

GUIDANCE FOR SESSION CONTRIBUTORS

The network connections of energy and water transfers in the production and provision of foods, feedstocks and fuels, while assuring environmental sustainability, are extremely complicated and difficult to disentangle. We know for certainty that over the next several decades an increasing global population and climate change will put enormous pressure on the FEWS nexus. It will require the input of various disciplines to identify and quantify the critical linkages, predict weaknesses and feedbacks within the FEWS nexus, define environmental consequences, and develop new technological solutions. Societies' preferences, demands, economic capacity and policy awareness are also dynamic and must be informed by the knowledge gained from the best available research. Developing and implementing solutions for the FEWS nexus requires transdisciplinary collaborations between traditionally separate research fields. A major FEWSTERN goal is to break down such barriers, and to facilitate the formation of teams that integrate expertise from different disciplines and enable fundamental innovations with practical outcomes that address current and future FEWS research challenges.

Unlike most science and engineering research conferences, the FEWSTERN Symposium is a working meeting (i.e., workshop) intended to (1) identify critical grand challenge research questions that threaten Food, Energy and Water quality and supply, (2) develop new research program ideas (new research themes) to meet those challenges, and (3) facilitate independent researchers to step beyond their individual research programs to create transdisciplinary teams capable of carrying out the required integrated research. This latter issue is normally quite difficult and many researchers are not trained, or necessarily well experienced, in contributing their research to multi-system level research as a part of transdisciplinary teams.

- (1) Session Contributors should provide a very brief introduction of their research areas of competence and expertise. This should not be a research seminar but a short (5 min) introduction with no more than 3 slides.
- (2) The session contributors should attempt to identify any perceived grand challenges for FEWS, either in developing research topics or in finding ways to contribute to transdisciplinary research and teams.
- (3) The session contributors are encouraged to engage in discussions of relevant research topics for FEWS regardless of whether the topic is a perfect match for the research they already do.
- (4) The contributors should help to identify the training and expertise their students will need in order to perform research addressing FEWS grand challenge questions.
- (5) The contributors should identify technical advances now, on the horizon, or that are needed now and in the future to more fully develop the FEWS research agenda.
- (6) The session contributors should identify hurdles that limit the individual's ability to fully integrate into a broad FEWS research program(s).
- (7) What would the contributor consider the rewards to be gained by extending his/her research program to a transdisciplinary research agenda?
- (8) In summary, the contributors should try to briefly outline in 3 slides their relevant research, their expertise, and the analytical tools they can bring to bear, and what kind of research questions they are willing to address in joint efforts to advance the FEWS agenda.