on September 20, 2016, this video has played 554 times. (video link: https://www.youtube.com/watch?v=OwVL4xd04CQ)

Figure 9. YouTube videos about FWCA

What To Make Of All Those Sea-Level Rise Projections

Kenny Malone

Subscribe 13

554 views

Add to Share ••• More

Published on Nov 8, 2013

Climate scientists largely agree that sea level is rising. The extent of the change is a far more complicated matter.

"Probably two feet. Three feet, possibly," said David Enfield, a climatologist with the University of Miami and the National Oceanic Atmospheric Administration. "As an extreme -- if for example we see an unexpected acceleration of the melting ice in Greenland and Antarctica, something else we're not observing -- we could be seeing six feet by the end of the century."

Compare that to the personal projection by Harold Wanless: "Six to 20 feet, somewhere in that range."

Wanless is a geologist at the University of Miami. He studies the evolution of coastal regions and believes past sea-level rise shows us that when ice sheets start to melt, they melt much faster than experts might think.

"We don't really know enough about how ice melts: big ice sheets, like the Greenland ice sheet or parts of the Antarctic ice sheet," Wanless said. "Every year we're learning new things and they're all pointing towards a much more rapid rise [in melt] than is presently being projected."

Individual projections, even expert ones, are not typically the numbers you'll see being cited regularly. Most of those projections come from groups of experts discussing which models are worthwhile, which published research to believe, and how to interpret the data. Even those meta-projections typically don't agree with one another, though they generally fall within the eight-inch to six-and-a-half-foot range.

"Everybody's brother has been trying to predict the sea-level rise," said Jayantha Obeysekera, chief modeler for the South Florida Water Management District.

Obeysekera recently gave a presentation on that topic to the Florida Water and Climate Alliance. WLRN-Miami Herald News sat down with him afterwards to ask: What should the general public make of the array of sea-level rise projections?

Category Science & Technology

Twitter

Five 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. Figure 9a, figure 9b and figure 9c presented the screen shots of these tweets.

Figure 10a. Twitter tweets about FWCA

Figure 10b. Twitter tweets about FWCA

Figure 10c. Twitter tweets about FWCA

Tone of FWCA information

Of the 96 Google search results mentioning FWCA, 57 used a positive tone while 34 had a neutral tone. The positive tone used phrases to illustrate the positive impact and mission of FWCA. One example is from a description of FWCA on the Tampa Bay Water website:

> "FloridaWCA is a stakeholder-scientist partnership committed to increasing the relevance of climate science data and tools to support decision-making in water source management, planning and supply operations in Florida."

Another example is found on an introduction of FWCA on America's Watershed Initiative conference program posted on the UF|IFAS website (https://conference.ifas.ufl.edu/awi/Program_book.pdf)

> "Scientists participating in the Alliance seek to understand and provide information that utilities personnel need regarding climate variability/change and sea-level rise, along with projections showing how these phenomena may affect water demand, water availability, water quality, and the infrastructure used to provide water."

Articles using a neutral tone about FWCA simply mentioned FWCA without using positive words or phrases. These articles are usually workshop announcements, member affiliations, describing a collaboration that involves FWCA, or a simple description of FWCA. One example is from EEPublishing LLC. (article link: http://www.eenews.net/stories/1059978868):

> "A similar effort called the Florida Water and Climate Alliance includes a half-dozen Florida water utilities as well as three of the state's water management districts and a consortium of research institutions."

Conclusions

This study aimed to document the visibility and the impact of FWCA. Based on the findings, FWCA members have been productive in publishing journal articles. These articles have been cited by a variety of journals, books, dissertations, theses, as well as proceedings. Members are also active in presenting at conferences and workshops.

Most of the journals that have cited FWCA articles are written in English, but foreign language journals have also referenced FWCA published articles. Many articles that have cited FWCA articles, especially those that have cited more than three of them, were authored by FWCA members, meaning the members tend to cite FWCA members more than other scholars in the field. This finding suggests that affiliating with a scientist-based organization such as FWCA improves the research impact among members. Members of scientist stakeholder partnerships like FWCA often cite each other's work, since one of the benefits of belonging to such organizations is to see what others in the field are doing. Further, group members may engage in citing each other in an attempt to build the reputation of the organization itself, suggesting that member citation of each other's work is a useful metric to evaluate the impact of such organizations.

The majority of the online information about FWCA is introductive. These introductions usually included the goal and mission of FWCA. The wording of these introductions is often highly similar to the FWCA's introduction on its official website. Many online sources mentioned FWCA as a partner of a project or an effort in the water and climate related field without describing FWCA in depth. Announcements about FWCA workshops have been 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. Limited information about FWCA can also be found on some social media sites such as Facebook and Twitter.

Information found online about FWCA carries either a positive or a neutral tone. No negative coverage about FWCA was found.

Recommendations

In general, citation impact analysis of FWCA indicates that the organization is making an impact in the climate science and water resource management fields, and that is members are highly productive in terms of academic publications, presentations and workshops. Now that this foundation has been

developed, there will be opportunities to further extend the reach and reputation of the organization as a whole as a collaborative partner and source for expert, scientifically based information.

As the organization seeks to further enhance its reputation, however, it might be valuable to invest some resources in developing and promoting its identity, core messages and visibility with key audiences. This might include developing 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.

Just as the organization says it "is committed to increasing the relevance of climate science data and tools to support decision-making," these informational tools can be used to further increase the relevance and reputation of the FWCA with its key stakeholder groups.

Other recommendations include:

- More visibility on mass media and social media;
- Develop strategic communication plan (objectives, target audiences, strategies, message and media tactics) and revisit it yearly;
- Workshop slides need to add speakers name, time, location, purpose, and target audience before uploading to FWCA website.

While is very challenging for self-directed organizations to find the resources to hire a full time science communicator, it might be possible to find enough resources to hire one as a freelancer. It is recommended that FWCA consider looking for ways to find professional communication expertise to assist them in developing reputation enhancing materials for external audiences.

In addition, evaluating the media visibility of the organization on a regular basis can benefit the understanding of the organization's reputation and its communication effectiveness. Researchers can track over time the mention or coverage about FWCA in print media, television news, or new media such as social media. These assessments can be analyzed and compared quantitatively. Such analysis will help FWCA members to better understand if the organization and its members are communicating their mission and goals effectively to stakeholders, and how to strategically plan future organizational activities.

References

Clarivate Analytics (2016). Web of Science. [Thomson Reuter Website]. Retrieved from http://ipscience.thomsonreuters.com/product/web-of-science/?utm_source=false&utm_medium=false&utm_campaign=false

Johnson, B., & Christensen, L. B. (2012). *Educational research: Quantitative, qualitative, and mixed approaches*. Thousand Oaks, Calif: SAGE Publications.

Reimen-Sendi, K. A. (2016). Research impact metrics: Citation analysis. [University of Michigan Library website].Retrieved from http://guides.lib.umich.edu/citation

Glaser, B. G., & Strauss, AL. (1967). T*he discovery of grounded theory: Strategies for qualitative research*. New York: Aldine De Gruyter.

Strauss, A., & Corbin, J. (1990). Basics of qualitative research: Grounded theory procedures and techniques. Newbury Park, CA: Sage Publications.

Social Mention (n.d.). Frequently Asked Questions. Retrieved from: http://www.socialmention.com/about/

Vine, R. (2006). Google scholar. *Journal of the Medical Library Association*, *94*(1), 97. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1324783/

Appendix

List of all FWCA articles

1. Martinez, C. J., Maleski, J. J., & Miller, M. F. (2012). Trends in precipitation and temperature in Florida, USA. *Journal of hydrology*, 452, 259-281.
2. Hwang, S., Graham, W., Hernández, J. L., Martinez, C., Jones, J. W., & Adams, A. (2011). Quantitative spatiotemporal evaluation of dynamically downscaled MM5 precipitation predictions over the Tampa Bay region, Florida. *Journal of hydrometeorology*, *12*(6), 1447-1464
3. Bolson, J., Martinez, C., Breuer, N., Srivastava, P., & Knox, P. (2013). Climate information use among southeast US water managers: beyond barriers and toward opportunities. *Regional Environmental Change*, *13*(1), 141-151.
4. Tian, D., & Martinez, C. J. (2012). Forecasting reference evapotranspiration using retrospective forecast analogs in the southeastern United States. *Journal of Hydrometeorology*, *13*(6), 1874-1892.
5. Voisin, N., Liu, L., Hejazi, M., Tesfa, T., Li, H., Huang, M., ... & Leung, L. R. (2013). One-way coupling of an integrated assessment model and a water resources model: evaluation and implications of future changes over the US Midwest. *Hydrology and Earth System Sciences*, *17*(11), 4555-4575.
6. Bastola, S., & Misra, V. (2014). Evaluation of dynamically downscaled reanalysis precipitation data for hydrological application. *Hydrological Processes*, *28*(4), 1989-2002.

7. Hwang, S., & Graham, W. D. (2013). Development and comparative evaluation of a stochastic analog method to downscale daily GCM precipitation. *Hydrology and Earth System Sciences*, *17*(11), 4481-4502.
8. Hwang, S., Graham, W. D., Adams, A., & Geurink, J. (2013). Assessment of the utility of dynamically-downscaled regional reanalysis data to predict streamflow in west central Florida using an integrated hydrologic model. *Regional Environmental Change*, *13*(1), 69-80.
9. Tian, D., Martinez, C. J., & Graham, W. D. (2014). Seasonal prediction of regional reference evapotranspiration based on climate forecast system version 2. *Journal of Hydrometeorology*, *15*(3), 1166-1188.
10. Tian, D., & Martinez, C. J. (2012). Comparison of two analog-based downscaling methods for regional reference evapotranspiration forecasts. *Journal of hydrology*, *475*, 350-364.
11. Bolson, J., & Broad, K. (2013). Early adoption of climate information: lessons learned from South Florida water resource management. *Weather, Climate, and society*, *5*(3), 266-281.
12. Misra, V., DiNapoli, S. M., & Bastola, S. (2013). Dynamic downscaling of the twentieth-century reanalysis over the southeastern United States. *Regional Environmental Change*, *13*(1), 15-23.
13. Li, H., Kanamitsu, M., Hong, S. Y., Yoshimura, K., Cayan, D. R., Misra, V., & Sun, L. (2014). Projected climate change scenario over California by a regional ocean–atmosphere coupled model system. *Climatic change*, *122*(4), 609-619.
14. Tian, D., & Martinez, C. J. (2014). The GEFS-based daily reference evapotranspiration (ETo) forecast and its implication for water management in the southeastern United States. *Journal of Hydrometeorology*, *15*(3), 1152-1165.
15. Li, H., & Misra, V. (2014). Thirty-two-year ocean–atmosphere coupled downscaling of global reanalysis over the Intra-American Seas. *Climate dynamics*, *43*(9-10), 2471-2489.
16. Tian, D., Martinez, C. J., Graham, W. D., & Hwang, S. (2014). Statistical downscaling multimodel forecasts for seasonal precipitation and surface temperature over the southeastern United States. *Journal of Climate*, *27*(22), 8384-8411.
17. Bastola, S. (2013). Hydrologic impacts of future climate change on Southeast US watersheds. *Regional Environmental Change*, *13*(1), 131-139.
18. Hwang, S., Graham, W. D., Geurink, J. S., & Adams, A. (2014). Hydrologic implications of errors in bias-corrected regional reanalysis data for west central Florida. *Journal of Hydrology*, *510*, 513-529.
19. Johnson, N. T., Martinez, C. J., Kiker, G. A., & Leitman, S. (2013). Pacific and Atlantic sea surface temperature influences on streamflow in the Apalachicola–Chattahoochee–Flint river basin. *Journal of Hydrology*, *489*, 160-179.
20. Obeysekera, J. (2013). Validating climate models for computing evapotranspiration in hydrologic studies: how relevant are climate model simulations over Florida?. *Regional Environmental Change*, *13*(1), 81-90.

21. Asefa, T., & Adams, A. (2013). Reducing bias-corrected precipitation projection uncertainties: a Bayesian-based indicator-weighting approach. *Regional Environmental Change*, *13*(1), 111-120.
22. Hwang, S., & Graham, W. D. (2014). Assessment of alternative methods for statistically downscaling daily GCM precipitation outputs to simulate regional streamflow. *JAWRA Journal of the American Water Resources Association*, *50*(4), 1010-1032.
23. Misra, V., & Li, H. (2014). The seasonal climate predictability of the Atlantic Warm Pool and its teleconnections. *Geophysical Research Letters*, *41*(2), 661-666.
24. Risko, S. L., & Martinez, C. J. (2014). Forecasts of seasonal streamflow in West-Central Florida using multiple climate predictors. *Journal of Hydrology*, *519*, 1130-1140.
25. Nag, B., Misra, V., & Bastola, S. (2014). Validating ENSO teleconnections on Southeastern US winter hydrology. *Earth Interactions*, *18*(15), 1-23.
26. Asefa, T., Adams, A., & Wanakule, N. (2015). A Level-of-Service Concept for Planning Future Water Supply Projects under Probabilistic Demand and Supply Framework. *JAWRA Journal of the American Water Resources Association*, *51*(5), 1272-1285.
27. The NOAA MAPP Climate Prediction Task Force
28. Developing a surface water resiliency model for the 21 century

List of All Journals That Cited FWCA Published Articles

1. Hydrology and Earth System Sciences
2. Journal of Hydrometeorology
3. Journal of Hydrology
4. Journal of Geophysical Research Atmospheres
5. Theoretical and Applied Climatology
6. International Journal of Climatology
7. Regional Environmental Change
8. Agricultural Water Management
9. Atmospheric Research
10. Climate Dynamics
11. Climate Change
12. Climate Risk Manamgement
13. Journal of Climate
14. Journal of Water Resources Planning and Management
15. Agricultural and Forest Meteorology
16. Climate Services
17. Journal of the Korean Society of Agricultural Engineers
18. Water Resources Research AN AGU Journal
19. Environmental Earth Sciences
20. Hydrological Process

21. Journal of Advances in Modeling Earth Systems
22. Journal of The American Water Resources Association
23. Bulletin of the American Meteorological Society
24. Dynamics of Atmospheres and Oceans
25. Earth Interactions
26. Environmental Modelling & Software
27. Geophysical Research Letters
28. Global and Planetary Change
29. Irrigation Science
30. Journal of Hydrology: Regional Studies
31. Journal of Korean Water Resources Association
32. Journal of the Meteorological Society of Japan
33. Regional Environmental Change, suppl. Supplement13
34. Tellus (The International Meteorological Institute in Stockholm)
35. Weather, Climate, and Society
36. Wiley Interdisciplinary Reviews: Water
37. Climate
38. 《南水北调与水利科技》
39. 《气象》
40. Meteorological Monthly"
41. 《节水灌溉》 Water Saving Irrigation
42. Advances in Meteorology
43. Advances in Water Resources
44. Agriculture
45. American Journal of Climate Change
46. American Meteorological Society
47. Applied Geography
48. Archives of Agronomy and Soil Science
49. Change and Adaptation in Socio-Ecological Systems
50. Climate of the Past
51. Current Opinion in Environmental Sustainability
52. Earth Sciences
53. Earth's Future
54. Ecohydrology & Hydrobiology
55. Ecological Entomology
56. Ecological Indicators
57. Environmental Management
58. Environmental Practice

59. Environmental Research Letters
60. Estud. av.
61. Forest Ecology and Management
62. Global Environmental Change
63. Hydrology Research
64. International Journal of Remote Sensing
65. International Journal of Wildland Fire
66. Journal of Applied Meteorology and Climatology
67. Journal of Environmental and Earth Science
68. Journal of Environmental Protection
69. Journal of Marine System
70. Journal of Mountain Science
71. Journal of South Carolina Water Resources
72. Journal of the Korea Disaster Prevention Association
73. Journal of Water and Climate Change
74. Journal Title
75. Korean Journal of Agricultural and Forest Meteorology
76. Meteorological Applications
77. Monthly Weather Review
78. Nature Communication
79. Open Journal of Modern Hydrology
80. Pesq. agropec. bras.
81. PLoS ONE
82. Program
83. Southeastern geographer
84. Stochastic Environmental Research and Risk Assessment
85. Tecnol. cienc. Agua
86. The American Society of Agricultural and Biological Engineers
87. The International Conference on Marine and Freshwater Environments
88. Transactions of the ASABE
89. Vadose Zone Journal
90. Water Resources Management

List of all journal articles that have cited FWCA articles?

1. Leng, G., Huang, M., Tang, Q., & Leung, L. R. (2015). A modeling study of irrigation effects on global surface water and groundwater resources under a changing climate. *Journal of Advances in Modeling Earth Systems*, 7(3), 1285-1304.

2. Misra, V. (2013). A multi-disciplinary assessment of the southeastern United States climate. *Regional Environmental Change*, *13*, 1.
3. Yuan, X., Wood, E. F., & Ma, Z. (2015). A review on climate-model-based seasonal hydrologic forecasting: physical understanding and system development. *Wiley Interdisciplinary Reviews: Water*, *2*(5), 523-536.
4. Asefa, T., Adams, A., & Kajtezovic-Blankenship, I. (2014). A tale of integrated regional water supply planning: Meshing socio-economic, policy, governance, and sustainability desires together. *Journal of Hydrology*, *519*, 2632-2641.
5. Cleverly, J., Chen, C., Boulain, N., Villalobos-Vega, R., Faux, R., Grant, N., ... & Eamus, D. (2013). Aerodynamic resistance and Penman-Monteith evapotranspiration over a seasonally two-layered canopy in semiarid central Australia. *Journal of Hydrometeorology*, *14*(5), 1562-1570.
6. Shin, M. J., Eum, H. I., Kim, C. S., & Jung, I. W. (2016). Alteration of hydrologic indicators for Korean catchments under CMIP5 climate projections. *Hydrological Processes*, *30*(24), 4517-4542.
7. Gutmann, E., Pruitt, T., Clark, M. P., Brekke, L., Arnold, J. R., Raff, D. A., & Rasmussen, R. M. (2014). An intercomparison of statistical downscaling methods used for water resource assessments in the United States. *Water Resources Research*, *50*(9), 7167-7186.
8. Djaman, K., Tabari, H., Balde, A. B., Diop, L., Futakuchi, K., & Irmak, S. (2016). Analyses, calibration and validation of evapotranspiration models to predict grass-reference evapotranspiration in the Senegal river delta. *Journal of Hydrology: Regional Studies*, *8*, 82-94.
9. Nam, W. H., & Baigorria, G. A. (2015). Analysing changes to the spatial structures of precipitation and temperature under different ENSO phases in the Southeast and Midwest United States. *Meteorological Applications*, *22*(4), 797-805.
10. Hutton, D., Kaye, N. B., & III, W. D. M. (2015). Analysis of Climate Change and 24-Hour Design Storm Depths for a Range of Return Periods Across South Carolina. *Journal of South Carolina Water Resources*, *2*(1), 70-79.
11. Bari, S. H., Rahman, M. T. U., Hoque, M. A., & Hussain, M. M. (2016). Analysis of seasonal and annual rainfall trends in the northern region of Bangladesh. *Atmospheric Research*, *176*, 148-158.
12. Nicole, M. Ã., & Gende, S. (2015). Anticipated Inversion and Visibility Conditions over Glacier Bay with a Changing Climate. *Journal of Environmental Protection*, *6*(5), 515.
13. Bolinger, R. A., Gronewold, A. D., Kompoltowicz, K., & Fry, L. M. (2016). Application of the NMME in the Development of a New Regional Seasonal Climate Forecast Tool. *Bulletin of the American Meteorological Society*, (2016).
14. Swain, E., Stefanova, L., & Smith, T. (2014). Applying Downscaled Global Climate Model Data to a Hydrodynamic Surface-Water. *American Journal of Climate Change*, *2014*.
15. Ficklin, D. L., Letsinger, S. L., Stewart, I. T., & Maurer, E. P. (2016). Assessing differences in snowmelt-dependent hydrologic projections using CMIP3 and CMIP5 climate forcing data for the western United States. *Hydrology Research*, *47*(2), 483-500.
16. Martins, D. S., Paredes, P., Raziei, T., Pires, C., Cadima, J., & Pereira, L. S. (2016). Assessing reference evapotranspiration estimation from reanalysis weather products. An application to the Iberian Peninsula. *International Journal of Climatology*.

17. Hwang, S. W., Martinez, C., & Asefa, T. (2012). Assessing the benefits of incorporating rainfall forecasts into monthly flow forecast system of Tampa Bay Water, Florida. *Journal of the Korean Society of Agricultural Engineers*, *54*(4), 127-135.
18. de Mello, C. R., Ávila, L. F., Viola, M. R., Curi, N., & Norton, L. D. (2015). Assessing the climate change impacts on the rainfall erosivity throughout the twenty-first century in the Grande River Basin (GRB) headwaters, Southeastern Brazil. *Environmental Earth Sciences*, *73*(12), 8683-8698.
19. Hwang, S. (2014). Assessing the Performance of CMIP5 GCMs for Various Climatic Elements and Indicators over the Southeast US. *Journal of Korea Water Resources Association*, *47*(11), 1039-1050.
20. González-Leiva, F., Valdés-Pineda, R., Valdés, J. B., & Ibáñez-Castillo, L. A. (2016). Assessing the Performance of Two Hydrologic Models for Forecasting Daily Streamflows in the Cazones River Basin (Mexico). *Open Journal of Modern Hydrology*, *6*(03), 168.
21. Rodrigues, D. B., Gupta, H. V., Mendiondo, E. M., & Oliveira, P. T. S. (2015). Assessing uncertainties in surface water security: An empirical multimodel approach. *Water Resources Research*, *51*(11), 9013-9028.
22. Hwang, S., & Graham, W. D. (2014). Assessment of alternative methods for statistically downscaling daily GCM precipitation outputs to simulate regional streamflow. *JAWRA Journal of the American Water Resources Association*, *50*(4), 1010-1032.
23. Hwang, S., Graham, W. D., Adams, A., & Geurink, J. (2013). Assessment of the utility of dynamically-downscaled regional reanalysis data to predict streamflow in west central Florida using an integrated hydrologic model. *Regional Environmental Change*, *13*(1), 69-80.
24. Araghi, A., Mousavi-Baygi, M., Adamowski, J., & Martinez, C. (2016). Association between three prominent climatic teleconnections and precipitation in Iran using wavelet coherence. *International Journal of Climatology*.
25. Raynaud, D., Hingray, B., Zin, I., Anquetin, S., Debionne, S., & Vautard, R. (2016). Atmospheric analogues for physically consistent scenarios of surface weather in Europe and Maghreb. *International Journal of Climatology*.
26. Kim, S. H., Hejazi, M., Liu, L., Calvin, K., Clarke, L., Edmonds, J., ... & Davies, E. (2016). Balancing global water availability and use at basin scale in an integrated assessment model. *Climatic Change*, *136*(2), 217-231.
27. Soares, M. B., & Dessai, S. (2016). Barriers and enablers to the use of seasonal climate forecasts amongst organisations in Europe. *Climatic Change*, 1-15.
28. Singh, S., Srivastava, P., Abebe, A., & Mitra, S. (2015). Baseflow response to climate variability induced droughts in the Apalachicola–Chattahoochee–Flint River Basin, USA. *Journal of Hydrology*, *528*, 550-561.
29. Kirchhoff, C. J., Esselman, R., & Brown, D. (2015). Boundary organizations to boundary chains: Prospects for advancing climate science application. *Climate Risk Management*, *9*, 20-29.
30. Campos-Aranda, D. F. (2015). Búsqueda del cambio climático en la temperatura máxima de mayo en 16 estaciones climatológicas del estado de Zacatecas, México. *Tecnología y ciencias del agua*, *6*(3), 143-160.

31. Karban, R., GROF-TISZA, P. A. T. R. I. C. K., Mcmunn, M., Kharouba, H., & Huntzinger, M. (2015). Caterpillars escape predation in habitat and thermal refuges. *Ecological Entomology*, *40*(6), 725-731.
32. Zeng, X., Zhao, N., Sun, H., Ye, L., & Zhai, J. (2015). Changes and relationships of climatic and hydrological droughts in the Jialing River Basin, China. *PloS one*, *10*(11), e0141648.
33. Tereshchenko, I., Zolotokrylin, A. N., Cherenkova, E. A., Monzón, C. O., Brito-Castillo, L., & Titkova, T. B. (2015). Changes in Aridity across Mexico in the Second Half of the Twentieth Century. *Journal of Applied Meteorology and Climatology*, *54*(10), 2047-2062.
34. Zhang, D. D., Yan, D. H., Wang, Y. C., Lu, F., & Wu, D. (2015). Changes in extreme precipitation in the Huang-Huai-Hai River basin of China during 1960-2010. *Theoretical and Applied Climatology*, *120*(1-2), 195-209.
35. Ishida, K., & Kavvas, M. L. (2016). Climate Change Analysis on Historical Watershed-Scale Precipitation by Means of Long-Term Dynamical Downscaling. *Hydrological Processes*.
36. Martin, J. B., Kurz, M. J., & Khadka, M. B. (2016). Climate control of decadal-scale increases in apparent ages of eogenetic karst spring water. *Journal of Hydrology*, *540*, 988-1001.
37. Bolson, J., Martinez, C., Breuer, N., Srivastava, P., & Knox, P. (2013). Climate information use among southeast US water managers: beyond barriers and toward opportunities. *Regional Environmental Change*, *13*(1), 141-151.
38. Lackstrom, K., Kettle, N. P., Haywood, B., & Dow, K. (2014). Climate-sensitive decisions and time frames: A cross-sectoral analysis of information pathways in the Carolinas. *Weather, Climate, and Society*, *6*(2), 238-252.
39. Vogel, J., McNie, E., & Behar, D. (2016). Co-producing actionable science for water utilities. *Climate Services*, *2*, 30-40.
40. Hwang, S., & Hernandez, J. (2012). Combining Bias-correction on Regional Climate Simulations and ENSO Signal for Water Management: Case Study for Tampa Bay, Florida, US. *Korean Journal of Agricultural and Forest Meteorology*, *14*(4), 143-154.
41. Abera, W., Brocca, L., & Rigon, R. (2016). Comparative evaluation of different satellite rainfall estimation products and bias correction in the Upper Blue Nile (UBN) basin. *Atmospheric Research*, *178*, 471-483.
42. Zhang, J., & Ross, M. (2015). Comparison of IHM and MIKE SHE Model Performance for Modeling Hydrologic Dynamics in Shallow Water Table Settings. *Vadose Zone Journal*, *14*(7).
43. Tian, D., & Martinez, C. J. (2012). Comparison of two analog-based downscaling methods for regional reference evapotranspiration forecasts. *Journal of hydrology*, *475*, 350-364.
44. Kirchhoff, C. J., Lemos, M. C., & Kalafatis, S. (2015). Creating synergy with boundary chains: Can they improve usability of climate information?. *Climate Risk Management*, *9*, 77-85.
45. Côrtes, P. L., Torrente, M., Pinto Alves Pinto, A., Ruiz, M. S., Dias, A. J. G., & Rodrigues, R. (2015). Crise de abastecimento de água em São Paulo e falta de planejamento estratégico. *Estudos Avançados*, *29*(84), 7-26.
46. Lemos, M. C., Lo, Y. J., Kirchhoff, C., & Haigh, T. (2014). Crop advisors as climate information brokers: building the capacity of US farmers to adapt to climate change. *Climate Risk Management*, *4*, 32-42.

47. MacLeod, D. A., Jones, A., Di Giuseppe, F., Caminade, C., & Morse, A. P. (2015). Demonstration of successful malaria forecasts for Botswana using an operational seasonal climate model. *Environmental Research Letters*, *10*(4), 044005.
48. Traore, S., Luo, Y., & Fipps, G. (2016). Deployment of artificial neural network for short-term forecasting of evapotranspiration using public weather forecast restricted messages. *Agricultural Water Management*, *163*, 363-379.
49. Brettle, M., Berry, P., Paterson, J., & Yasvinski, G. (2015). Determining Canadian water utility preparedness for the impacts of climate change. *Change and Adaptation in Socio-Ecological Systems*, *2*(1), 128-144.
50. Hwang, S., & Graham, W. D. (2013). Development and comparative evaluation of a stochastic analog method to downscale daily GCM precipitation. *Hydrology and Earth System Sciences*, *17*(11), 4481-4502.
51. Lee, J. W., Hong, S. Y., Kim, J. E. E., Yoshimura, K., Ham, S., & Joh, M. (2015). Development and implementation of river-routing process module in a regional climate model and its evaluation in Korean river basins. *Journal of Geophysical Research: Atmospheres*, *120*(10), 4613-4629.
52. Sayemuzzaman, M., Mekonnen, A., & Jha, M. K. (2015). Diurnal temperature range trend over North Carolina and the associated mechanisms. *Atmospheric Research*, *160*, 99-108.
53. Anderson, R. G., Wang, D., Tirado-Corbala, R., Zhang, H., & Ayars, J. E. (2015). Divergence of actual and reference evapotranspiration observations for irrigated sugarcane with windy tropical conditions. *Hydrology and Earth System Sciences*, *19*(1), 583-599.
54. Huang, S., Krysanova, V., & Hattermann, F. F. (2014). Does bias correction increase reliability of flood projections under climate change? A case study of large rivers in Germany. *International Journal of Climatology*, *34*(14), 3780-3800.
55. Tian, D., Asseng, S., Martinez, C. J., Misra, V., Cammarano, D., & Ortiz, B. V. (2015). Does decadal climate variation influence wheat and maize production in the southeast USA?. *Agricultural and Forest Meteorology*, *204*, 1-9.
56. Maples, A., McHugh, M., & Brown, E. (2014). Downscaled climate models in complex topographical regions: relevancy for water utility planning. *Journal of Water and Climate Change*, *5*(4), 540-555.
57. Mitra, S., Srivastava, P., Singh, S., & Yates, D. (2014). Effect of ENSO-induced climate variability on groundwater levels in the lower Apalachicola-Chattahoochee-Flint river basin. *Transactions of the ASABE*, *57*(5), 1393-1403.
58. Diodato, N., & Bellocchi, G. (2016). Enhanced propagation of rainfall kinetic energy in the UK. *Theoretical and Applied Climatology*, 1-6.
59. Perera, K. C., Western, A. W., Robertson, D. E., George, B., & Nawarathna, B. (2016). Ensemble forecasting of short-term system scale irrigation demands using real time flow data and numerical weather predictions. *Water Resources Research*.
60. Li, H. Y., Leung, L. R., Getirana, A., Huang, M., Wu, H., Xu, Y., ... & Voisin, N. (2015). Evaluating global streamflow simulations by a physically based routing model coupled with the community land model. *Journal of Hydrometeorology*, *16*(2), 948-971.

61. Ma, F., Ye, A., Deng, X., Zhou, Z., Liu, X., Duan, Q., ... & Gong, W. (2016). Evaluating the skill of NMME seasonal precipitation ensemble predictions for 17 hydroclimatic regions in continental China. *International Journal of Climatology*, *36*(1), 132-144.
62. Stucki, P., Dierer, S., Welker, C., Gómez-Navarro, J. J., Raible, C. C., Martius, O., & Brönnimann, S. (2016). Evaluation of downscaled wind speeds and parameterised gusts for recent and historical windstorms in Switzerland. *Tellus A*, *68*.
63. Slater, L. J., Villarini, G., & Bradley, A. A. (2016). Evaluation of the skill of North-American Multi-Model Ensemble (NMME) Global Climate Models in predicting average and extreme precipitation and temperature over the continental USA. *Climate Dynamics*, 1-16.
64. Perera, K. C., Western, A. W., Nawarathna, B., & George, B. (2014). Forecasting daily reference evapotranspiration for Australia using numerical weather prediction outputs. *Agricultural and Forest Meteorology*, *194*, 50-63.
65. Perera, K., Western, A., Nawarathna, B., & George, B. (2013, December). Forecasting Daily Reference Evapotranspiration for Shepparton, Victoria, Australia using Numerical Weather Prediction outputs. In *20th International Congress on Modelling and Simulation, Adelaide, Australia* (pp. 1-6).
66. Xiong, Y., Luo, Y., Wang, Y., Traore, S., Xu, J., Jiao, X., & Fipps, G. (2016). Forecasting daily reference evapotranspiration using the Blaney–Criddle model and temperature forecasts. *Archives of Agronomy and Soil Science*, *62*(6), 790-805.
67. Tian, D., & Martinez, C. J. (2012). Forecasting reference evapotranspiration using retrospective forecast analogs in the southeastern United States. *Journal of Hydrometeorology*, *13*(6), 1874-1892.
68. Risko, S. L., & Martinez, C. J. (2014). Forecasts of seasonal streamflow in West-Central Florida using multiple climate predictors. *Journal of Hydrology*, *519*, 1130-1140.
69. Mitchell, R. J., Liu, Y., O'Brien, J. J., Elliott, K. J., Starr, G., Miniat, C. F., & Hiers, J. K. (2014). Future climate and fire interactions in the southeastern region of the United States. *Forest Ecology and Management*, *327*, 316-326.
70. Guo, B., Zhang, J., Gong, H., & Cheng, X. (2014). Future climate change impacts on the ecohydrology of Guishui River Basin, China. *Ecohydrology & Hydrobiology*, *14*(1), 55-67.
71. 覃丹宇, & 李博. (2012). FY-2 双星亮温归一化及其在台风个例中的应用. *气象*, *38*(12), 1449-1455.
72. Anandhi, A. (2016). Growing degree days–Ecosystem indicator for changing diurnal temperatures and their impact on corn growth stages in Kansas. *Ecological Indicators*, *61*, 149-158.
73. Ham, S., Yoshimura, K., & Li, H. (2016). Historical Dynamical Downscaling for East Asia with the Atmosphere and Ocean Coupled Regional Model. *氣象集誌第 2 輯*, *94*(0), 199-208.
74. Maleski, J. J., & Martinez, C. J. (2016). Historical trends in precipitation, temperature and drought in the Alabama–Coosa–Tallapoosa and Apalachicola–Chattahoochee–Flint river basins. *International Journal of Climatology*.
75. Bastola, S. (2013). Hydrologic impacts of future climate change on Southeast US watersheds. *Regional Environmental Change*, *13*(1), 131-139.

76. Hwang, S., Graham, W. D., Geurink, J. S., & Adams, A. (2014). Hydrologic implications of errors in bias-corrected regional reanalysis data for west central Florida. *Journal of Hydrology*, *510*, 513-529.
77. Le Moine, N., Hendrickx, F., Gailhard, J., Garçon, R., & Gottardi, F. (2015). Hydrologically Aided Interpolation of Daily Precipitation and Temperature Fields in a Mesoscale Alpine Catchment. *Journal of Hydrometeorology*, *16*(6), 2595-2618.
78. McEvoy, D. J., Huntington, J. L., Mejia, J. F., & Hobbins, M. T. (2016). Improved seasonal drought forecasts using reference evapotranspiration anomalies. *Geophysical Research Letters*, *43*(1), 377-385.
79. Tian, D., Martinez, C. J., & Asefa, T. (2016). Improving Short-Term Urban Water Demand Forecasts with Reforecast Analog Ensembles. *Journal of Water Resources Planning and Management*, *142*(6), 04016008.
80. Clark, M. P., Fan, Y., Lawrence, D. M., Adam, J. C., Bolster, D., Gochis, D. J., ... & Maxwell, R. M. (2015). Improving the representation of hydrologic processes in Earth System Models. *Water Resources Research*, *51*(8), 5929-5956.
81. Kalafatis, S. E., Lemos, M. C., Lo, Y. J., & Frank, K. A. (2015). Increasing information usability for climate adaptation: The role of knowledge networks and communities of practice. *Global Environmental Change*, *32*, 30-39.
82. Hwang, S., & Graham, W. D. (2013). Interactive comment on "Development and comparative evaluation of a stochastic analog method to downscale daily GCM precipitation" by S. Hwang and W. D. Graham. *Hydrology and Earth System Sciences Discussions, 10*. Retrieved from http://www.hydrol-earth-syst-sci-discuss.net/10/C1605/2013/hessd-10-C1605-2013-print.pdf
83. Sonali, P., Kumar, D. N., & Nanjundiah, R. S. (2015). Intercomparison of CMIP5 and CMIP3 simulations of the 20th century maximum and minimum temperatures over India and detection of climatic trends. *Theoretical and Applied Climatology*, 1-25.
84. Eum, H. I., Cannon, A. J., & Murdock, T. Q. Intercomparison of multiple statistical downscaling methods: multi-criteria model selection for South Korea. *Stochastic Environmental Research and Risk Assessment*, 1-21.
85. Kraucunas, I., Clarke, L., Dirks, J., Hathaway, J., Hejazi, M., Hibbard, K., ... & Leung, R. (2015). Investigating the Nexus of climate, energy, water, and land at decision-relevant scales: the Platform for Regional Integrated Modeling and Analysis (PRIMA). *Climatic Change*, *129*(3-4), 573-588.
86. Mallakpour, I., & Villarini, G. (2016). Investigating the relationship between the frequency of flooding over the central United States and large-scale climate. *Advances in Water Resources*, *92*, 159-171.
87. Talaee, P. H. (2014). Iranian rainfall series analysis by means of nonparametric tests. *Theoretical and applied climatology*, *116*(3-4), 597-607.
88. Mahan, J. R., & Lascano, R. J. (2016). Irrigation Analysis Based on Long-Term Weather Data. *Agriculture*, *6*(3), 42.
89. Kukal, M., & Irmak, S. (2016). Long-Term Patterns of Air Temperatures, Daily Temperature Range, Precipitation, Grass-Reference Evapotranspiration and Aridity Index in the USA Great Plains: Part II. Temporal Trends. *Journal of Hydrology*.

90. Chattopadhyay, S., & Edwards, D. R. (2016). Long-Term Trend Analysis of Precipitation and Air Temperature for Kentucky, United States. *Climate*, *4*(1), 10.
91. Hu, C., Xu, Y., Han, L., Yang, L., & Xu, G. (2015). Long-term trends in daily precipitation over the Yangtze River Delta region during 1960–2012, Eastern China. *Theoretical and Applied Climatology*, 1-17.
92. Cockerill, K., Badurek, C., & Hale, R. (2014). Managing Water in Western North Carolina: Decision-Maker Perceptions and Policy Implementation. *Environmental Practice*, *16*(02), 94-101.
93. Kundu, A., Chatterjee, S., Dutta, D., & Siddiqui, A. R. (2015). Meteorological Trend Analysis in Western Rajasthan (India) using Geographical Information System and Statistical Techniques. *Journal of Environment and Earth Science*, *5*(5), 90-99.
94. Park, B. H., Allen, M. R., White, D., Weber, E., Murphy, J. T., North, M. J., & Sydelko, P. MIRAGE: A framework for data-driven collaborative high-resolution simulation.
95. Li, H. Y., Ruby Leung, L., Tesfa, T., Voisin, N., Hejazi, M., Liu, L., ... & Yang, X. (2015). Modeling stream temperature in the Anthropocene: An earth system modeling approach. *Journal of Advances in Modeling Earth Systems*, *7*(4), 1661-1679.
96. Leng, G., Huang, M., Tang, Q., Gao, H., & Leung, L. R. (2014). Modeling the effects of groundwater-fed irrigation on terrestrial hydrology over the conterminous United States. *Journal of Hydrometeorology*, *15*(3), 957-972.
97. Leng, G., & Tang, Q. (2014). Modeling the impacts of future climate change on irrigation over China: Sensitivity to adjusted projections. *Journal of Hydrometeorology*, *15*(5), 2085-2103.
98. Lemos, M. C., Kirchhoff, C. J., Kalafatis, S. E., Scavia, D., & Rood, R. B. (2014). Moving climate information off the shelf: boundary chains and the role of RISAs as adaptive organizations. *Weather, Climate, and Society*, *6*(2), 273-285.
99. Perera, K. C., Western, A. W., George, B., & Nawarathna, B. (2015). Multivariate time series modeling of short-term system scale irrigation demand. *Journal of Hydrology*, *531*, 1003-1019.
100. Kirchhoff, C. J., Lemos, M. C., & Kalafatis, S. (2015). Narrowing the gap between climate science and adaptation action: The role of boundary chains. *Climate Risk Management*, *9*, 1-5.
101. Nazemi, A., & Wheater, H. S. (2015). On inclusion of water resource management in Earth system models–Part 1: Problem definition and representation of water demand. *Hydrology and Earth System Sciences*, *19*(1), 33-61.
102. Nazemi, A., & Wheater, H. S. (2015). On inclusion of water resource management in Earth system models–Part 2: Representation of water supply and allocation and opportunities for improved modeling. *Hydrology and Earth System Sciences*, *19*(1), 63-90.
103. Tang, R., Tang, B., Wu, H., & Li, Z. L. (2015). On the feasibility of temporally upscaling instantaneous evapotranspiration using weather forecast information. *International Journal of Remote Sensing*, *36*(19-20), 4918-4935.
104. Hunter, M. E. (2016). Outcomes of fire research: is science used?. *International Journal of Wildland Fire*, *25*(5), 495-504.
105. Cho, E., Lee, J., & Yoo, C. (2016). Performance Evaluation of CMIP5 GCMs using CSEOF Analysis. *Journal of Korean Society of Hazard Mitigation*, *16*(1), 265-273.

106. Liu, Y., Lee, S. K., Enfield, D. B., Muhling, B. A., Lamkin, J. T., Muller-Karger, F. E., & Roffer, M. A. (2015). Potential impact of climate change on the Intra-Americas Sea: Part-1. A dynamic downscaling of the CMIP5 model projections. *Journal of Marine Systems*, *148*, 56-69.
107. Sachindra, D. A., Huang, F., Barton, A., & Perera, B. J. C. (2015). Potential improvements to statistical downscaling of general circulation model outputs to catchment streamflows with downscaled precipitation and evaporation. *Theoretical and Applied Climatology*, *122*(1-2), 159-179.
108. Santos, M., & Fragoso, M. (2013). Precipitation variability in Northern Portugal: data homogeneity assessment and trends in extreme precipitation indices. *Atmospheric Research*, *131*, 34-45.
109. Pelosi, A., Medina, H., Villani, P., D'Urso, G., & Chirico, G. B. (2016). Probabilistic forecasting of reference evapotranspiration with a limited area ensemble prediction system. *Agricultural Water Management*, *178*, 106-118.
110. Caillouet, L., Vidal, J. P., Sauquet, E., & Graff, B. (2015). Probabilistic precipitation and temperature downscaling of the Twentieth Century Reanalysis over France. *Climate of the Past Discussions*, *11*, 4425-4482.
111. Kearney, K. A., Butler, M., Glazer, R., Kelble, C. R., Serafy, J. E., & Stabenau, E. (2015). Quantifying Florida Bay habitat suitability for fishes and invertebrates under climate change scenarios. *Environmental management*, *55*(4), 836-856.
112. Alemohammad, S. H., McLaughlin, D. B., & Entekhabi, D. (2015). Quantifying Precipitation Uncertainty for Land Data Assimilation Applications. *Monthly Weather Review*, *143*(8), 3276-3299.
113. Pokhrel, Y. N., Hanasaki, N., Wada, Y., & Kim, H. (2016). Recent progresses in incorporating human land–water management into global land surface models toward their integration into Earth system models. *Wiley Interdisciplinary Reviews: Water*.
114. Amirabadizadeh, M., Huang, Y. F., & Lee, T. S. (2015). Recent trends in temperature and precipitation in the Langat River basin, Malaysia. *Advances in Meteorology*, *2015*.
115. Misra, V., & Bastola, S. (2016). Reconciling droughts and landfalling tropical cyclones in the Southeastern United States. *Climate Dynamics*, *46*(3-4), 1277-1286.
116. Asefa, T., & Adams, A. (2013). Reducing bias-corrected precipitation projection uncertainties: a Bayesian-based indicator-weighting approach. *Regional Environmental Change*, *13*(1), 111-120.
117. Demaria, E. M., Palmer, R. N., & Roundy, J. K. (2016). Regional climate change projections of streamflow characteristics in the Northeast and Midwest US. *Journal of Hydrology: Regional Studies*, *5*, 309-323.
118. Naz, B. S., Kao, S. C., Ashfaq, M., Rastogi, D., Mei, R., & Bowling, L. C. (2016). Regional hydrologic response to climate change in the conterminous United States using high-resolution hydroclimate simulations. *Global and Planetary Change*, *143*, 100-117.
119. Chen, X., & Hossain, F. (2016). Revisiting extreme storms of the past 100 years for future safety of large water management infrastructures. *Earth's Future*, *4*(7), 306-322.
120. Seyyedi, H., Anagnostou, E. N., Beighley, E., & McCollum, J. (2014). Satellite-driven downscaling of global reanalysis precipitation products for hydrological applications. *Hydrology and Earth System Sciences*, *18*(12), 5077-5091.

121. Tesfa, T. K., Ruby Leung, L., Huang, M., Li, H. Y., Voisin, N., & Wigmosta, M. S. (2014). Scalability of grid-and subbasin-based land surface modeling approaches for hydrologic simulations. *Journal of Geophysical Research: Atmospheres*, *119*(6), 3166-3184.
122. Sayemuzzaman, M., & Jha, M. K. (2014). Seasonal and annual precipitation time series trend analysis in North Carolina, United States. *Atmospheric Research*, *137*, 183-194.
123. Ma, F., Yuan, X., & Ye, A. (2015). Seasonal drought predictability and forecast skill over China. *Journal of Geophysical Research: Atmospheres*, *120*(16), 8264-8275.
124. Yuan, X., Roundy, J. K., Wood, E. F., & Sheffield, J. (2015). Seasonal forecasting of global hydrologic extremes: system development and evaluation over GEWEX basins. *Bulletin of the American Meteorological Society*, *96*(11), 1895-1912.
125. Whateley, S., Palmer, R. N., & Brown, C. (2014). Seasonal hydroclimatic forecasts as innovations and the challenges of adoption by water managers. *Journal of Water Resources Planning and Management*, *141*(5), 04014071.
126. Bastola, S., & Misra, V. (2015). Seasonal hydrological and nutrient loading forecasts for watersheds over the Southeastern United States. *Environmental Modelling & Software*, *73*, 90-102.
127. Bastola, S., Misra, V., & Li, H. (2013). Seasonal hydrological forecasts for watersheds over the southeastern United States for the boreal summer and fall seasons. *Earth Interactions*, *17*(25), 1-22.
128. Tian, D., Martinez, C. J., & Graham, W. D. (2014). Seasonal prediction of regional reference evapotranspiration based on climate forecast system version 2. *Journal of Hydrometeorology*, *15*(3), 1166-1188.
129. Graham, W. D. (2016). Sensitivity of future continental United States water deficit projections to general circulation models, the evapotranspiration estimation method, and the greenhouse gas emission scenario. *Hydrology and Earth System Sciences*, *20*(8), 3245.
130. Scott, M. J., Daly, D. S., Hejazi, M. I., Kyle, G. P., Liu, L., McJeon, H. C., ... & Voisin, N. (2016). Sensitivity of future US Water shortages to socioeconomic and climate drivers: a case study in Georgia using an integrated human-earth system modeling framework. *Climatic Change*, *136*(2), 233-246.
131. Bastola, S., & Misra, V. (2013). Sensitivity of hydrological simulations of southeastern United States watersheds to temporal aggregation of rainfall. *Journal of Hydrometeorology*, *14*(4), 1334-1344.
132. Luo, Y., Chang, X., Peng, S., Khan, S., Wang, W., Zheng, Q., & Cai, X. (2014). Short-term forecasting of daily reference evapotranspiration using the Hargreaves–Samani model and temperature forecasts. *Agricultural Water Management*, *136*, 42-51.
133. Selman, C., & Misra, V. (2015). Simulating diurnal variations over the southeastern United States. *Journal of Geophysical Research: Atmospheres*, *120*(1), 180-198.
134. Radanovics, S. (2014). *Spatially coherent probabilistic precipitation downscaling with meteorological analogues* (Doctoral dissertation, Université Grenoble Alpes).
135. Malekian, A., & Kazemzadeh, M. (2016). Spatio-temporal analysis of regional trends and shift changes of autocorrelated temperature series in urmia lake basin. *Water Resources Management*, *30*(2), 785-803.

136. Sayemuzzaman, M., Jha, M. K., & Mekonnen, A. (2015). Spatio-temporal long-term (1950–2009) temperature trend analysis in North Carolina, United States. *Theoretical and Applied Climatology*, *120*(1-2), 159-171.
137. Shi, Z., Shan, N., Xu, L., Yang, X., Gao, J., Guo, H., ... & Dong, L. (2016). Spatiotemporal variation of temperature, precipitation and wind trends in a desertification prone region of China from 1960 to 2013. *International Journal of Climatology*.
138. Tian, D., Martinez, C. J., Graham, W. D., & Hwang, S. (2014). Statistical downscaling multimodel forecasts for seasonal precipitation and surface temperature over the southeastern United States. *Journal of Climate*, *27*(22), 8384-8411.
139. Casanueva, A., Frías, M. D., Herrera, S., San-Martín, D., Zaninovic, K., & Gutiérrez, J. M. (2014). Statistical downscaling of climate impact indices: testing the direct approach. *Climatic change*, *127*(3-4), 547-560.
140. Lu, Y., Mandapaka, P. V., Kuo, C. C., Gan, T. Y., & Qin, X. (2014, August). Statistical Downscaling of Rainfall using Large-Scale Predictors: Dynamic Model Outputs vs. Reanalysis Data. In *The International Conference on Marine and Freshwater Environments (iMFE 2014)* (Vol. 1, No. 1).
141. Pierce, D. W., Cayan, D. R., & Thrasher, B. L. (2014). Statistical Downscaling Using Localized Constructed Analogs (LOCA)*. *Journal of Hydrometeorology*, *15*(6), 2558-2585.
142. Rahman, K., Etienne, C., Gago-Silva, A., Maringanti, C., Beniston, M., & Lehmann, A. (2014). Streamflow response to regional climate model output in the mountainous watershed: a case study from the Swiss Alps. *Environmental Earth Sciences*, *72*(11), 4357-4369.
143. Sayemuzzaman, M., Jha, M. K., Mekonnen, A., & Schimmel, K. A. (2014). Subseasonal climate variability for North Carolina, United States. *Atmospheric Research*, *145*, 69-79.
144. Trubilowicz, J. W., Shea, J. M., Jost, G., & Moore, R. D. (2016). Suitability of North American Regional Reanalysis (NARR) output for hydrologic modelling and analysis in mountainous terrain. *Hydrological Processes*.
145. Olsson, J., Uvo, C. B., Foster, K., & Yang, W. (2016). Technical Note: Initial assessment of a multi-method approach to spring-flood forecasting in Sweden. *Hydrology and Earth System Sciences*, *20*(2), 659-667.
146. Maurer, E. P., Ficklin, D. L., & Wang, W. (2016). Technical Note: The impact of spatial scale in bias correction of climate model output for hydrologic impact studies. *Hydrology and Earth System Sciences*, *20*(2), 685-696.
147. Kousari, M. R., Ahani, H., & Hendi-zadeh, R. (2013). Temporal and spatial trend detection of maximum air temperature in Iran during 1960–2005. *Global and planetary change*, *111*, 97-110.
148. Ávila, L. F., de Mello, C. R., Yanagi, S. D. N. M., & Neto, O. B. S. (2014). Tendências de temperaturas mínimas e máximas do ar no Estado de Minas Gerais. *Pesq. agropec. bras., Brasília*, *49*(4), 247-256.
149. Tian, D., & Martinez, C. J. (2014). The GEFS-based daily reference evapotranspiration (ETo) forecast and its implication for water management in the southeastern United States. *Journal of Hydrometeorology*, *15*(3), 1152-1165.

150. Staub, C. G., Stevens, F. R., & Waylen, P. R. (2014). The geography of rainfall in Mauritius: Modelling the relationship between annual and monthly rainfall and landscape characteristics on a small volcanic island. *Applied Geography*, *54*, 222-234.
151. Selman, C., & Misra, V. (2016). The impact of an extreme case of irrigation on the southeastern United States climate. *Climate Dynamics*, 1-19.
152. Cantet, P., Déqué, M., Palany, P., & Maridet, J. L. (2014). The importance of using a high-resolution model to study the climate change on small islands: the Lesser Antilles case. *Tellus A*, *66*.
153. Zhong, Y., Lei, L., Liu, Y., Hao, Y., Zou, C., & Zhan, H. (2016). The influence of large-scale climate phenomena on precipitation in the Ordos Basin, China. *Theoretical and Applied Climatology*, 1-15.
154. Borjigin, C., Feng, H., Zhang, B., & Zhao, G. (2016). The information resources utilization index: a case study in China. *Program*, *50*(1), 2-15.
155. Misra, V., & Mishra, A. (2016). The oceanic influence on the rainy season of Peninsular Florida. *Journal of Geophysical Research: Atmospheres*, *121*(13), 7691-7709.
156. Briley, L. J., Ashley, W. S., Rood, R. B., & Krmenec, A. (2015). The role of meteorological processes in the description of uncertainty for climate change decision-making. *Theoretical and Applied Climatology*, 1-12.
157. Misra, V., Mishra, A., & Li, H. (2016). The sensitivity of the regional coupled ocean-atmosphere simulations over the Intra-Americas seas to the prescribed bathymetry. *Dynamics of Atmospheres and Oceans*, *76*, 29-51.
158. Li, H., & Misra, V. (2014). Thirty-two-year ocean–atmosphere coupled downscaling of global reanalysis over the Intra-American Seas. *Climate dynamics*, *43*(9-10), 2471-2489.
159. Singh, D., Jain, S. K., & Gupta, R. D. (2015). Trend in observed and projected maximum and minimum temperature over NW Himalayan basin. *Journal of Mountain Science*, *12*(2), 417-433.
160. Felis, T., Giry, C., Scholz, D., Lohmann, G., Pfeiffer, M., Pätzold, J., ... & Scheffers, S. R. (2015). Tropical Atlantic temperature seasonality at the end of the last interglacial. *Nature communications*, *6*.
161. Hwang, S., Her, Y. G., & Chang, S. (2013). Uncertainty in regional climate change impact assessment using bias-correction technique for future climate scenarios. *Journal of the Korean Society of Agricultural Engineers*, *55*(4), 95-106.
162. Yuan, R., Song, X., Han, D., Zhang, L., & Wang, S. (2013). Upward recharge through groundwater depression cone in piedmont plain of North China Plain. *Journal of Hydrology*, *500*, 1-11.
163. Lemos, M. C. (2015). Usable climate knowledge for adaptive and co-managed water governance. *Current Opinion in Environmental Sustainability*, *12*, 48-52.
164. Regonda, S. K., Zaitchik, B. F., Badr, H. S., & Rodell, M. (2016). Using Climate Regionalization to Understand Climate Forecast System Version 2 (CFSv2) Precipitation Performance for the Conterminous United States (CONUS). *Geophysical Research Letters*.
165. Araghi, A., Baygi, M. M., Adamowski, J., Malard, J., Nalley, D., & Hasheminia, S. M. (2015). Using wavelet transforms to estimate surface temperature trends and dominant periodicities in Iran based on gridded reanalysis data. *Atmospheric Research*, *155*, 52-72.

166. Lorite, I. J., Ramírez-Cuesta, J. M., Cruz-Blanco, M., & Santos, C. (2015). Using weather forecast data for irrigation scheduling under semi-arid conditions. *Irrigation Science*, *33*(6), 411-427.

167. Shah, R. D., & Mishra, V. (2016). Utility of Global Ensemble Forecast System (GEFS) reforecast for short-term drought prediction in India. *Journal of Hydrometeorology*, (2016).

168. Hwang, S. W. (2012). Utility of gridded observations for statistical bias-correction of climate model outputs and its hydrologic implication over west central Florida. *Journal of the Korean Society of Agricultural Engineers*, *54*(5), 91-102.

169. Nag, B., Misra, V., & Bastola, S. (2014). Validating ENSO teleconnections on Southeastern US winter hydrology. *Earth Interactions*, *18*(15), 1-23.

170. Cooper, C., & Cockerill, K. (2015). Water Quantity Perceptions in Northwestern North Carolina: Comparing College Student and Public Survey Responses. *southeastern geographer*, *55*(4), 386-399.

171. Anandhi, A. A., Omani, N. N., Chaubey, I., Horton, R., Bader, D., & Nanjundiah, R. S. (2015). What changes do the CMIP5 climate models predict for South Asia and what are some potential impacts on managed ecosystems and water resources. In *ASABE 1st Climate Change Symposium: Adaptation and Mitigation Conference Proceedings* (pp. 1-4). American Society of Agricultural and Biological Engineers.

172. 赵琪, 罗玉峰, **彭世彰**, 孙勇, & **常**晓敏. (2014). **基于天气**预报和 Penman-Monteith **公式的短期逐日参考作物**腾发量预报. *节水灌溉*, (1), 1-4.

173. 吕志涛. (2014). 时间序列分析方法在郑州市降水量预报中的应用. ***南水北***调与水利科技, *12*(4), 35-37.