

# **Needs Assessment Processes and Methods**

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Kearney Agricultural Research and Extension Center

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# Presentation Outline

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- Needs Assessment Processes
- Methods to collect Needs Assessment Data
- Best Practices for Developing and Administering Surveys
- Best Practices for the Initial Contact with Community
- Cultural Considerations in Needs Assessment
- Writing Good Questions
- Needs Assessment Priority Setting Filters
- Evaluating Questions Activity

# What is “Need?”

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The measurable discrepancy between “*what is*” (or the present state for group or situation of interest) and the “*what should be*” (or desired state) (Witkin & Altschuld, 1995)

- Needs not wants
- Needs not solutions

# What is Needs Assessment?

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- Is the very first step in the overall program planning process.
- Needs assessment is driven by the question “*What do clients need and how can those needs be met?*” (Patton, 1982).

- “A systematic set of procedures undertaken for the purpose of setting needs-based priorities and making decisions about program design/improvement and allocation of resources.” (Altschuld & Kumar, 2010).
- It is the process of identifying needs as gaps between current and desired results, placing those needs in priority orders based on the cost to meet each need versus cost of ignoring it, and selecting the most important opportunity or solutions to eliminate or reduce the problem (Kauffman et al., 2003).

# Why do Needs Assessment?

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- Improve services and products for clientele
- Strategically use limited resources
- For better program planning and evaluation
- Part of job description

# When to conduct a Needs Assessment?

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- The program is brand new.
- You are new to the job.
- You want to learn more about what your clients need related to a specific condition.
- You need to document the needs for funding (Angima et al., 2014)
- You need additional information to communicate with your stakeholders.
- If the program evaluation focus is on how well it meets the needs of the intended audience (Patton, 1982)

# When NOT to conduct a New Needs assessment

(Berkowitz & Nagy, 2014)

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- Your clients view the assessment as redundant or wasteful.
- The issue requires a quick action.
- A recent needs assessment results are still timely.
- When there is absolutely no doubt what the most important needs are

# What Needs Assessment can be

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- Different potential uses
  - Definitely
    - Developing your program: from goal setting to evaluation
    - Performance appraisal
  - Maybe
    - Commissioned study
    - Journal article
    - Justify requests for funding
    - Collaborative research project
- Choice of scale and scope
- Informal vs. formal approaches

# How Can We Span the Boundaries between Wildland Fire Science and Management in the United States?

Susan D. Kocher, Eric Toman, Sarah F. Trainor, Vita Wright, Jennifer S. Briggs, Charles P. Goebel, Eugénie M. MontBlanc, Annie Oxarart, Donna L. Pepin, Todd A. Steelman, Andrea Thode, and Thomas A. Waldrop

In 2009, the federal Joint Fire Science Program (JFSP) initiated a national network of boundary organizations, known as regional fire science consortia, to accelerate the awareness, understanding, and use of wildland fire science. Needs assessments conducted by consortia in eight regions of the United States are synthesized here using a case survey approach. Although regions used different methods based on their different ecosystems, geography, and demography, results showed striking similarities in how fire science is accessed and used, barriers to its use, and research information needed. Use of Internet-based information is universally high

3.3 million to 7.0 million (USDA, 2011). A recent analysis (USDA, 2011) found that only 9.4% of

J. Ext.  
http://dx.doi.org/10.1002/joe.1000  
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## Multiple-Methods Needs Assessment of California 4-H Science Education Programming

### Abstract

The California 4-H Science Leadership Team conducted a statewide assessment to evaluate the needs of county-based 4-H programs related to the key areas of the 4-H Science Initiative: program development and design, professional development, curricula, evaluation, partnerships, and fund development. The use of multiple qualitative data sources proved effective in identifying needs and gaps. Integrated findings provided evidence of institutionalization of 4-H Science; the assessment also revealed gaps that represent opportunities for future effort and directions. Needs identified included intentional and systematic science programming, effective program models, professional development for staff, and consistency in messaging and branding.

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**Grower Needs Assessment for  
Sustainable Food Production  
in San Diego County**

One Time Funding Request for FHA/UCCE/LUEG  
Submitted by: Ramiro Lobo, Small Farms Advisor  
& Jan Gonzales, Community Education Specialist  
July 1, 2017 – June 30, 2018

**Commissioned Study**



**Collaborative Research Project**

**UC SAREP Grant**  
*Needs assessment for small scale  
livestock harvesting and processing  
facilities in Northern California*

# Things to consider before getting started

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- Find out what is already known or available
- Determine if you need more information from stakeholders
- Clientele readiness for assessment
- Political aspects of the activity

# Context is important

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- Extension programs exist within a situation or environment that is often complex and changing.
- The more we know about the situation, the more solid the foundation of our program.
- Examine the available resources and relevant research, knowledge and experience to better understand the situation.
- Involving others helps to build a better understanding of the context or situation, as well as buy-in to the program.

# First steps for new advisors

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- Get out and introduce yourself
  - Develop relationships
  - Define your clientele
  - Get the lay of the land
- This informs who and what to ask about needs

# How to organize a Needs Assessment (Donaldson & Franck, 2016)

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## Phase 1: Exploration

- NA purpose, potential uses, audience, explore secondary data sources, what & how to collect data

## Phase 2: Assessment

- implement NA plan: collect, analyze, & synthesize data

## Phase 3: Utilization

- use the data to set program priorities, develop action plan to address needs/issues, communicate results

McKillip (1998) and Lepicki and Boggs (2014) as cited in Donaldson and Franck (2016)

(Adapted from Donaldson and Franck, 2016)

## **Worksheet: Organizing a Needs Assessment**

### **Phase One: Exploration**

- What are the potential uses of the assessment information and who are the potential users of the assessment information?

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- Are you looking at one town or county or a specific audience?

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- What existing information do you have?

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- What data still need to be collected?

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- How will you collect the data?

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### **Phase Two: Assessment**

- What data did you gather?

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- How did you access the data?

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- What did you learn or confirm?

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- Was there overlap in the needs identified as shown by different sources?

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### **Phase Three: Utilization**

- What are your priorities based on the needs assessment?

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- How will you share the needs assessment information with others?

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# Commonly Used Data Collection Methods

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## For secondary data:

- Literature/Document review

## For primary data:

- Individual Interviews
- Group interviews (focus groups)
- Key-informant interviews
- Observation
- Surveys

# Document/Literature Review

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Content analysis of existing information, secondary data

- Little to no participant burden

## **Best practices:**

- ✓ Have an audit trail
- ✓ Document systematically

# Systematic Analysis

S. No	Title of the article	Year published	Questionnaire Validity	Population	Response rate	Major inservice need	Major recommendation
1	Inservice needs and problems of agricultural science teachers in Krara state, Nigeria	1988	Face and content validity	All agricultural science teachers in the 60 secondary schools that offered agricultural science course during 1985 school year	97%	To either increase their knowledge in agriculture or update and keep current in agricultural development. Topics on teaching methods and techniques.	School administrators of the board should design short and long-term plans for in-service programs. In-service workshops on Ag mechanics should be organized.
2	An assessment of microcomputer utilization in Kansas vocational agricultural programs	1989	Face and content by expert panel (Face inferred)	All 158 secondary vocational agriculture programs in Kansas. Radom sample of 87 unique programs.	93% (Population validity established by comparing means of sample to population on two variables)	Inservice on agricultural specific software.	Implied that computer related inservice activities should continue to be offered. Microcomputer competencies should be required for certification of new teachers (preservice).
3	An analysis of the agricultural mechanics laboratory management inservice needs of Missouri agriculture teachers	1990	Since original competencies were developed by nationally recognized agricultural mechanics education experts, the instrument was judged to be valid	All 240 secondary agriculture teachers listed in 1988-1989 Missouri Agricultural Education Directory	84% (Early and late respondents were compared on all 50 competency statements).	In the area of agricultural mechanics laboratory management and the greatest need was in the area of safety.	Programs should be conducted to improve the agricultural mechanics laboratory management abilities.

Susie Kocher,  
UCCE Forestry/  
Natural Resources  
Advisor

Mixed methods:  
**Literature review**  
then  
Key informant  
interviews



# Methods for Collecting Primary Data

# Sampling Process

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1. Determine the sampling frame:  
compile a comprehensive and accurate list of your target audience
2. Choose sample type:
  - Convenience sample
  - Stratified sample (diverse audience)
  - Random sample

## Best practices

- ✓ Use existing lists and check for accuracy
- ✓ Plan to oversample

# Individual Interviews

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- personal contact is desirable
- sample group is smaller
- sample group is unlikely to respond to a written survey
- sample has people incapable of taking a survey
- you are not sure what is most important to potential respondents

## Best practices

- State the purpose upfront
- Be consistent and neutral
- Use probing questions
- Send questions 1-2 days in advance

**Elizabeth  
Fitchner,**  
UCCE Farm/  
Orchard Systems  
Advisor

**Informal  
Interviews**  
piggy backing  
on existing  
meetings



**Susie Kocher,**  
UCCE Forestry/  
Natural  
Resources  
Advisor

**Semi-  
structured  
Interviews**



# Group Interviews/Focus Groups

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- Don't know what questions to ask
- Want to know more from survey responses
- Foster trust and relationship-building
- Piggy back off existing meetings
- Understand common issues or needs

## Best Practices

- 8-10 people
- Explain the rules
- Make deliberate efforts to get answers from everyone

Video: <https://www.youtube.com/watch?v=FHcCNufXLsg>

# Key-informant interviews

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- Verify collected data (e.g.: to understand needs vs wants)
- Get inputs from knowledgeable and influential people (opinion leaders, spark plugs etc.)
- Explore unanticipated ideas

## Best Practices

- Have a mix of people from different ages, races, ethnicities etc.
- ~10 people

**Ramiro Lobo,**  
UCCE Small Farms  
& Ag Economics  
Advisor

Mixed methods:  
Online survey, In-  
person interview &  
**Focus Groups**



# Observation

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- Observe practice/behavior
- Want to see and listen
- Confirm fidelity of implementation

## **Best Practices**

- Have an observation guide
- Take field notes

Observation Prompts	Actions You See or Comments You Hear
<b>1) Engagement/Delivery</b> a. How are students engaging in the activities? b. What is their body language?	
<b>2) Learning</b> a. Are students expressing what they are learning? b. Is the environment conducive to learning? c. Are students forming new connections? Why? How?	
<b>3) Staff friendliness &amp; circulation</b> a. Warm tone of voice and respectful language b. Attentive and responsive c. One-on-one interactions with every student	
<b>4) Emotional safety</b> a. Respect to all students and insistence in mutual respect b. Staff address any incidents in which student(s) are made fun of or where there are misunderstandings	
<b>5) High expectations &amp; good challenge</b> a. All students are encouraged to try out new(er) skills b. Students seem challenged (in a good way) by the activities	
<b>6) Active, cooperative and experiential learning</b> a. Activities include both hands-on and cognitive processes (problem-solving, practicing skills, manipulation of ideas, creatively expressing ideas and building with materials exercises)	
<b>Other observations</b> a. Anything stand out from a positive or negative perspective? b. Any other observations?	

# Observation Guide: Elkus Ranch Summer Camp (June 25th – Aug. 26th, 2018)

Adapted from

Klink, J. (2014). *Field Day Observation Guide*. Environmental Resources Center, University of Wisconsin-Extension.

Carlson, S. P., Heimlich, J. E., Storksdieck, M., & Meyer, N. (2009). *Best practices for field days. Assessment tools and observation protocols*. University of Minnesota Extension.

# Steven Worker, UCCE 4-H/ Youth Development Advisor Observation

## Summary of Observations of Five 4-H Camps at Las Posadas 2016

By Steven Worker, 4-H Youth Development Advisor serving Marin, Sonoma, and Napa

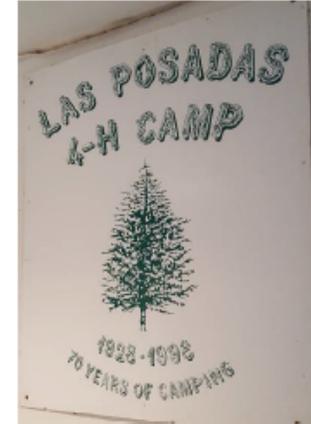
*Revised September 13, 2016*

**Purpose:** A summary of my observations and suggestions resulting from camp visits. I visited each week (Sonoma, Marin, and Napa counties) and observed and interacted with campers, teen staff, and adults; learned about camp activities, educational sessions, and flow of the schedule; got a general sense of the atmosphere of youth-adult interactions; learned about the Las Posadas facility; and started to determine what the needs for future camps might be.

**My background:** 4-H alumnus from Santa Barbara County where I served as a youth counselor and teen staff at Santa Barbara County's 4-H Camp Wahoo! In addition to my 10 years as a 4-H member & volunteer, I worked for 14 years at the State 4-H Office.

**Observations:** June 16 for Napa Week 1, July 1 for Sonoma Week 1, July 6 for Sonoma Week 2, July 14 for Marin, July 21 for Napa Week 2; approximately 10:00am to 3:30pm each visit.

**Summary:** I observed a positive atmosphere, vibrancy, and positive interactions between campers, teens, and adults at each camp. There was evidence of tremendous effort, time, and organization in the preparation and implementation of each week of camp by a dedicated group of adults and teens. Dozens of adults shared their decades at camp, which painted a clear picture of emotional investment in camp and the Las Posadas facility. I was impressed with the attention to health and safety, including the posting of 4-H Clover Safe Notes, ample fire protection at both campfire pits (hose and extinguisher), and 4 of 5 camps ensuring campers hands were clean (or sanitized) before meals.



# Surveys

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- To collect standardized information from large sample
- privacy is important or independent opinions and responses are needed
- When there are resource constraints (mainly time and money)

## Best practices

- Be clear about the purpose
- Be focused: only ask what you need to
- Establish reliability and validity of the questionnaire
- Follow design principles

# Response rate

*achieved in Extension....*

$$\frac{\# \text{ answered}}{\# \text{ contacted}} = \text{Response Rate}$$

*Archer, 2008*

- Meeting or Conference Evaluations - 57%
- Needs Assessments - 40%
- Output or Impact Evaluations - 51%
- Ballots - 62%

*Koundinya, Klink, Deming, Meyers, and Erb, 2016*

- Electronic follow up survey 10 month follow up: 33%
- Electronic follow up survey 2 month follow up: 51%
- Mailed surveys two months follow up: 39%
- Mailed surveys 10 months follow up: 31%

# Best Practices for Developing and Administering Surveys

(Dillman, Smyth, and Christian (2014))

# Online Surveys

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- ❑ Decide how the survey will be programmed and hosted
- ❑ Evaluate the technological capabilities of the sample
- ❑ See that questions display similarly across different devices and browsers
- ❑ Decide how many questions you want per page
- ❑ Have interesting and informative welcome and closing screens

## Online Surveys *continued*

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- ❑ Allow respondents to back up in the survey
- ❑ Consider *whether or not* to use graphical progress indicator
- ❑ Allow respondents to save and finish the survey later
- ❑ Use multiple contacts and vary the message
- ❑ Take steps to ensure that e-mails are not flagged as spam

# Mailed Surveys

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- ❑ Construct in booklet forms
- ❑ Decide question layout and order
- ❑ To the extent possible, personalize all contacts
- ❑ Create interesting and informative front and back cover pages

## Mailed Surveys continued

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- ❑ Take steps to ensure that mailings will not be mistaken for junk mail or marketing materials
- ❑ Strategically time all the contacts
- ❑ Assign an individual ID number to each sample member
- ❑ Send a token of appreciation with the survey request

**Betsy Karle,**  
UCCE Dairy  
Advisor

**Mail & Online  
Survey**



# Survey Incentives?!



**FIGURE 10.9** Examples of the effects of advance token incentives in mail surveys.

Population (year, survey director)	Sample Size	Experimental Groups	Response Rate
Oregon State University students who left the College of Agricultural Sciences without graduating (1997, Lesser)	133	\$0	28%
	130	\$2 Check	44%
	125	\$2 Bill	53%
Recent graduates of the College of Agricultural Sciences at Oregon State University (1998, Lesser)	129	\$0	59%
	135	\$2 Bill	67%
	141	\$5 Bill	81%
Oregon State University distance education students (1997, Lesser)	249	\$0	20%
	91	\$2 Check	25%
	92	\$2 Bill	32%
	87	\$5 Check	31%
	97	\$5 Bill	32%
Oregon State University June 1997 graduates (1998, Lesser)	231	\$0	52%
	234	\$2 Bill	65%
New residents of Washington who obtained a state driver's license (1994, Dillman)	368	\$0	44%
	357	\$2 Bill	63%
New residents in Iowa who obtained an Iowa state driver's license (1997, Lorenz)	317	\$0	42%
	313	\$2 Singles	70%
	313	\$2 Bill	73%
New residents of Idaho aged 50 to 70 (1996, Carlson)	526	\$0	53%
	526	\$2 Bill	72%
	524	\$300 Lottery	58%
Centre County Pennsylvania Residents (1998, Williams)	470	\$0	39%
	288	\$2 Bill	62%

Dillman, Smyth, and Christian (2014)

# Other Considerations

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- ❑ Keep the email/letter short and to the point.
- ❑ Use smaller paragraphs and sentences.
- ❑ Paper surveys: Have white space (less busy)
- ❑ Look up design/visualization principles (e.g.: Gamification Theory)

# Best Practices for the Initial Contact With Community

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- ❑ Tell that you are a UC ANR/UCCE person.
- ❑ Specify the purpose of the study.
- ❑ Tell that their participation would contribute to improvements in others lives and their society. However, do not use subordinating language.

(Dillman, Smyth, and Christian (2014))

# Examples of Subordinating Language

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*“For us to help solve the school problems in your community, it is necessary that you participate in this study.”*

*“Will you please be part of helping to solve the farming problems in your county? Your responses can assist the county farmers in fully understanding the issues facing the farms here.”*

- ❑ Establish trust.
- ❑ Ask for advice.
- ❑ Stress that the opportunities to contribute to this study are limited.
- ❑ Convey that others are also participating.
- ❑ When appropriate, use incentives as social exchange.

# Formatting Considerations

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- ❑ Keep the letter short and to the point.
- ❑ Use smaller paragraphs and sentences.
- ❑ Avoid using words such as 'survey', 'respond' in the subject line.
- ❑ Mobile-friendly.
- ❑ Paper surveys: Have white space (less busy)
- ❑ Look up design/visualization principles (e.g.: Gamification Theory)

# Protecting Human Subjects

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“A **human subject** is as a living individual about whom an investigator conducting research obtains (1) data through intervention or interaction with the individual; or (2) identifiable private information.”

Institutional Review Board = IRB

Core Principles: Respect, Beneficence, Justice

# Do you need IRB approval?

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- Do the human subjects represent a vulnerable population (e.g., youth, institutionalized individuals, or others whose participation may be considered involuntary)?
- Is it likely that participants' identities and/or contact information can be linked to their responses?
- Will evaluation results be published (in peer-reviewed journals)?

(Adapted from Ellen Taylor-Powell's *Building Capacity in Evaluating Outcomes*)

**Michelle Leinfelder-  
Miles,**  
UCCE Farm / Delta  
Crops Advisor

**Mixed Methods:**  
Document review,  
Survey using  
Clickers &  
Informal Interviews



# Ensuring Culturally Competent Needs Assessment

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## Cultural Competence:

*“a set of congruent behaviors, attitudes, and policies that come together in a system, agency, or among professionals and enables that system, agency, or those professionals to **work effectively in cross-cultural situations.**”*

[Cowles (2005)]

# Cultural Considerations

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## How might participant characteristics affect your needs assessment?

- Language
- Age
- Abilities: mental, physical, social
- Male-female interactions, communication styles, family relationships, decision-making styles
- Attitudes to conflict
- Concept of time
- Approaches to knowing and ways of knowing

## How might you make the following data collection methods more culturally sensitive?

- Written questionnaire
- Mailed survey
- Observations
- Interviews

Margaret  
Lloyd,  
UCCE  
Small Farms  
Advisor

On farm  
Observation  
& Interviews



# Writing Good Questions

# Some Guidelines (Ary, Jacobs, Razavieh, & Sorenson, 2006)

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- ❑ Make it simple, short, and direct.
- ❑ Phrase in a way that they can be understood by every respondent.
- ❑ Do not use abbreviations, slang, or acronyms.
- ❑ Phrase questions so as to elicit unambiguous answers. Quantify responses whenever possible.

- ❑ Avoid bias that may predetermine a respondent's answer
- ❑ Avoid questions that might lead to unstated assumptions
- ❑ Avoid leading questions, which imply a desired response
- ❑ Avoid questions that may elicit embarrassment, suspicion, or hostility in the respondent

- ❑ Avoid double-barreled questions.
- ❑ Make sure alternatives are exhaustive. Have "other" option where there are wide range of possibilities.
- ❑ Make sure the respondents have the information necessary to answer the questions.
- ❑ Have equal variation on both the sides of the rating scale.

- ❑ Ensure the question stem matches the answer choices.
- ❑ Decide the points on the scale based on the purpose.
- ❑ Give a timeframe/time range when necessary.
- ❑ Keep the questionnaire as short as possible (10-15 minutes).

# **Using the Findings to Focus and Develop Your Program**

# Priority Setting Filters

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## To help frame the needs/issues:

- Your job description
- ANR Strategic Vision 2025 and Condition Changes
- Any relevant mandates
- Resources available
- Level of support - local and institutional
- Other agencies/organizations
- Local perspectives and dynamics

## Priority Setting Filters continued

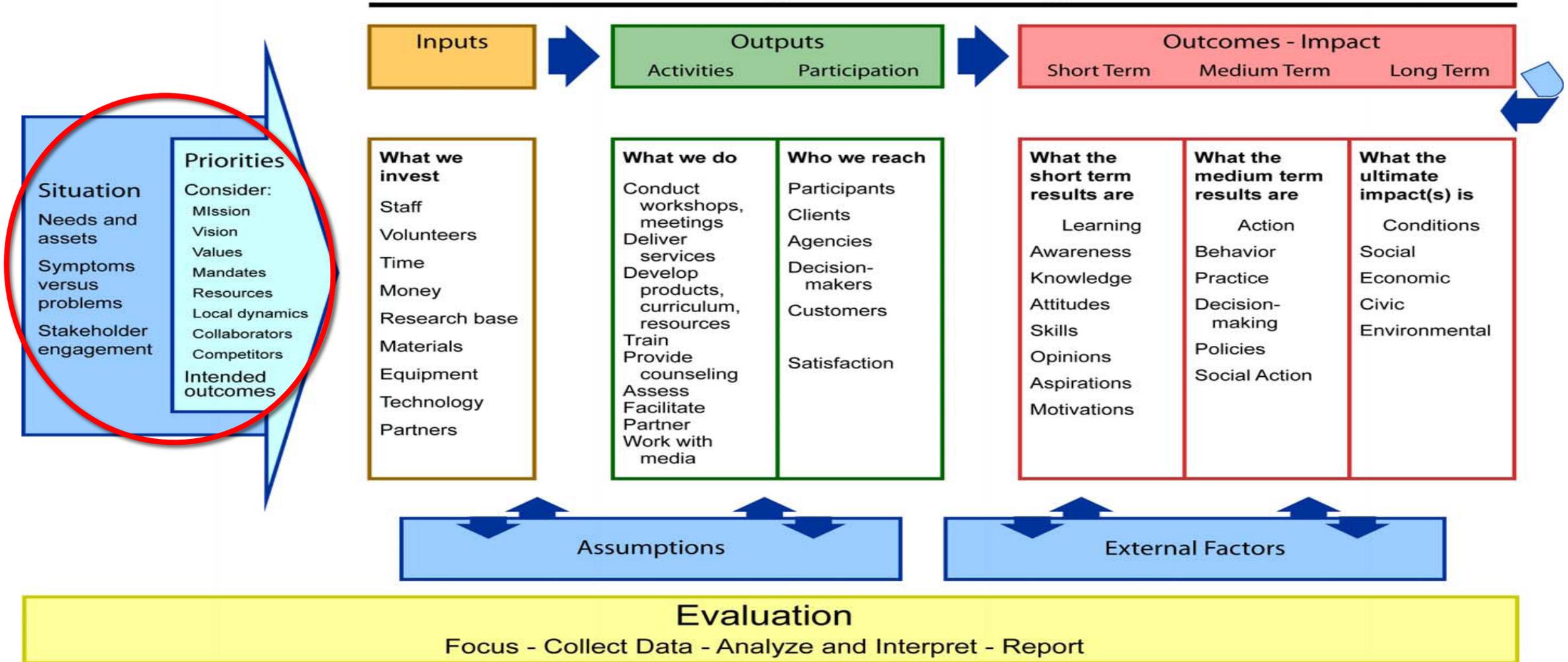
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- Percent audience affected
- Type of problem (technical, economic, or political)
- Frequency of the problem
- Extent of the problem - catastrophic, low loss, etc.
- Probability of successful resolution (i.e., probability of an economically feasible solution)

# Using Your Needs Assessment Findings

## Developing Focused, Relevant Programs

### Program Action - Logic Model



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# UCCE Needs Assessment Resources

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[http://ucanr.edu/sites/CEprogramevaluation/Needs\\_Assessment\\_Resources/](http://ucanr.edu/sites/CEprogramevaluation/Needs_Assessment_Resources/)

**THANK YOU!**