



# **Superfund Research Center**

## **Orientation to Community Engaged Research**

**August 22, 2013**

# CRC-SRP Collaboration

- Provide orientation and support for developing community-engaged research approach for the SRP
- Initiate pilot projects to:
  - Test feasibility of engaged scholarship in SRP
  - Learning/ adaptation for on-going improvement
  - Demonstrate commitment to CES for SRP funding proposals

# Opportunities in Community Engagement in Environmental and Biomedical Projects: Collaboration of Superfund Research Program and Center for Regional Change at University of California, Davis

## About the UC Davis Superfund Research Program:

The Superfund Research Program (SRP) funds multidisciplinary research that addresses the broad, complex human and environmental



### Target Research Areas:

- ❖ **Fate and transport** of hazardous materials in ground water, surface water, and air
- ❖ **Effects** of hazardous materials using epidemiological approaches
- ❖ **Developing sensitive systems** for evaluating the exposure of populations to these materials
- ❖ **Bioremediation** of toxic materials

**Can on-site quantification of pesticide exposure in landscape and agricultural workers help lessen their health impacts?**  
(Sacramento, CA)



How to identify and establish contacts in communities?

How can science be used to enhance community capacity?

How to identify novel hazards of public concern to develop scientific research platforms?



**Are lower-income groups at higher risk of exposure to flame retardants from second-hand furniture?**  
(Imperial Valley, CA)

**Does exposure of mother to antimicrobials pose an exposure risk to breast-fed infants?**  
(Communities near large dairy operations and waste-water treatment facilities, CA)



How can new technologies address key community challenges?

How to identify local pollution-impacted sites at early stages to mobilize research efforts and regulator response with urgency?

How can communities gain access to scientific data/ analyses?

How to share research findings with public in an effective, serviceable manner?

**What are the levels of pesticide exposure in previously undocumented populations, e.g. Hawaiian bird-chasers?**  
(Kauai, HI)



## About the UC Davis Center for Regional Change:

### Mission:

**"To produce innovative research to create healthy, sustainable, prosperous, and equitable regional change in California and beyond."**

### Aims:

- ❖ Bridging faculty and students across disciplines in solutions-oriented research
- ❖ Connecting the University to leaders from government, business, non-profit, and philanthropic sectors to apply research to solve real-world problems.

The CRC emphasizes community participatory methods, cutting-edge socio-spatial analysis and a translational research orientation to achieve these goals.

INSERT CRC graphic following slide



# Workshop Agenda

- Welcome!/ Introductions
- Introduction to Community Engaged Research
- A Community Advocate's Perspective
- The Community Engaged Research Continuum
- Case Studies: The Spectrum of Success
- Discussion and Reflection
- Next Steps

# Survey Results July 2013

## **Benefits of CES**

- Identifying regions and/or chemicals of concern
- Communities help develop methods
- Real populations help validate scientific methods
- Pushes frontiers of technology application
- Better funding opportunities for researchers
- Personal satisfaction and connection with people even without positive results

## **Primary Concerns on Undertaking CES**

- Connections with key decision-makers  
IRB related issues
- Misinterpretation of data/results
- Mid-course alteration of research  
Scientific and/or innovative merit of projects need clear and thorough definition

## **How Science can Contribute**

- Exposure studies that lead to improved working/living conditions
- Citizen science initiatives – small scale empowered solutions to problems implemented by communities with assistance/advice from researchers
- ‘Landscaping for Environmental and Human Health’\*
- Alleviate cynicism about scientists and research by maintaining open channels of communicating key data and findings

## **Support most needed:**

- Facilitated meetings and connections with established community contacts to ensure success.

# Engagement Auto-biography

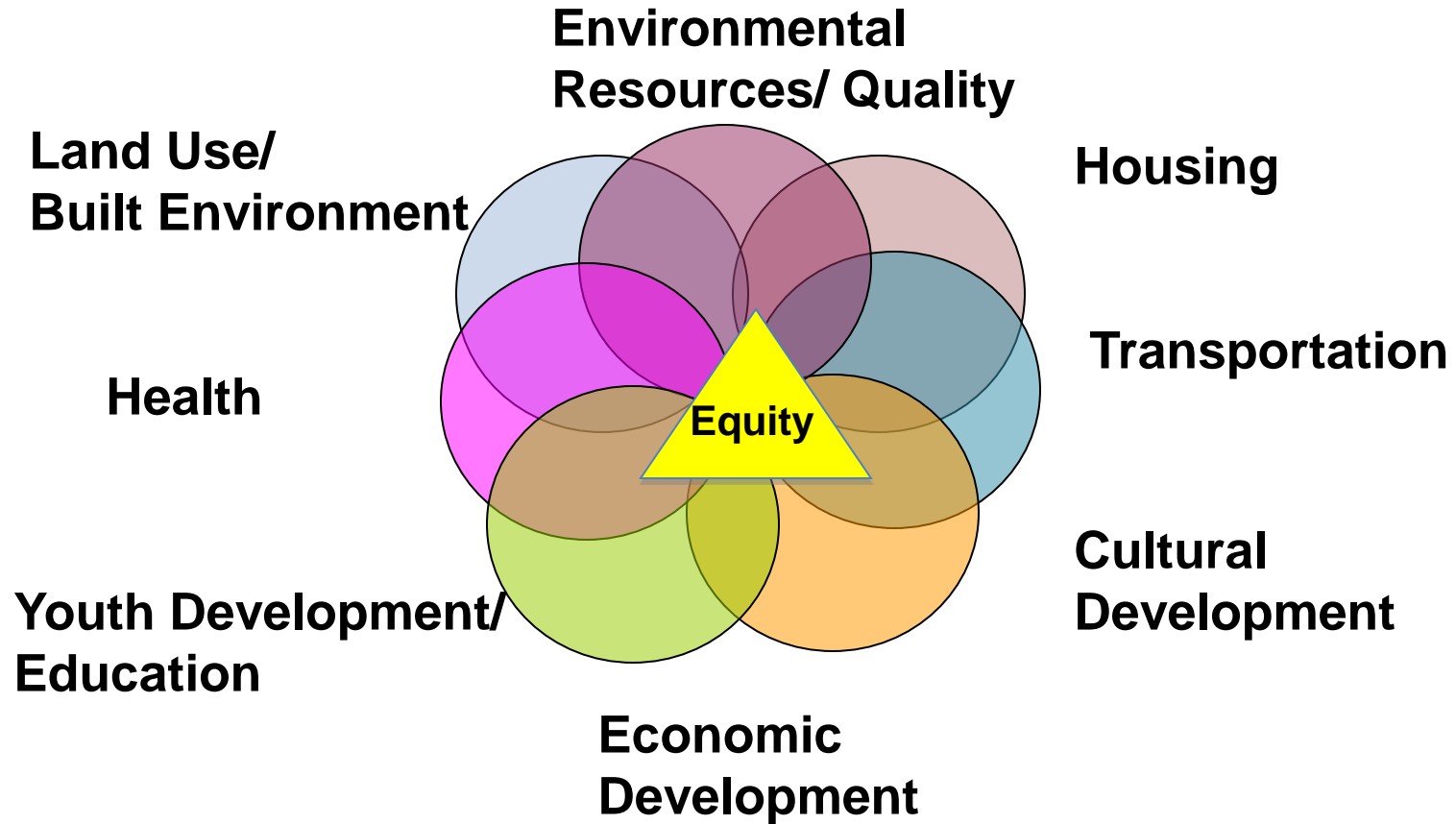
- Inter-disciplinary/ applied degrees
- Inter-weaving of non-profit leadership with academic training
- Research based on collaborative/ PAR model
- Solutions-oriented research center



dreamstime.

**UCDAVIS**  
CENTER FOR REGIONAL CHANGE

Mission: *“Produce innovative and collaborative research to inform the building of healthy, prosperous, sustainable and equitable regions in California and beyond.”*



# Conceptual Origins

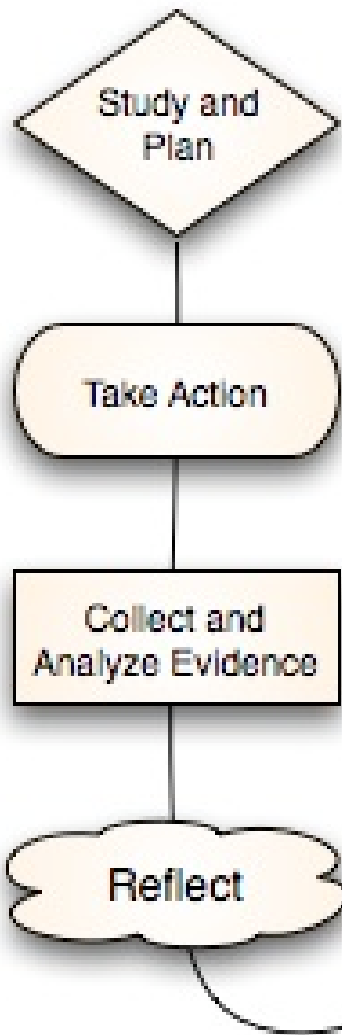
- “Participatory research attempts to present people as researchers themselves in pursuit of answers to the questions of their daily struggle and survival” (Tandon 1988: 7)
- “Participatory research is defined as systematic inquiry, with the collaboration of those affected by the issue being studied, for purposes of education and taking action or effecting change.” (Green et al 2003:419)
- “Research is seen not only as a process of creating knowledge, but simultaneously, as education and development of consciousness, and of mobilization for action.” J. Gaventa
- “To exist humanely is to name the world, to change it” – P. Freire



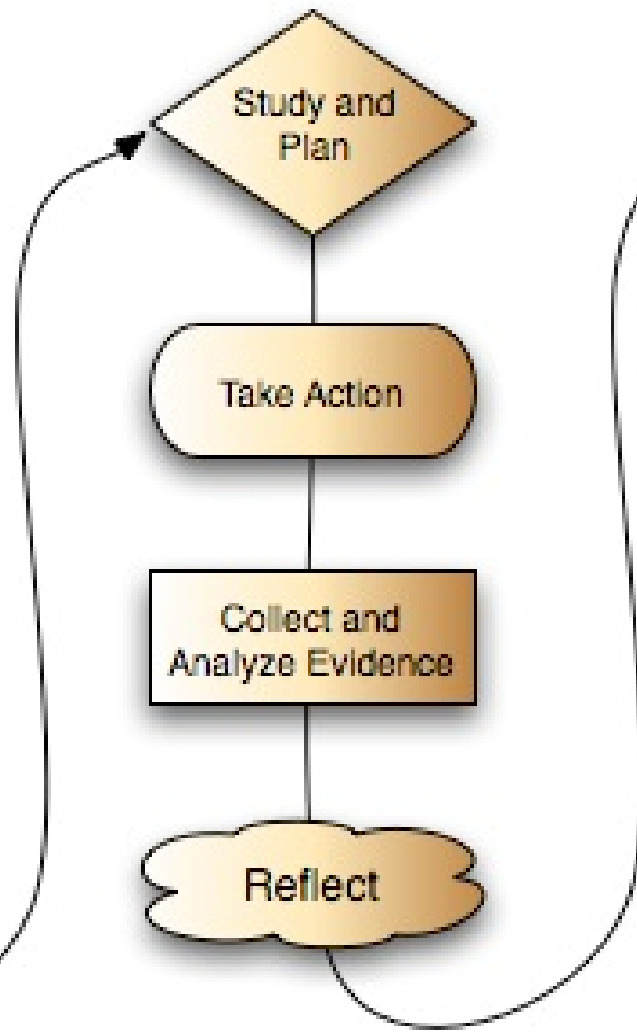
# Defining Our Terms

- A fundamental characteristic of community-based research is the emphasis on the participation and influence of non-academic researchers in the process of creating knowledge.
- Community-based research equitably involves all partners – community members, organizational representatives and researchers -- in all aspects of the research process
- All contribute unique strengths and shared responsibilities to enhance understanding of a given phenomenon and the social and cultural dynamics of the community
- Goal to integrate the knowledge gained with action to improve the health and well-being of community members.

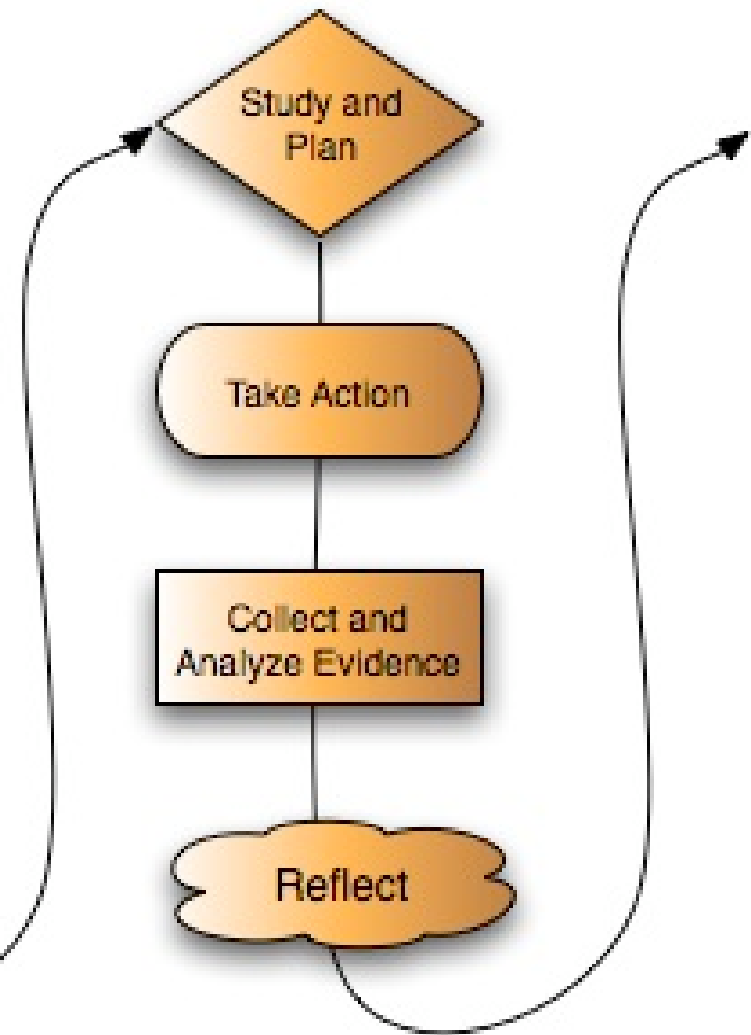
Cycle 1



Cycle 2



Cycle 3



Progressive Problem Solving with Action Research

# What does Community Engaged Scholarship (CES) mean?

What/ where is  
“COMMUNITY?”

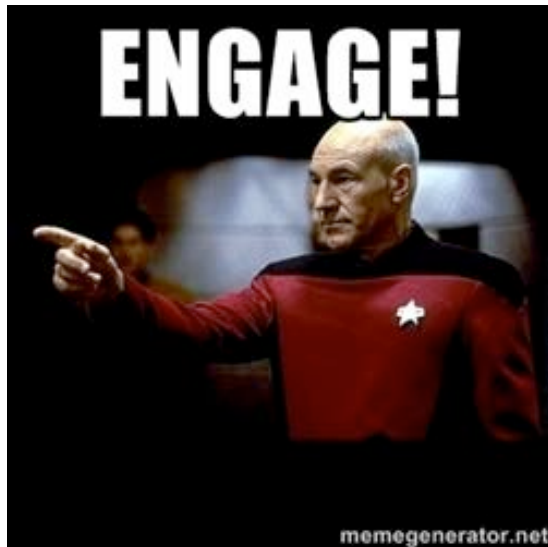


- A place and/ or a process?
- Anyone/ any place off campus?
- Disadvantaged populations/ places?
- What happens when community is divided?
- Is the researcher part of the community? Which part?

# What does CES mean?

## What is “ENGAGEMENT?”

From the root for “*to pledge*” “*to commit*” and also “*to challenge*”



- Relevance to community needs/ issues?
- Participation in shaping research questions, methods, analysis, documentation, application?
- What is participation anyway? Informing? collaborating? deciding? All of the above?

# What does CES demand?

- Communication/  
translation: ability to  
make complex ideas  
simple; code-switching
- Community-building:  
asset-based; teaming;  
conflict resolution
- Cultural Humility\*



# What does CES Risk?

- Time/ energy required for community engagement vs. the ticking tenure clock...
- Losing academic credibility if perceived as:
  - “Biased”
  - “Political/ Ideological”
  - “Not rigorous”
  - “Not theoretical”
  - “Only Applied”



# What does CES promise?

- Greater innovation (emergent properties of bringing together unlikely pairs)
- Better science:
  - More rigorous
  - More relevant
  - Greater reach
- Realization of public/land-grant education vision



# Engaged Product Portfolio

Int. J. Environ. Res. Public Health 2012, 9, 1593-1608; doi:10.3390/ijerph9111593

Article

## Cumulative Environmental Vulnerability and Justice in California's San Joaquin Valley

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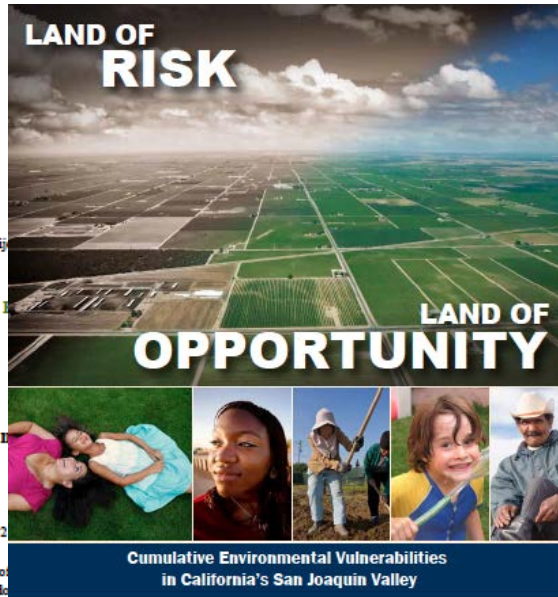
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Received: 19 March 2012; in revised form: 16 April 2012 / Accepted:

Published: 3 May 2012



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UC DAVIS  
CENTER FOR REGIONAL CHANGE

November 2011

**Abstract:** The identification of "environmental justice (EJ) communities" is an increasingly common element in environmental planning, policy, and regulation. As a result, the choice of methods to define and identify these communities is a critical and often contentious process. This contentiousness is, in turn, a factor of the lack of a commonly accepted method, the concern among many EJ advocates and some regulators that existing frameworks are inadequate, and ultimately, the significant consequences of such designations for both public policy and community residents. With the aim of assisting regulators and advocates to more strategically focus their efforts, the authors developed a Cumulative Environmental Vulnerability Assessment (CEVA). This CEVA is composed of a Cumulative Environmental Hazard Index and a Social Vulnerability Index, with a Health Index as a reference. Applying CEVA produces spatial analysis that identifies the places that are subject to both the highest concentrations of cumulative environmental hazards and the fewest social, economic and political resources to prevent, mitigate, or adapt to these conditions. We recommended that these areas receive special consideration in permitting, monitoring, and enforcement actions, as well as investments in public participation, capacity building, and community economic development.

## Lower San Joaquin Valley residents say they live in a toxic soup

By Mark Grossi  
Fresno Bee

KETTLEMAN CITY – Maria Saucedo cried as she spoke of the two babies she has lost in Kettleman City – one to birth defects and the other in a miscarriage.

There's no proof, but she blames the toxic landscape surrounding her town. She and others who have suffered in Kings County's Kettleman City say they live in a nasty soup of pollution. They make a compelling case.

Just west is the largest hazardous waste landfill this side of the Mississippi River. Electricity buzzes overhead along tall towers at a power plant supplying electricity up and down the state. Pesticide is sprayed in nearby orchards. Diesel smoke wafts from Interstate 5 and Highway 41.



"It's a nightmare," Saucedo told state health authorities last year.

The latest: Treated human sewage from more than 5 million people in Los Angeles County is supposed to be composted on farmland east of town. The first deliveries could start as soon as late summer.

"When somebody flushes a toilet in Los Angeles County, it will end up in Kings County," said Jonathan London of the University of California, Davis, which published a study in late 2011 about health risks in the San Joaquin Valley.

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### San Joaquin Valley CUMULATIVE HEALTH IMPACTS PROJECT (SJV-CHIP)

SJVCHIP is a collaborative of environmental justice and community health organizations who seek to reduce the cumulative impact of environmental contamination particularly in communities that are heavily burdened by or especially vulnerable to pollution such as low-income and communities of color within the San Joaquin Valley.

PARTNER ORGANIZATIONS:



NOW AVAILABLE:

2011  
REPORT

Jonathan London Ph.D.,  
Ganlin Huang Ph.D., and  
Tara Zagorsky M.S.

LAND OF RISK

LAND OF OPPORTUNITY

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# QUESTIONS THAT WONT GO AWAY (QTWGAs)

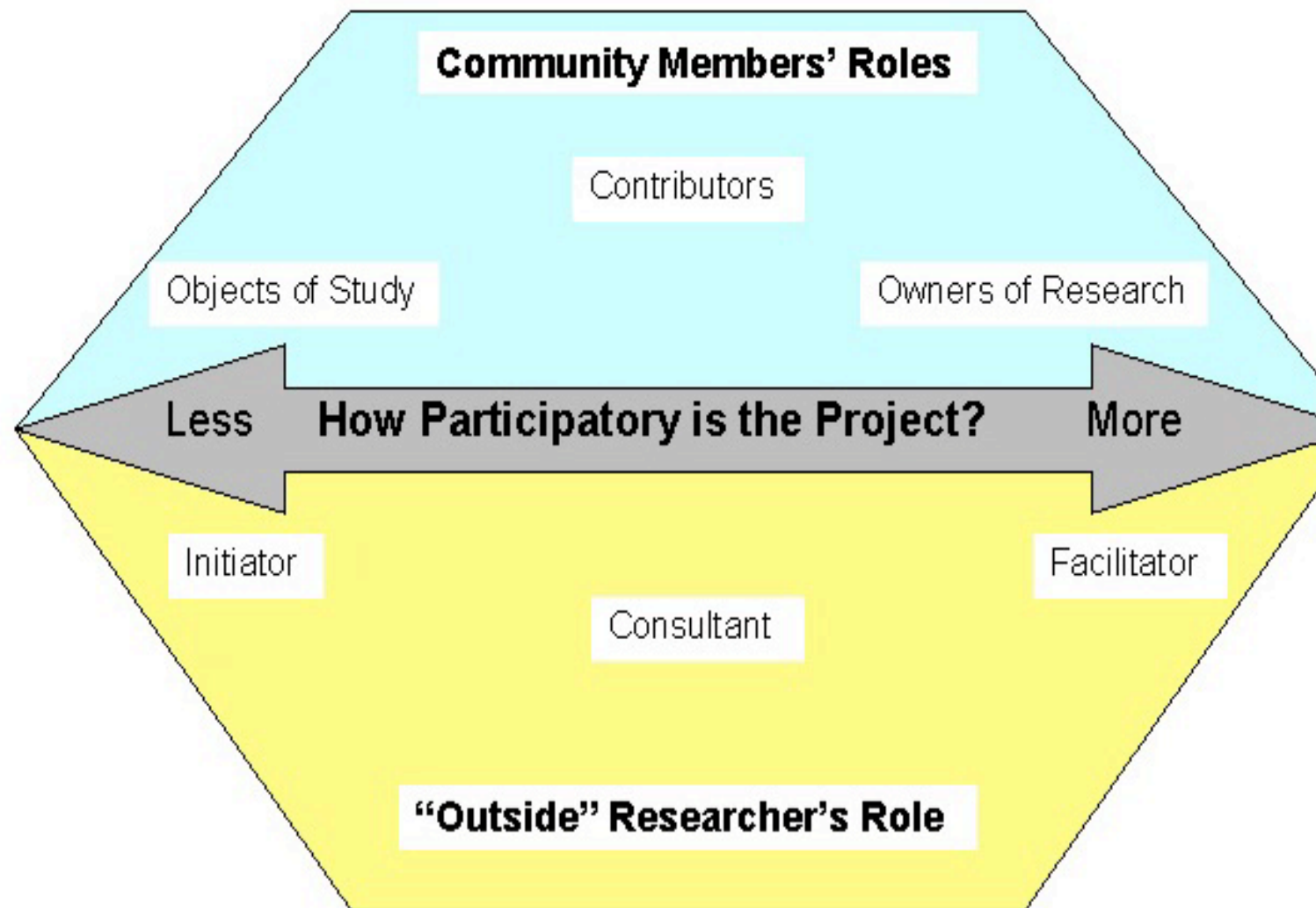
<i>Issue</i>	<i>Issues for participatory action research</i>
<b>Community Identity</b>	Ex.: What are the implications for research if the concept or perception of community is not clearly defined or agreed upon?
	Others?
<b>Fractured Communities</b>	Ex.: What are the implications for participatory research when the community is divided?
	Others?
<b>Membership Issues</b>	Ex.: How does the research process change when the researchers <i>are</i> or <i>are not</i> members of the community?
	Others?
<b>Roles of the Researcher</b>	Ex.: What is the researcher's principal role in the community?
	Ex.: What issues are raised when researchers assume different roles in the community (for example, organizer, facilitator, teacher, consultant, supervisor, bringer of money, and provocateur)?
<b>Community Expectations</b>	Ex.: What responsibilities do researchers have in helping the community to address/resolve their problems?
	Ex.: What are the researchers' responsibilities in creating expectations? Others?

# QTWGAs

<i>Issue</i>	<i>Issues for participatory action research</i>
<b>Accountability</b>	Ex.: How should researchers navigate tensions between what members of the community want, what members of the academic committee want, and what the academic discipline wants?
	Others?
<b>Rewards</b>	Ex.: What are appropriate ways to credit and reward community members who assist the research?
	Others?
<b>Power Relationships</b>	Ex.: What are the implications when participatory research affects power relationships in the community, either intentionally or unintentionally?
	Others?
<b>Sustaining the Research</b>	Ex.: How can research be done so that it promotes lasting benefits or can be continued after the specific project (thesis, dissertation, etc.) is completed?
	Others?

# PAR Continuum

# The Participatory Research Continuum



# Community-Engaged Scholarship Case Studies: Spectrum of Success

# Steps and Spectrum of Community-Engaged Research

Based on the International Association of Public Participation's Public Participation Spectrum

*Spectrum for community engagement in research*



Steps for a Research Project

	<b>INFORM</b> <i>Educate the community</i>	<b>CONSULT</b> <i>Get feedback from the community</i>	<b>COLLABORATE</b> <i>Community gets involved/ helps decide</i>	<b>EMPOWER</b> <i>Community takes lead role/ makes final decision</i>
1. Identify problem/need				
2. Define research questions and methods				
3. Select relevant sites/subjects				
4. Collect relevant data				
5. Analyze data				
6. Document findings				
7. Public Presentations				
8. Application to community action and/or public policy				

# Proposed Next Steps

- One-on-one meetings with PIs to:
  - Develop community engagement ideas within existing SRP projects
  - Identify community contact person(s) or organizations relevant to project idea
  - Establish contacts and facilitate meetings to take projects forward
- Conceptualizing and launching targeted Pilot Project(s)