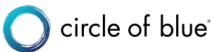




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FEW Nexus Workshop on Integrated Science, Engineering, and Policy: A Multi Stakeholder Dialogue

Objective: Building the roadmap that lays the foundation for the creation of an inclusive FEW Nexus Community of science, composed of engineers, scientists, and stakeholders from industry and public sector and that will foster science and engineering cooperation in the FEW domains.

January 25: Check in at Hilton Hotel

Day 1: January 26 (Ideas Day)

8:00 Registration and coffee

Masters of Ceremonies:

Peter Saundry, NCSE & John Hopkins University, and *J. Carl Ganter* Circle of Blue

9:00 Welcome Notes

Glen A. Laine, VPR, Texas A&M University

Dimitris Lagoudas, Sr. Assoc. Dean for Research, College of Engineering
Assoc. Vice Chancellor for Engineering, Texas A&M Engineering

Craig Nessler, Director, Texas A&M AgriLife Research, College of Agriculture

9:15 Workshop Objectives *Rabi Mohtar*, Texas A&M WEF Nexus Initiative

9:30 Opportunities and Challenges in the FEW Nexus - *JoAnn Lighty*, NSF-CBET

10:15 Burst Session of 10 BIG IDEAS

(Questions posted on portal to be discussed in breakout session)

1. Data and modeling *Bernie Engel*, Purdue
2. Governance, policy, and financing *Kent Portney*, Bush School, Texas A&M
3. Governing resources in future cities *Josh Sperling*, NREL
4. Tradeoffs and decision support tools *Suzanne Pierce*, UT Austin
5. Energy for water *Enid J. Sullivan-Graham*, NM State
6. Water for food *Elsa Murano*, Borlaug Institute, Texas A&M
7. Water for energy production *Ashlyn Stillwell*, U IL
8. Food processing and waste *Stephen Searcy*, Texas A&M
9. Soil – Food – Climate Nexus *Rattan Lal*, Ohio State
10. Engagement and outreach: Community Building *Jon Padgham*, futurearth

12:00 Networking Lunch

1:00 Breakout session #1: **Exploring the FEW System**

1. FEW Research Facilitator, *Noel Bakhtian*, former Senior Policy Advisor, White House Office of Science & Technology Policy
2. FEW Education Facilitator, *Adel Shirmohammadi*, U Maryland
3. FEW Practice: applied research, industry, policy; Facilitator, *Jamal Yagoobi*, Worcester Poly
4. FEW Community Building Facilitator, *Molly Jahn*, UWI

Questions:

1. Define target FEW system(s)
2. What are the key challenges
3. What are the solutions (immediate possibilities to leverage opportunities)
4. What are the key potential impacts (social, environmental, economic)
5. What resources are needed for implementation

3:00 Summary Panel from moderators of breakouts and Q/A

4:00 Goals for tomorrow and Closing (**Rabi Mohtar**)

Evening Networking Reception immediately following, hosted by Texas A&M WEF Nexus Initiative. Welcome: *Martin Scholtz*, Executive Associate VPR, Texas A&M



FEW Nexus Workshop on Integrated Science, Engineering, and Policy: A Multi Stakeholder Dialogue

Day 2: January 27 (Action Day)

Masters of Ceremonies

Jack Baldauf, *Geosciences, Texas A&M* and **J. Carl Ganter**, *Circle of Blue*

9:00 Hotspot – Nexus Live – **J. Carl Ganter**, *Circle of Blue*

9:30 Science and Policy Panel with Q/A

Moderator, **J. Carl Ganter**. Panelists: **Rattan Lal**, *Ohio State*, **John Tracy**, *TX Water Resource Inst.*, **Vanessa Casado Peres**, *TAMU Law*, **Astrid Hillers**, *Global Environmental Facility*

Kickoff Questions:

1. How do you characterize the state of FEW science and policy interaction nationally?
2. What steps should be taken to improve the science base decisions related to FEW resources?
3. What policy changes can improve the science and science – policy coherence in FEW resources?

10:30 Industry and Technology Panel with Q/A

Moderator: **Michel Boufadel**, *NJIT*. Panelists: **Walid Saad**, *VA Tech*, **Andrea Putman**, *SoAR*, **Gerrit Hoogenboom**, *UFL*

Kickoff Questions:

1. Do we have the right incentives for innovations in the FEW system
2. What unique technological challenges / opportunities that FEW system exhibits?
3. What are the infrastructure and human capacity needed for fostering innovations in the FEW system.

11:30 – 12:00 Breakout assignments

12:00 Networking lunch

1:00 **Breakout session #2 Moving Forward: the Road map**

- a. Building on the white papers **Ali Fares**, *PVAM*
- b. Community of Science: RCN & e-portal **Katrina Bennett**, *LANL*
- c. INFEWS **Lucy M Camacho**, *Texas A&M-Kingsville*
- d. Belmont Forum **Rick Lawford**, *Futureearth*

Sessions Deliverables:

1. Establish targets and priorities for the theme
2. Develop action plan including activities, timeline, teams and role for achieving the target.
3. Identify resources needed for implementation
4. Are there other targets that should be included?

3:00 Panel summaries and discussions

4:00 Conclusions and recommendations (**Brandi Schottel** and **Jim Jones** (NSF INFEWS) and **Rabi Mohtar** TAMU WEF Nexus Initiative)

4:00 Adjournment



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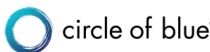
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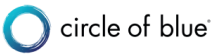


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Scientific Committee

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Anik Bhaduri, Water Future Program

Manocher Dorraj, Texas Christian U

Amr Elnashai, Penn State

Bernard Engel, Purdue

J. Carl Ganter, Circle of Blue

Karin Krchnak, World Wildlife Fund

Rattan Lal, Ohio State U

Upmanu Lall, Columbia

Richard Lawford, Morgan State

Claudia Ringler International Food Policy Research Institute (IFPRI)

Peter Saundry, Nat'l Council for Science & Environment and John Hopkins U

Kurt Schwabe, UC-Riverside

Shashi Shekhar, U Minnesota

Joshua B. Sperling, National Renewable Energy Lab

Enid J. Sullivan Graham, U New Mexico

Organizing Committee (Texas A&M University)

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College of Geosciences

Phil Berke, Professor and Director, Institute of Sustainable Coastal Communities at
College Station, College of Architecture

David Burnett, Director of Technology, Global Petroleum Research Institute

Shankar Chellam, Zachry Department of Civil Engineering

Ali Fares, Associate Director for Research, Prairie View A&M University

Bruce McCarl, Distinguished Professor of Agricultural Economics

Ari Michelsen, Professor and Resident Director, Texas AgriLife Research & Extension
Center, El Paso

Rabi Mohtar, TEES Professor, Texas A&M WEF Nexus Initiative, Departments of
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Efstathios Pistikopoulos, Professor and Director, Texas A&M Energy Institute

Kent Portney, Professor and Director, Institute for Science, Technology and Public
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Rudy Rosen, Professor and Director, Institute for Water Resources Science and
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David Smith, Extension Program Specialist, Biological & Agricultural Engineering

John Tracy, Director, Texas Water Resources Institute

Kevin Wagner, Professor and Deputy Director Texas Water Resources Institute

