

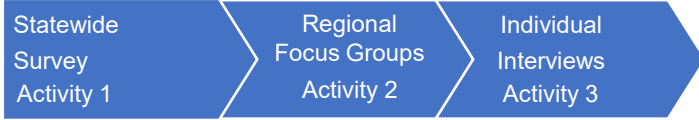
# Focus group prompts

1. Why did we think focus groups were the best method to answer our research question?

2. What kind of adaptations did we have to make while conducting focus groups to ensure we collected contextual and inclusive data?

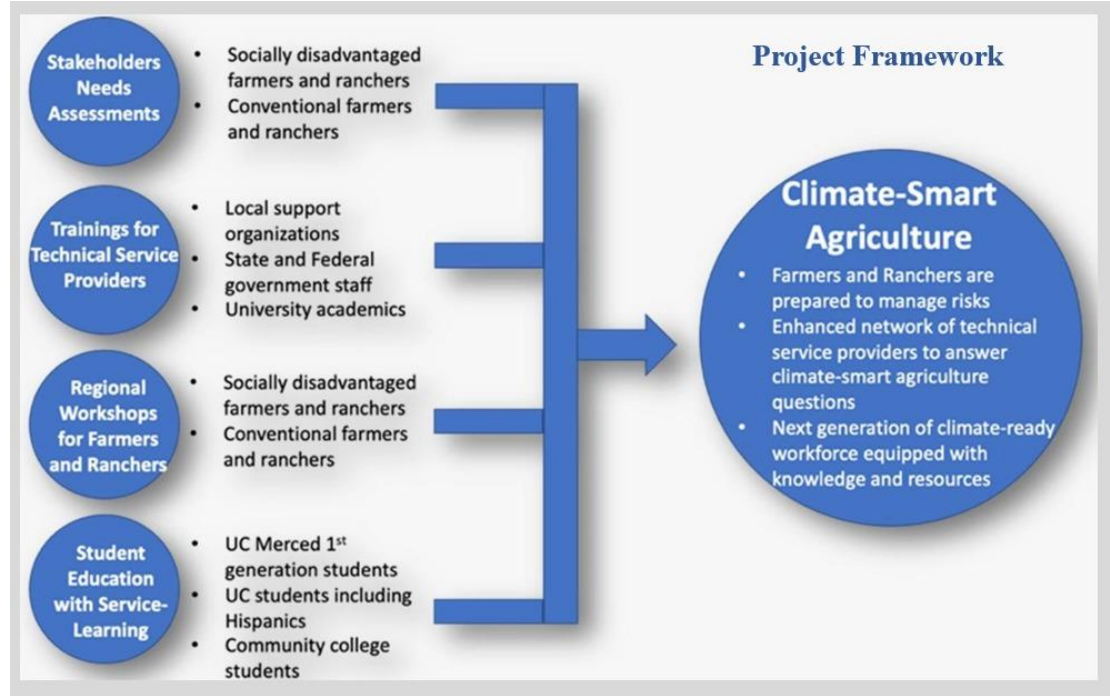
3. How did we analyze the data, and how did we use the findings?

# Case Study: Climate Smart Agriculture Educational Project



## Our Project Promise in Needs Assessment

1. Once we gather the breadth of information through online survey, we will organize regional focus groups with farmers and ranchers **to understand their needs better.**
2. For consistency, we propose a concise **version of an online survey questions** for questioning the focus group.



# Focus Group Guide 1: Procedural Items

Conducted **06** regional focus groups

1. 02 groups of 19 Hmong farmers in the Central Valley. **Merced & Fresno** [March 2023].
2. 01 group of 10 farmers + ranchers + TSPs in Southern California. **San Diego** [July 2023].
3. 01 group of 06 ranchers in Northern California. **Siskiyou County** [July 2023].
4. 02 groups of 15 ranchers during the **2023 California Cattlemen's Association** meeting [December 2023].

## Focus Group Questions

### Introduction About the Project

Welcome to the focus group interviews about farming operations in **San Diego!**

The **purpose** of this focus group is to understand growers perspectives on climate-related impacts, concerns, weather prediction/decision support tools, and information needs related to climate and extreme weather conditions. Results from this interview will be used to develop educational programs and resources to support the adoption of climate adaptation practices and climate-smart practices.

Your participation in this focus group is voluntary, and your responses will be kept confidential within the research team. Your responses will be aggregated and will be shared in reports, academic papers, and presentations. There are no foreseeable risks from participating in this group interviews.

We will be asking you a set of questions over the next **60 minutes, after which we will have an information session.** There is no right or wrong answer, only your opinion!

### Focus Group Rules

1. You may not have any input on a question that we ask, and that is fine. You do not have to answer every question if you do not have the answers.
2. Please be respectful of everyone's opinions. The information you provide will be kept confidential within the USDA/NIFA project team. Any written reports will NOT include names and will only include aggregate (combined) results.
3. If someone is speaking, please hold your comments so we only have one person talking at a time.
4. Please be honest so that this exercise is a good use of everyone's time.

### Verbal Consent

Are you willing to participate in our focus group interviews?

1. Yes: Remain seated and we continue.
2. No: You are welcome to sit aside of the group interviews and wait for the information session.

# Focus Group Guide 2: Question Prompts

## Introductions around the table

### 1<sup>st</sup> round

Who you are, where you live, what you raise, how long you have been a farmer.

### 2<sup>nd</sup> round

Surface vs. groundwater (or other water-related questions)

- Do you use private wells for water?
- Do you use surface or groundwater?
- Do you have access to or know if you have access to surface or groundwater?

## Climate-Related Impacts, Adaptations, and Approaches

### 1. WILDFIRE

#### a. Impact of wildfire.

- Have you experienced increasingly severe wildfire impacts?
- How has severe wildfire impacted your farm operations (product)?

#### b. Strategies.

- What are you doing now because of the extreme wildfire that you did not do before?

#### c. Need for information.

- What additional information do you need based on extreme wildfire?

### 2. DROUGHT

#### a. Impact of drought

- Have you experienced droughts due to high temperatures and unreliable/unpredictable rainfall?
- How has drought impacted the water availability/source for your farm or farm operation(s)?
- How has drought impacted your farming practices (products)?

#### b. Strategies.

- What are you doing now because of the drought that you did not do before?

#### c. Need for information.

- What additional information do you need based on drought?

### 3. FLOODING

#### a. Impact of flooding

- Have you experienced flooding, due to too much rain, or unpredictable rain?
- How has this flooding impacted your farm operation (products)?

#### b. Strategies.

- What are you doing now because of flooding that you did not do before?

#### c. Need for information.

- What additional information do you need on flooding?

### 4. HEAT

#### a. Impact of heat

- Have you experienced extreme heat?
- How has extreme heat impacted your farm operations (products)?

#### b. Strategies

- What are you doing now because of extreme heat that you did not do before?

#### c. Need for information.

- What additional information do you need based on extreme heat?

### 5. OTHER Climate or Weather Related Challenges

- Are there any other climate and/or weather challenges you have experienced on your farm (i.e. dust, wind, freezes/chill/smoke)?
- What challenges do they present for your farming operations?

### 6. FUTURE

- What are the most challenging climate and/or weather issues you see for farmers in the next 10 years?

## Barriers and Resources for Adaptation

We have talked about some extreme weather events such as wildfire, drought, flooding, heat, etc. We understand why adaptation and climate-smart practices are important to reduce the impact of these extreme events.

- When you think about these practices “adaptations” and/or others you would like to make to your farming operation(s), what are some barriers/issues you face when trying to make these changes?

## Decision Support Tools (DSTs)

This project has the capacity and resources to build prediction tools such as weather and climate forecasts and make them available to you (e.g., predictions about rainfall, frost, heat, pests, etc.).

- When you make decisions about what to plant or other decisions about your farming operation(s), what kinds of weather forecast tools do you use?
- If you want to plan your planting for next year, what kind of information would you need from the weather and climate forecast tools or what would you want these tools to inform you of?

## Needs for Climate Change Information

- What types of topics and information would you like to see in extension educational events or materials in climate-smart agriculture?
- What methods do you want to receive information related to climate change and climate-smart agriculture programs and practices?

*Thank you for your interest and time in the discussion.*

## 2. What kind of adaptations ....

### 1. Initial relationship building.

- Member introduction
- Provided updates of the survey (if any) and promise data use

### 2. Active listening

- Respectively manage the dormant voice
- Call-on silent member to say something
- Respond to clarifications
- Intervene to control overly discussions

### 3. Use of local language for interest groups

- Hmong-speaking colleagues [Lilian Thaoxaochay and Vong Moua]

**Pathways to Climate-Smart Agriculture**  
*Project Update*  
**Ranching & Rangelands**

*Building research and extension programs to address challenges, opportunities, and information needs related to variable and changing weather and climate conditions*

*Stakeholder surveys*

- Online survey closed spring 2023
- 109 ranchers surveyed
  - 68% multi-generational
  - 32% first-generation
- Survey and focus group results will be used to develop educational programs and resources to support adoption of best practices

*Student education*

- Learnign opportunities for student through UC Merced and UC Davis courses
- Building next-generation workforce

*Partners*

California Efficiency Institute (CEI) | California Climate & Agriculture Network (CalCAN) | NRCS | U.S. Department of Agriculture (USDA) | American Farmland Trust

*Workshops*

- Coming this Fall!
- Technical service provider trainings
- Regional rancher workshops

*...and more!*

NIFA | UNIVERSITY OF CALIFORNIA MERCED | UC DAVIS UNIVERSITY OF CALIFORNIA | USDA Climate Hubs | U.C.

## Adaptations ....

### 4. Purposive selection

- Ranchers in northern California
- [General – San Diego]
- [Target – Hmong]

### 5. Sitting arrangements

- Square form – arrange tables

### 6. Recording and notetaking

- Use voice recorders – consent
- Multiple members take notes – methodological/field memos



## UCCE Yreka – Sisikyou

- 06 ranchers: 03 men and 03 women; 02 first-generation, 03 multi-gen, and 01 limited-resource.
- All **purposively selected** by County Livestock Advisors

NB: 05 facilitators

## San Diego Farm Bureau

- 10 participants consisted of 04 farmers, 02 ranchers, and 04 TSPs extension providers
- Recruited through **Qualtrics** shared in our extension association networks.

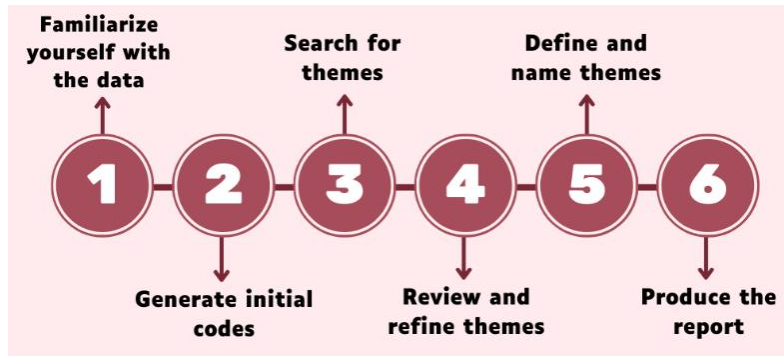
NB: 04 facilitators; 07 listeners

## 3a). How did we analyze the data?

# Thematic Analysis

### Initial steps

1. Immediate post focus group meeting
  - – small team
2. Collection of field memos
3. Data transcription/audios
4. Thematic analysis process



**Note:** Most themes were pre-determined by our design of the focus group guide [Q1-4]. However, new information or themes were uncovered from Qn 5-11.

4. **HEAT**
  - a. **Impact of heat**
    - i. Have you experienced extreme heat?
    - ii. How has extreme heat impacted your farm operations (products)?
  - b. **Strategies**
    - i. What are you doing now because of extreme heat that you did not do before?
  - c. **Need for information.**
    - i. What additional information do you need based on extreme heat?
5. **OTHER Climate or Weather Related Challenges**
  - i. Are there any other climate and/or weather challenges you have experienced on your farm (i.e. dust, wind, freezes/chill/smoke)?
  - ii. What challenges do they present for your farming operations?
6. **FUTURE**
  - i. What are the most challenging climate and/or weather issues you see for farmers in the next 10 years?

### Barriers and Resources for Adaptation

We have talked about some extreme weather events such as wildfire, drought, flooding, heat, etc. We understand why adaptation and climate-smart practices are important to reduce the impact of these extreme events.

7. When you think about these practices “adaptations” and/or others you would like to make to your farming operation(s), what are some barriers/issues you face when trying to make these changes?

### Decision Support Tools (DSTs)

This project has the capacity and resources to build prediction tools such as weather and climate forecasts and make them available to you (e.g., predictions about rainfall, frost, heat, pests, etc.).

8. When you make decisions about what to plant or other decisions about your farming operation(s), what kinds of weather forecast tools do you use?
9. If you want to plan your planting for next year, what kind of information would you need from the weather and climate forecast tools or what would you want these tools to inform you of?

### Needs for Climate Change Information

10. What types of topics and information would you like to see in extension educational events or materials in climate-smart agriculture?
11. What methods do you want to receive information related to climate change and climate-smart agriculture programs and practices?

*Thank you for your interest and time in the discussion.*

# Sample Results – Hmong Farmers

Main themes on climate-related impacts:

**Temperature, Drought, and Rainfall.**

## Temperature

**A Merced farmer reported:** “Hot weather has ‘burned’ my plants and vegetables, ... plants don’t emerge at the seedling stage. For example, bell peppers are burned/brown on the skin, and cilantro and green onions do not emerge from seeds or bolt early.”

**A Fresno farmer recounted:** “My lemon grass leaves wilt, burn, and/or are stunted due to extreme heat.” Also, “during summer, my tomatoes are splitting.”

Extreme heat exerts stress on crops, leading to limited crop production and reductions in crop quality.

How Hmong farmers want the climate adaptation information to be disseminated to them.

1. In-person teaching,
2. Joint classroom, and
3. Hands-on activities – perhaps watch videos together.”

**However, one farmer said:**

“I would not want to watch videos online by myself.”



1<sup>st</sup> workshop for Growers in San Joaquin Valley, March 22, 2023

# Sample Results – Ranchers

## Adaptation Practices

Including acquiring small leases, rotational grazing, livestock pass, reducing feeding hay [expensive], culling, sharecropping, and diversifying income.

On **land issues**, R2 said, “We have dealt with that by trying to take on small chunks of leases around us. So, our neighbor had 30 acres, dad went talked to him offered him [money] to get some extra feed.”

Limited Resource

R5 embraces large-scale rotational grazing... “a **specific ranch has now become just our winter operation... for two years now and that has been beneficial in getting a lot more regrowth.**”

1<sup>st</sup> Generation

## Extension Methods - Ranchers

Ranchers preferred in-person, on-ranch workshops and case studies. **NOT Conferences!**

R3 mentioned that ranchers need to “open their ranches for people to come on and see what your problems are... how you are taking care of the landscape... that is what the legislators in [Sacramento] remember.”



August 21, 2024. Event designed for irrigated pasture managers.  
Photo credit: UCCE Livestock Team: Leslie, Tracy and Grace.

## 3b). How did we Utilize the data?

Results are currently informing CSA extension program development for farmers, ranchers, TSPs, and students

### Project Implementation Through Regional Extension and Outreach Workshops



Merced: **Tree Nut**, March 2023



Tulare: **Tree Nut & Fruit**, March 2024



Monterey: **Grapevine, Berry & Vegetable**, March 2024



Sierra Valley: **Ranchers**, Aug 2024



UC **Merced & Merced College**: March 2025



USDA Climate Hub Davis, **TSP**: May 2024

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