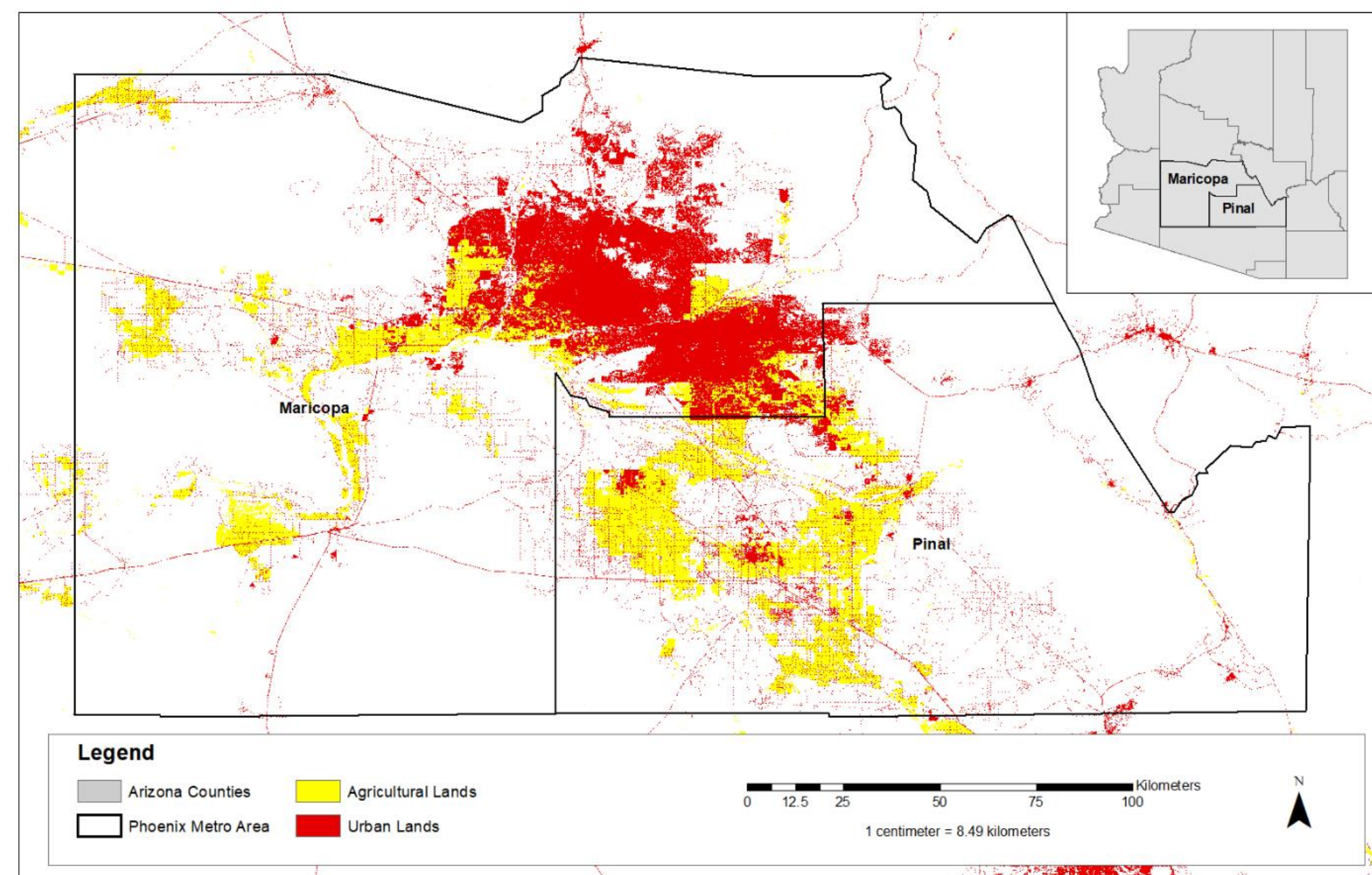


Rebecca Logsdon Muenich<sup>1</sup>, Otakuye Conroy-Ben<sup>1</sup>, Clinton Williams<sup>2</sup>, Peter Conden<sup>3</sup>  
CAP LTER All Scientists Meeting

## Background

- The Phoenix, Arizona metropolitan area has been experiencing the loss of agricultural lands due to urban expansion for decades
- In Maricopa County alone, urban areas expanded from 3% of the total area in 1955 to 20% in 2001
- Given the climate of the area is semi-arid, with a mean temperature of 15-30°C and average annual precipitation of 190 mm, the region is particularly vulnerable to climate risks
- The Phoenix area supports over 4 million residents and is a major agricultural food and fiber exporter, therefore disruptions and decreases to its productivity could have impacts beyond Phoenix and Arizona
- There are serious concerns in the Phoenix area as to whether or not water supplies will be sufficient to support the growing urban population, let alone the extant agricultural production in the area
- We are **working to enhance Arizona State University's (ASU)** ability to perform agricultural research and education through the topic of trade-offs and opportunities between urban and agricultural lands management

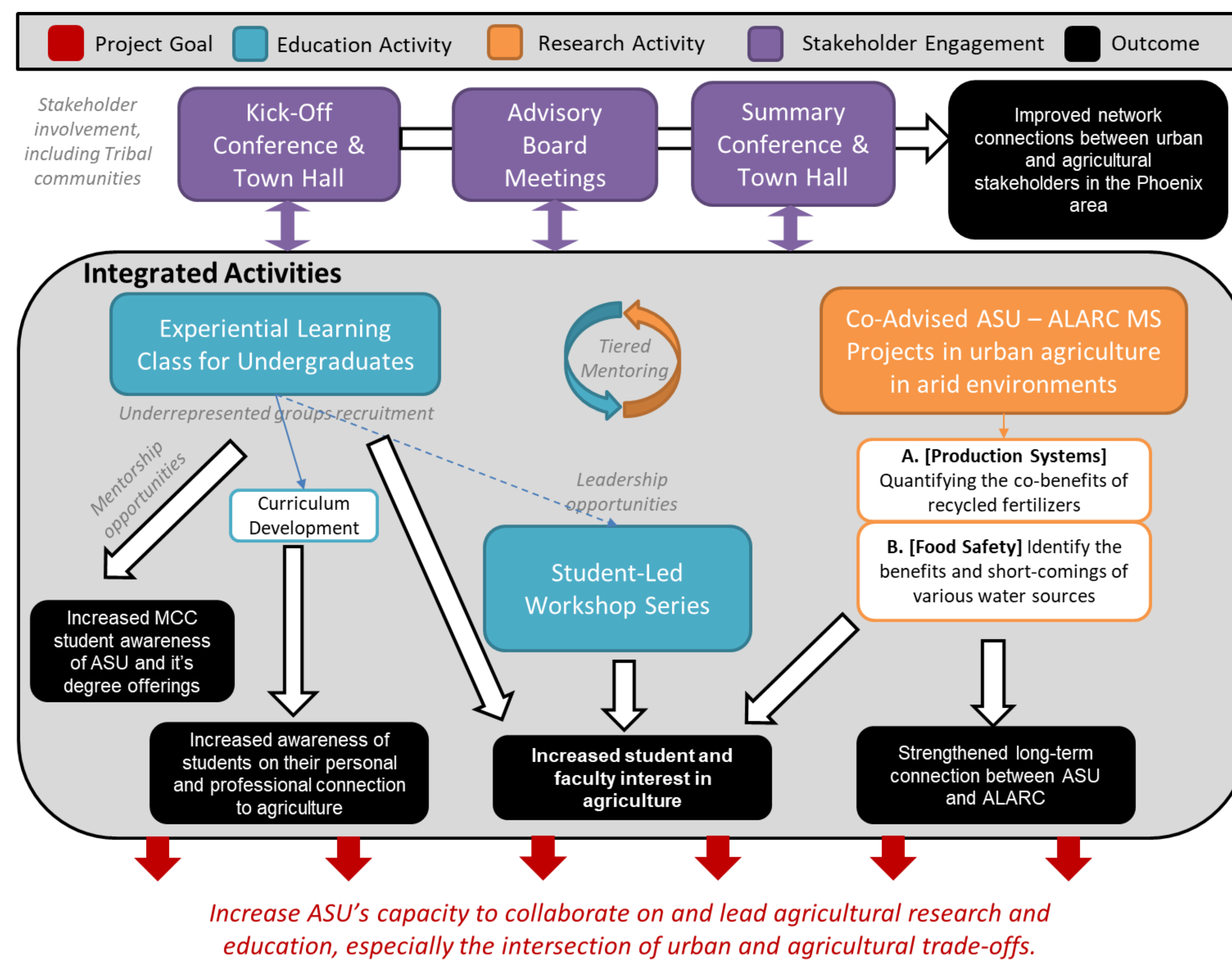


## Partners

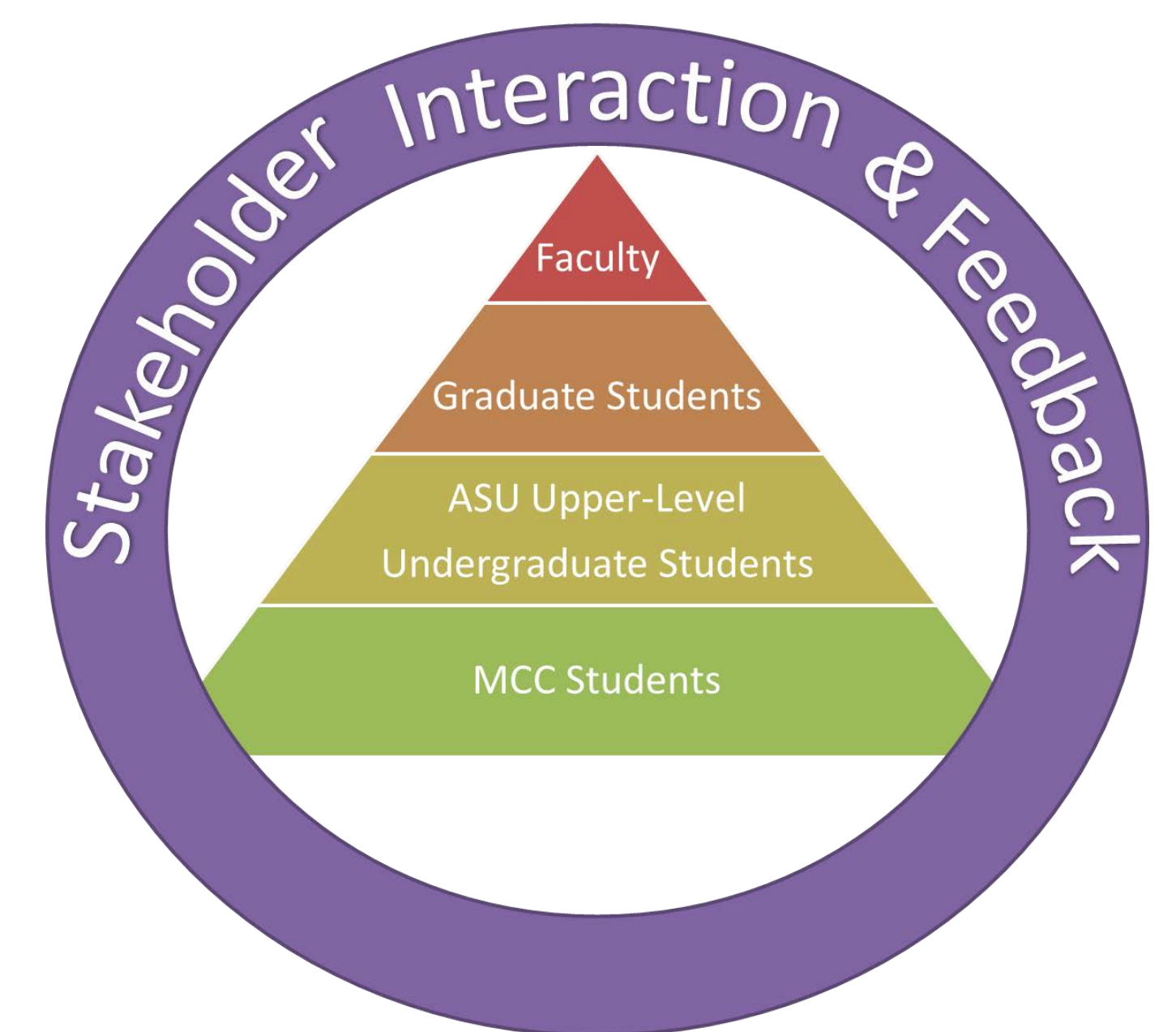
- Ira A. Fulton Schools of Engineering**  
Arizona State University
- ARID-LAND AGRICULTURAL RESEARCH CENTER**
- MESA COMMUNITY COLLEGE**  
A MARICOPA COMMUNITY COLLEGE

## Project Approach

### Capacity Building



### Tiered Mentoring



## Expected Outcomes

Knowledge	Actions	Conditions
Emerging opportunities in addressing competing demands from urban and agricultural uses	ASU students choose careers in agriculture	Strengthened long-term connection between ASU, ALARC, and MCC
Increased awareness of ASU faculty and students of connection to agriculture	ASU students from underrepresented groups participating in agricultural research and classes	Improved pathway for MCC students to pursue sustainable agriculture educations at ASU
Increased student and faculty interest in agriculture	MCC students choose to pursue advanced degree at ASU	Improved long-term ability of ASU to provide agricultural education and research opportunities
New network connections between urban and agricultural stakeholders in the Phoenix area	Faculty write papers or grant proposals with agricultural focus	Increased connectivity between urban and agricultural stakeholders in Phoenix area
Evaluation of co-benefits of recycled fertilizer use in arid environments	New research collaborations occur between ASU, MCC, and ALARC	More opportunities for agricultural productivity in and around urban areas
Evaluation of benefits and risks of urban resource recovery in agricultural applications	New agricultural-related courses at ASU	New collaborations between ASU and local Tribes
	Increased USDA funding at ASU	
	New shared projects developed between urban and agricultural stakeholders	

## Current Status

- Planning kick-off event for August 2019
- Preparing undergraduate experiential learning course to start in Spring of 2020
  - Looking for student project partners!
  - Student projects will be designed in spring semester, and students can then do a *paid* internship with the USDA ALARC to complete their project.
- Two new M.S. students starting January 2019 on projects co-advised by USDA ALARC
- Forming initial Stakeholder Advisory Group
  - Looking for additional members!

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