

National Collaborative for Research on Food, Energy, & Water Education (NC-FEW)

MESSAGE FROM THE DIRECTOR CORY T. FORBES, PH.D.

Associate Professor & Director, NC-FEW, University of Nebraska-Lincoln

A few years ago, a group of relatively new faculty had an idea. Coming from various disciplinary backgrounds, and each finding themselves in unique positions in a variety of academic departments, their work revolved around teaching and learning about natural systems and their human dimensions. They were motivated by a need to connect with colleagues and to identify the opportunities that existed in these organizational and conceptual spaces. A vision for a new community unrestrained by disciplinary orientations and departmental silos – a transdisciplinary community – began to emerge. And now, with sustained funding from NSF and USDA-NIFA, this growing community is poised to move closer to fully realizing the idea that started it all.

I have had the distinct pleasure of working with this group of colleagues in recent years to arrive at the point where we now find ourselves. The *National Collaborative for Research on Food, Energy, and Water Education* (NC-FEW) is the culmination of four years of big ideas and hard work. It also presents a tremendous opportunity to enhance educational programming grounded in the FEW-Nexus through empirical research and scholarship that leverages transdisciplinary expertise. And perhaps never before has this endeavor been more critical. The greatest challenges facing humanity today and in the future are those related to providing for an ever-growing human population in a sustainable and equitable manner. Of all the tools at our disposal, education can have a significant role to play in preparing learners – the global citizens of today and tomorrow – for these challenges. As educators and education researchers, we are both practitioners of and advocates for this important work, which occurs in an array of contexts and institutional settings with diverse groups of learners. NC-FEW affords an opportunity for us to come together and fully commit our efforts to the work at hand. I believe that, as a community, we have far greater potential to positively impact educational practices and outcomes than we do alone. This is our charge and I, for one, can think of none more important.

Over the next five years, NC-FEW will synergize FEW-Nexus educational programming and education research through an array of capacity-building activities that will not only contribute to the community's broader mission, but will also enable participants to enhance and elevate their own work. So, on behalf the NC-FEW Leadership Team, I invite you to join us in this important endeavor.

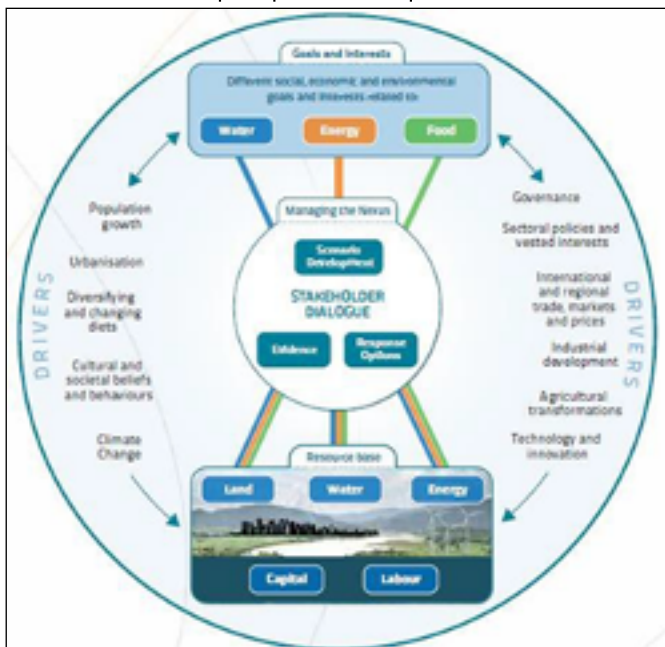
WHAT IS NC-FEW?

The *National Collaborative for Research on Food, Energy, and Water Education* (NC-FEW) is an emergent, transdisciplinary community of educators and education researchers. NC-FEW has a dual focus on educational programming and education research in K-12, postsecondary, and informal/nonformal contexts. Through sustained network- and capacity-building activities, NC-FEW promotes cross-fertilization between participants through. NC-FEW is funded by NSF, USDA-NIFA, the Network of STEM Education Centers/APLU, the University of Nebraska-Lincoln, and Virginia Tech. It is also coupled and integrated with activities of a Multistate Research Project (NC1207).

What can you expect from NC-FEW? In the upcoming years, the community will facilitate many different community-oriented activities, including multiple national invited conferences, regular webinars, newsletters, and community communications, and participation in NC-FEW working groups. Through these community activities, members will have opportunities to showcase and generate visibility for their work, network, learn about others' FEW-Nexus-focused education research and educational programs, contribute to NC-FEW working groups, develop new research and pedagogical skills, cultivate new collaborations for funding proposals, and become a part of new professional community.

FOOD-ENERGY-WATER NEXUS

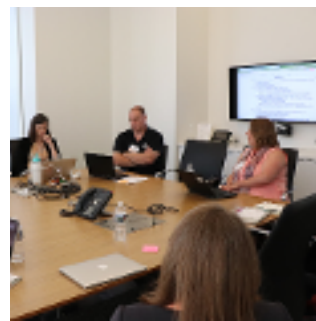
The greatest challenges of the 21st Century and beyond are defined by dynamic interactions between elements of coupled human-natural systems that span a multitude of temporal, spatial, and sociocultural scales. Providing the world's growing population with sufficient food, energy, and water will lead to increasing competition for resources and will have significant implications for all facets of society, including economic development, poverty, international trade, education, and regulatory mechanisms that span public and private domains.



The Food-Energy-Water Nexus has emerged as a framework used to describe and aid in addressing the complex interrelationships associated with these systems. The interdependence and inter-linkages between water, energy, and food means that changes in one system can have far-reaching impacts in other systems, resulting in significant ecological, economic, social, and political consequences. The nexus serves as a tool to understand the interplay between natural systems and their human dimensions. While each of these represents a coherent system and unit of analysis in its own right, envisioning their interconnections as a 'nexus' aids in management decisions that span particular objectives, production and consumption pathways, and regulatory modes. Doing so allows for more integrative problem-solving and decision-making that account for and balance trade-offs and synergies within and across systems.

MAY 2018 CONFERENCE

In May 2018, more than 50 individuals representing 40 different institutions of higher education participated in the 2-day *Innovating Teaching and Learning in the Food-Energy-Water-Nexus: Toward a National Collaborative for Food, Energy, & Water Systems Education* (NC-FEW) conference held in the Washington, D.C. metro area. Participants came from many different departments and disciplinary orientations, including education, STEM, agriculture, and natural resources. As part of the conference, each had the opportunity to share their research and engage in conversations centered around FEW-Nexus education and education research. The conference program consisted of keynote speakers, networking, facilitated group discussions and workshops, as well as an interactive poster session. Participants engaged with colleagues in small interdisciplinary working groups to generate critical themes around K-12, postsecondary, and informal/nonformal FEW-Nexus-focused educational programming. The deliverables generated by conference participants contributed directly to the now funded NSF INFEWS RCN grant supporting NC-FEW.



NC-FEW LEADERSHIP TEAM



HANNAH H. SCHERER, PH.D.

Agricultural, Leadership, and Community Education, Virginia Tech

The primary purpose of Dr. Scherer's integrated program of engaged scholarship is to build educator capacity for developing and facilitating educational programs that engage learners in authentic STEM learning in AFNR contexts. Dr. Scherer is excited to serve as a Co-PI and the lead for the informal/non-formal education working group. She sees this role as an opportunity to bring together folks with a wide range of expertise related to reaching learners outside of formal school settings. Hannah hopes that this can provide guidance for others working in informal/non-formal settings on how to engage with the novel framework afforded by the FEW-Nexus. She is excited about the momentum building for the NC-FEW initiative. NC-FEW provides a space for fostering new collaborations. Hannah can't wait to learn from new people and broaden her perspectives.



NICOLE SINTOV, PH.D.

Assistant Professor of Behavior, Decision Making and Sustainability, The Ohio State University

Dr. Sintov strives to advance psychological theory while producing insights that can be applied to benefit the environment and society. She is project Co-PI and the lead for the post-secondary working group. Her goals are to foster the development of the NC-FEW network; promote education research efforts rooted in the FEW nexus; support the development of FEW-Nexus based educational tools that serve diverse audiences. She is looking forward to cultivating and interacting with a community of scholars from a broad range of backgrounds who share a similar passion for FEW systems sustainability.



HUI-HUI WANG, PH.D.

Assistant Professor of Agricultural Sciences Education and Communication, Purdue University

Dr. Wang's scholarship focuses on improving K-12 and non-formal STEM and agriculture teacher education by using integrated STEM through agriculture, food, and natural resources (AFNR) curricula and instruction. She is project Co-PI and lead for the K-12 working group. She hopes to work with colleagues on research to develop educational resources and programs that focus on FEW issues. The aspect of NC-FEW that most excites her is that she gets to meet professionals from different disciplinary backgrounds that are all passionate about FEW issues.

NEWS & EVENTS

Friday, December 13, 2019

NC-FEW Webinar

2:30 CST

April 6-10, 2020

Annual meeting of the American Association of Geographers (AAG)

Education Research in the Food-Energy-Water-Nexus: Building Capacity through Transdisciplinary Networked Improvement Communities

Session co-sponsored by NC-FEW and the National Center for Research in Geography Education (NCRGE)

GET INVOLVED!

Are you engaged in FEW-Nexus-focused education and education research? Do you want to part of a community centered around these activities? If so, then join NC-FEW at no cost to you!

As an NC-FEW Affiliate, you will enjoy access to community activities, including travel support to invited meetings, webinars and NC-FEW communications, and opportunities for collaboration and dissemination.

<http://ncfew.org/get-involved/>



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