ASU Wrigley Institute Town Hall Meeting

Arizona State University
Downtown Campus
Monday April 9th, 2018
Welcome

Gary Dirks, Director
Rob Melnick, Executive Director
Christopher Boone, Dean
Agenda

1 Today’s approach
2 Food Systems Transformation Initiative
3 Global Drylands Center
4 Global Futures Initiative
5 Q & A
A vision for 2018-2019 and beyond

Food Systems Transformation Initiative
What have we done? Where will we go?

- Research
- Outreach and education
- Thematic approach
RESEARCH

Publications
• 5 peer-reviewed publications
• 1 book
• 3 chapters

Grants, presentations, workshops
• A dozen cross-disciplinary proposals

Presentations
• 10 talks and posters, including students and post-docs, across local and national contexts

Workshops
• 7 across local, national, and international locations

Identifying attributes of food system sustainability: emerging themes and consensus

Hallie Eakin1, John Patrick Conner2, Christopher Wharton3, Farrel Bertmann4, Angela Xiong5, Jared Stolzfus6

Abstract. Achieving food systems sustainability is one of the more pressing challenges of this century. Over the last decades, experts from diverse disciplines and intellectual traditions have worked to document the critical threats to food system sustainability and to define an appropriate agenda for action. Nevertheless, these efforts have tended to focus selectively on only a few components of the food system or have tended to be framed in particular discourses. Depending on the knowledge domains as critical aspects of food system sustainability. We argue that in the face of considerable complexity and high uncertainty, these attributes can serve as a guide to conceptualizing food system choices adaptively and iteratively.

Keywords: Food systems · Sustainability · Food security · Socio-ecological systems
OUTREACH & EDUCATION

Community Events
5 moderated film screenings
5 lectures
2 food festivals
1 artist performance
1 community charrette

Media
FSTI education page
Workshop video archive

News, Talks, and Interviews
NY Times, Slate, NPR (4 local and nat’l), KED, local news and Cronkite

Collaborations
Special issue CFP on indigenous food systems (JAFSCD + JAIE)
Steadfast Farms ASU farm course
ITA/SOS comparative farm course (at Maya’s Farm and on study abroad in Italy)

Consultations
VA Hospital community garden
Downtown Urban Community Kids garden
Maricopa County Food Systems Coalition
Greenhouse CO₂ capture project
St. Petersburg Free Clinic for Florida model of FSTI
OUTREACH & EDUCATION

Community Events
Over 1800 community members engaged in public events where FSTI was sponsor or co-sponsor.
National webinar reaching hundreds of participants
Dinner 2040

Public Talks/Op-eds
(Wharton) “Can We Insulate Ourselves from Food Shortage?” January 17, 2018, Slate: Future Tense. | 7,000 views
(Wharton) “New Years resolutions and health,” January 16, 2018 | 250,000 person listenership
Food systems looking forward: 2018-2019
FOCUS: FY18/19

FSTI will focus on health and sustainability behavior change around the following food-related themes:

• Food waste
• Plant-based diets: vegan, vegetarian, and flexitarian/reducitarian
• Indigenous food systems: food sovereignty and agency
• Humanities: context (how + why)
• Student opportunities: organize and manage an innovation network
  • HEALab and multi-campus entrepreneurial network
Thank you

sustainability.asu.edu
Global Drylands

- 41% of global terrestrial area
- 30% of world’s human population
- 50% of world’s livestock
- 35% of terrestrial carbon fixation

Map showing the distribution of drylands around the world, with legend indicating hyper-arid, arid, semi-arid, and dry sub-humid regions.
Executive Board

Affiliates (no.)

CLAS + GIOS: 35, across 5 departments

New College: 3

Integrative Arts & Sciences: 2

Herberger: 9

External: 27 across 15 institutions, 5 are international

Staff: 3

Osvaldo Sala
Heather Throop
Laureano Gherardi
Courtney Currier
Enrique
Kelly O’Meara
Sharon Hall
Ferran Garcia-Pichel
Kelly O’Meara
Osvaldo Sala
Heather Throop
Laureano Gherardi
Courtney Currier
Enrique
Kelly O’Meara
Sharon Hall
Ferran Garcia-Pichel
Looking for a pulse in dryland ecosystems: Evaluating the pulse dynamics paradigm forty years after its creation

April 10-14, 2018

20 dryland national-international experts
Pulse-Reserve Paradigm

Noy-Meir 1973
Questions

• Does the Pulse-Reserve Paradigm validity change in climatic space? Is it equally valid in summer than in winter precipitation systems?

• Does the validity of the Pulse-Reserve Paradigm change with body size of organisms from microbes to plants?

• How does spatial scale of interest affect the validity of the Pulse-Reserve Paradigm from a patch to the landscape?
ASU – BGU seed grant

$180K to fund ASU-BGU collaborative seed grant

9 proposals submitted, 4 funded
DISCOVERY

$500K  NSF - Research Coordination Network
$2.4M  Department of Defense
$500K  NSF - Long Term Research in Environmental Biology

SALA GRANTS 2018
Seminars
ASU student-driven series (SOLS-SOS-SESE)
Distributed Drylands Seminar (CSU-UNM)
Distributed Sustainability Seminar (UNAM-CSU-Harvard-UMN)

Research Experience
NSF International Research Experiences for Students – Namibia ($300K submitted)
COLLABORATIONS

**Global**
- DroughtNet
- Biodesert
- Australian Research Council
- PLuS alliance
- IRES Namibia
- Ben Gurion University
- Madrean conference
- CICESE
- CSU meeting C
- 49 internal GDC affiliates: 5 schools, 8 departments
- Desert EDGE

**Local**
- 27 external GDC affiliates: 15 institutions, 5 international
Ensuring a sustainable future for drylands

ASU's Global Drylands Center engages key actors of dryland stewardship to develop use-inspired research, training and solution for arid ecosystems around the world.

Website

globaldrylands.asu.edu
people, partners, news, events, opportunities, about, contact

@DrylandsASU
90 followers, following 143, 49 tweets

Upcoming events

• Pulse Reserve Symposium
  April 10th-13th
• Scottsdale Community College, April 25th
Global Futures Initiative

Peter Schlosser

Vice President and Vice Provost of Global Futures
University Global Futures Professor
School of Sustainability
School of Earth and Space Exploration
School of Sustainable Engineering and the Built Environment

April 8, 2018
Motivation

We have entered the Anthropocene and are shaping/engineering our planet at global scales.

As a consequence humankind has left the domain of a safe operating space.

Academia has a societal mandate to chart a pathway towards a sustainable future of our planet.
Assuming limitless resources of our planet humankind has embarked on rapidly accelerating development, most notably since the beginning of the Industrial Revolution.

We are now pushing hard against planetary boundaries, using more resources than the planet has to offer.

We are facing serious problems in many domains, threatening habitability of our planet.

Time to move on a safe trajectory is running out fast.
Global Futures Initiative

Keeping our planet habitable
Vision

Managing our Planet for a Sustainable Future
Mission

Harnessing the innovative capacity of academia, the Global Futures Initiative will develop options for proactive planetary management to achieve sustained habitability and improved human wellbeing.
Goal

Advance the role of academia in the debate about and decision making for the future of our planet and global society.

- Shape debate by informing it with the best knowledge and innovation available
- Explore which critical interventions will steer us towards a sustainable, globally connected, future
- Effectively exchange with a broad stakeholder community to meet societal needs.
Guiding Principles and Specific Objectives
Inclusive Approach

Challenge is large and complex and needs a holistic approach with contributions from disciplines across the university and academia as a whole.

- The Initiative is only possible because ASU has already built many components of its envisioned structure
- ASU is pushing into the transdisciplinary space
- ASU is committed to institutional change
- Many schools, centers, programs, initiatives, and individual faculty are already working on problems related to the GFI.
- The GFI is open to input from all interested parties
- Open discussion will be held in a variety of fora to continually refine and adjust the goals, objectives, scope, and implementation of the GFI.
Define the Challenge

Global Society/Population → Development of societies → Pressure on Earth System → Interaction of stresses

Social Sciences, Humanities, Life Sciences, Natural Sciences, Engineering

‘Societal Will’ → Implementing Institutions → Economic Feasibility → Solutions Mitigation Adaptation

Feedback Loop is very simplistic but captures the basic features of the challenge to move towards a sustainable future.

The willingness of society to change and recognize planetary boundaries is the key to successfully embarking onto a trajectory towards a future state of our planet that is habitable and offers human wellbeing in a just way on a global scale.
Respond to the Challenge

Expand existing and create new intellectual spaces for understanding, quantifying and projecting/predicting the complex Earth system, and managing (engineering) it while minimizing negative effects.

- Create a platform for wide-ranging exchange about global futures across all knowledge domains offering the opportunity for innovation through both bottom-up activities and strategically planned initiatives to address critical questions.
Accept a new Commitment

Move engagement in real world questions and problem-solving to the center of academia.

- Move academia into the heart of society, committing to solving problems.
- Utilize the full breadth and depth of academia’s innovative capacity and potential.
- Expand academia’s role in bridging the spaces between idea generation, design of solutions, translation of knowledge and application/implementation to build a better and sustainable future.
Form New Alliances

Engage with a broadly defined group of stakeholders or actors who are key facilitators of knowledge transfer, and essential in defining the directions of research aimed at shaping our future.

- Enhance mechanisms to expand the discourse beyond the traditional confines of academic institutions.
- Design and implement new fora to include stakeholders in the dialogue about society’s need for new knowledge in jointly owned space.
Form networks/leagues and connect the existing talent pool distributed across many institutions to enable rapid progress in addressing problems that need immediate answers.

- Establish hubs that offer a variety of ways to communicate, exchange ideas, and develop new intellectual spaces. These hubs should have scholars in residence, provide physical space for visitors, and be equipped with advanced technology to connect virtually.

- Pursue new appointment models in which scholars hold primary affiliations with one institution and secondary or multiple affiliations within or outside other academic entities.
Train Problem Solvers and Innovators

Build capacity of a diverse and inclusive work force to apply knowledge to problem solving.

- Engage a wide range of learners through formal and informal education media and venues in understanding and responding to problems.
- Facilitate student exploration of solutions in environments that encourage innovation in problem solving in partnership with stakeholders.
- Apply data science and technology to access the rapidly growing information base and synthesize it into accessible packages with direct applicability.
- Develop innovative teaching and communication methods that utilize the opportunities of the digital age to acquire critical information in real time for students and decision-makers.
WHY ASU?
#1 in the U.S. for innovation

#1 ASU #2 Stanford #3 MIT

-U.S. News & World Report 2016, 2017 and 2018

BEST COLLEGES
U.S. News & World Report
MOST INNOVATIVE
2018

ASU Arizona State University
Thank You

Peter Schlosser
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Questions?