

# DRBC's Water Resources Resilience Plan: **Phase 1 Progress Report**

---

**December 16, 2025**

**Advisory Committee on Climate Change**

Sarah Beganskas, Ph.D.

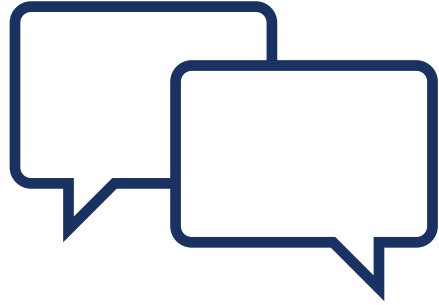
Amanda Khalil



**Delaware River Basin Commission**

DELAWARE • NEW JERSEY  
PENNSYLVANIA • NEW YORK  
UNITED STATES OF AMERICA

This content was for discussion at the December 16, 2025, ACCC Meeting. Content may not be published or re-posted in whole or in-part without the DRBC's permission.



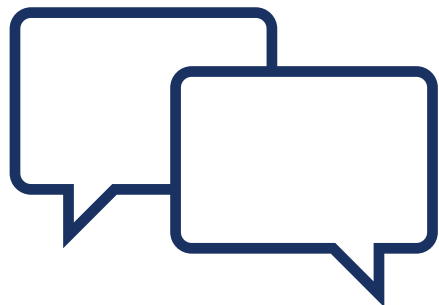
Stakeholder engagement results



Water resource assets and  
climate change hazards



New details for Phase 2 workplan



## Stakeholder engagement results



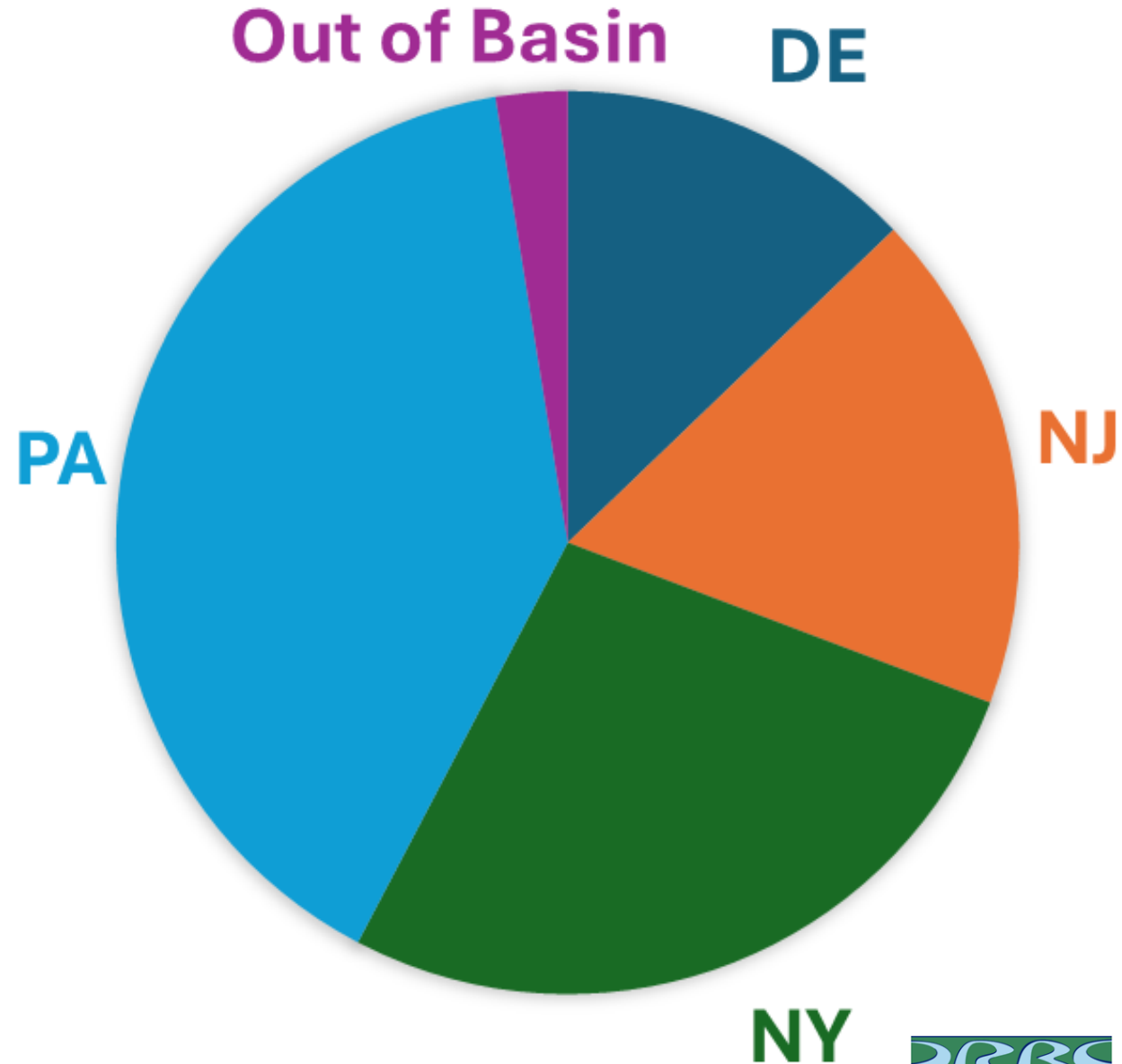
Water resource assets and  
climate change hazards



New details for Phase 2 workplan

Over 150 people engaged during Phase 1 from all four Basin states.

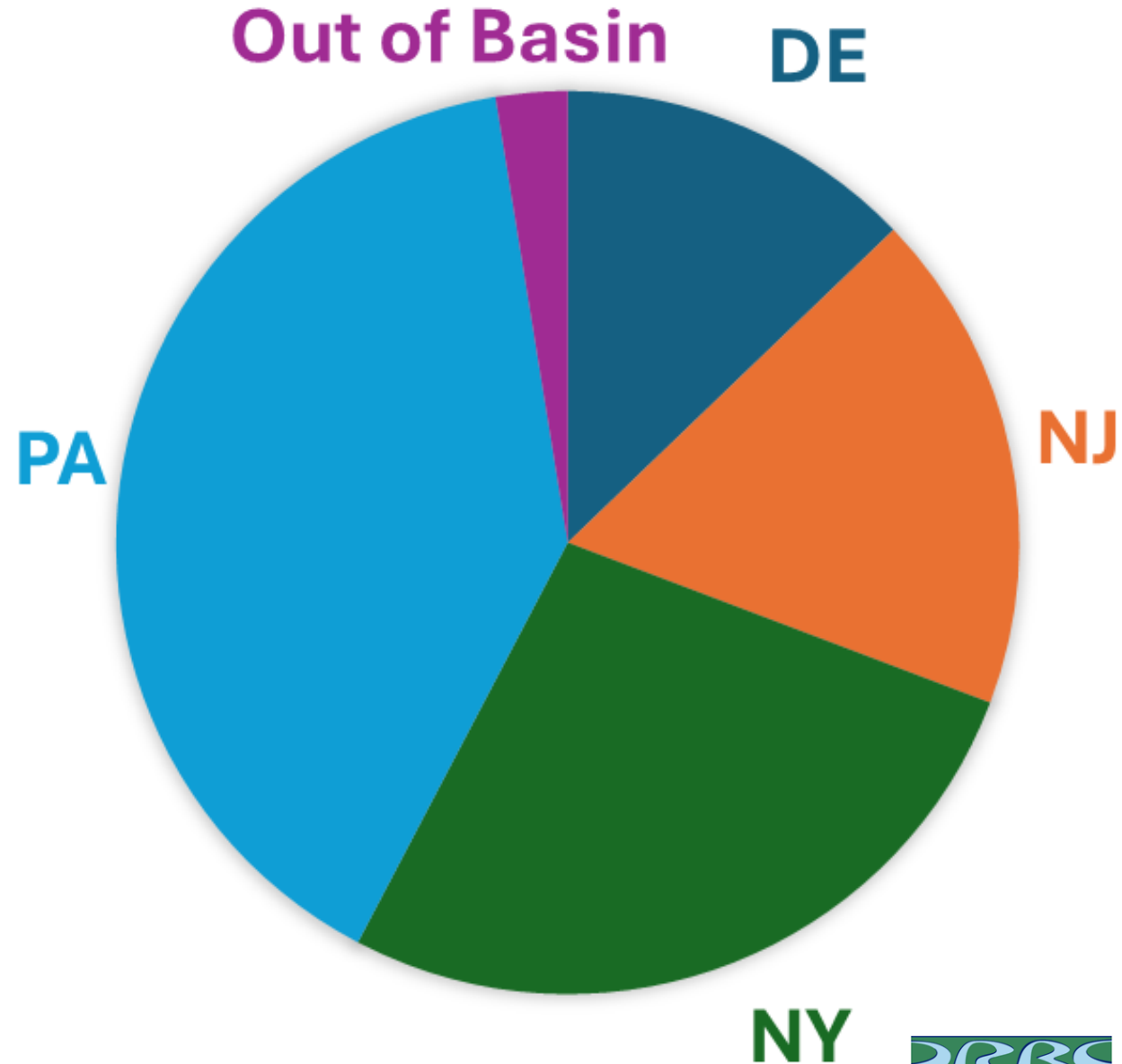
- **121** people participated in **13** listening sessions
- **47** responses to online comment card



Over 150 people engaged during Phase 1 from all four Basin states.

**We heard from:**

State government, non-profits, Basin residents, public utility, academia, private utility, faith-based groups, federal government, youth, community groups



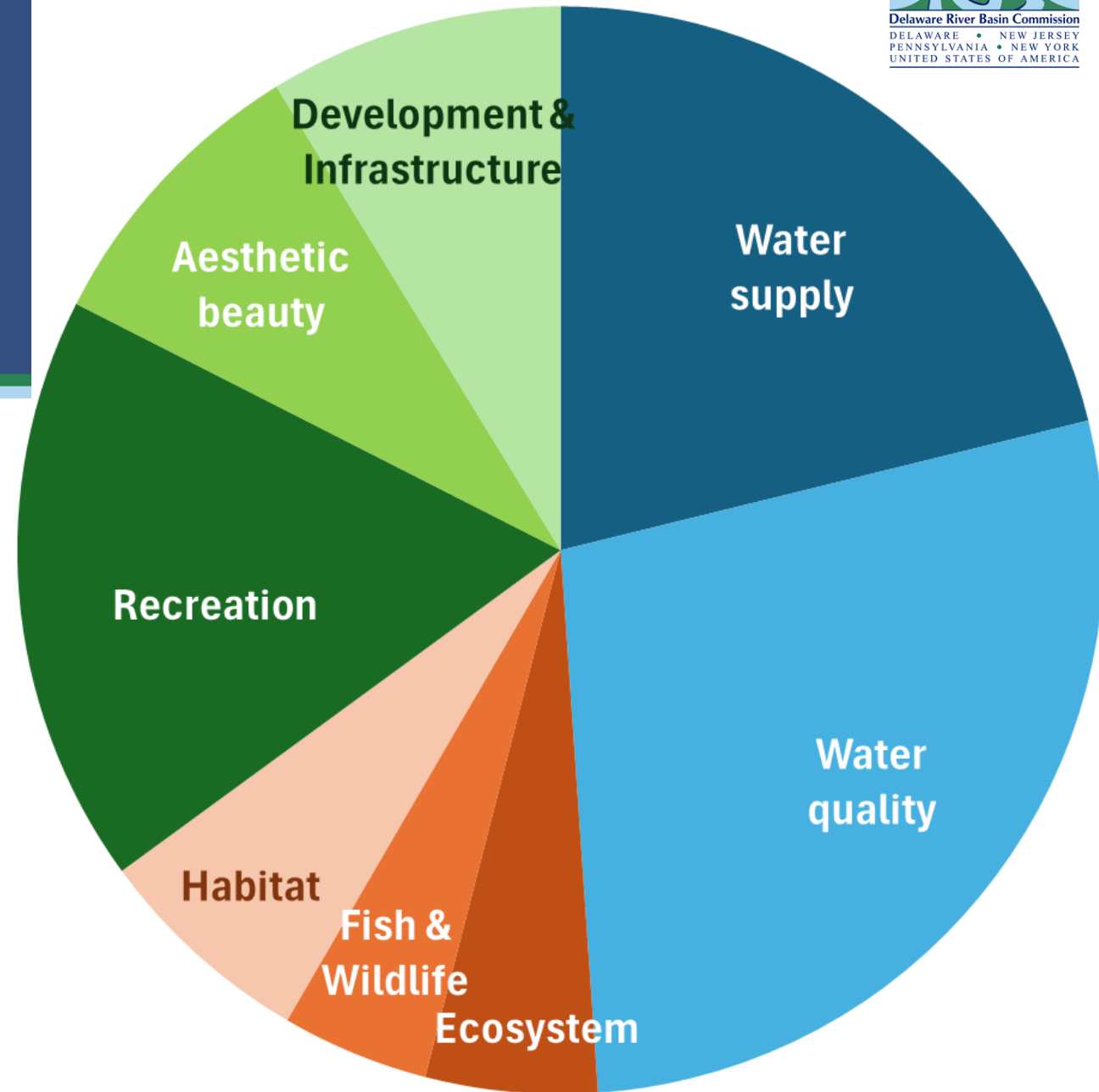
“ I just enjoy [the  
Delaware River’s]  
existence and beauty...

Many stakeholders noted the Basin’s **aesthetic beauty**, partake in a range of **recreational activities**, and acknowledged the River as an important **source of water**.

# Stakeholders' responses communicated **what they value**

## PHASE 1 GOAL

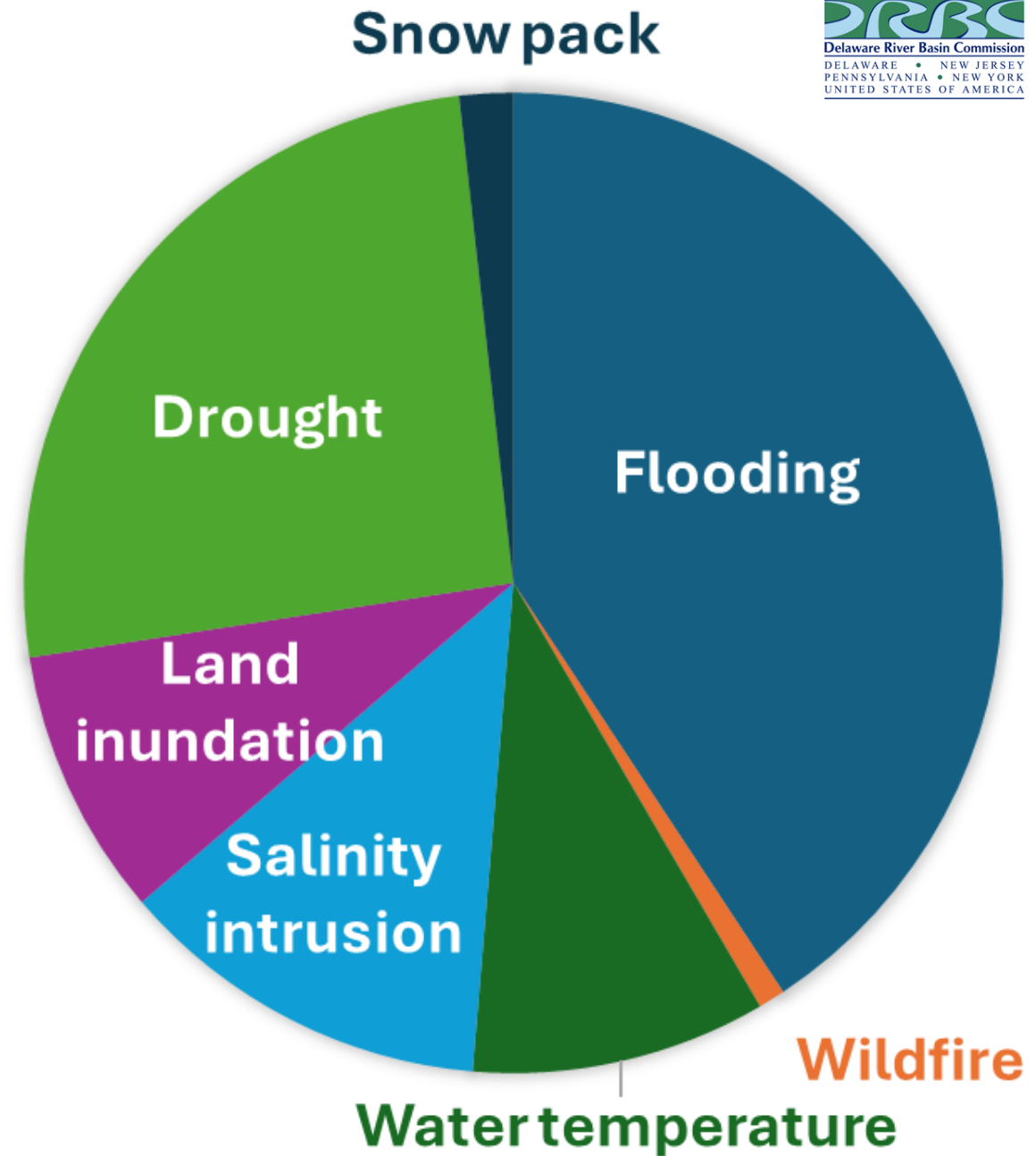
Ensure the scope of the WRRP considers the breadth of public and partner concerns about climate change and water resources.





# Flooding and drought were of greatest concern

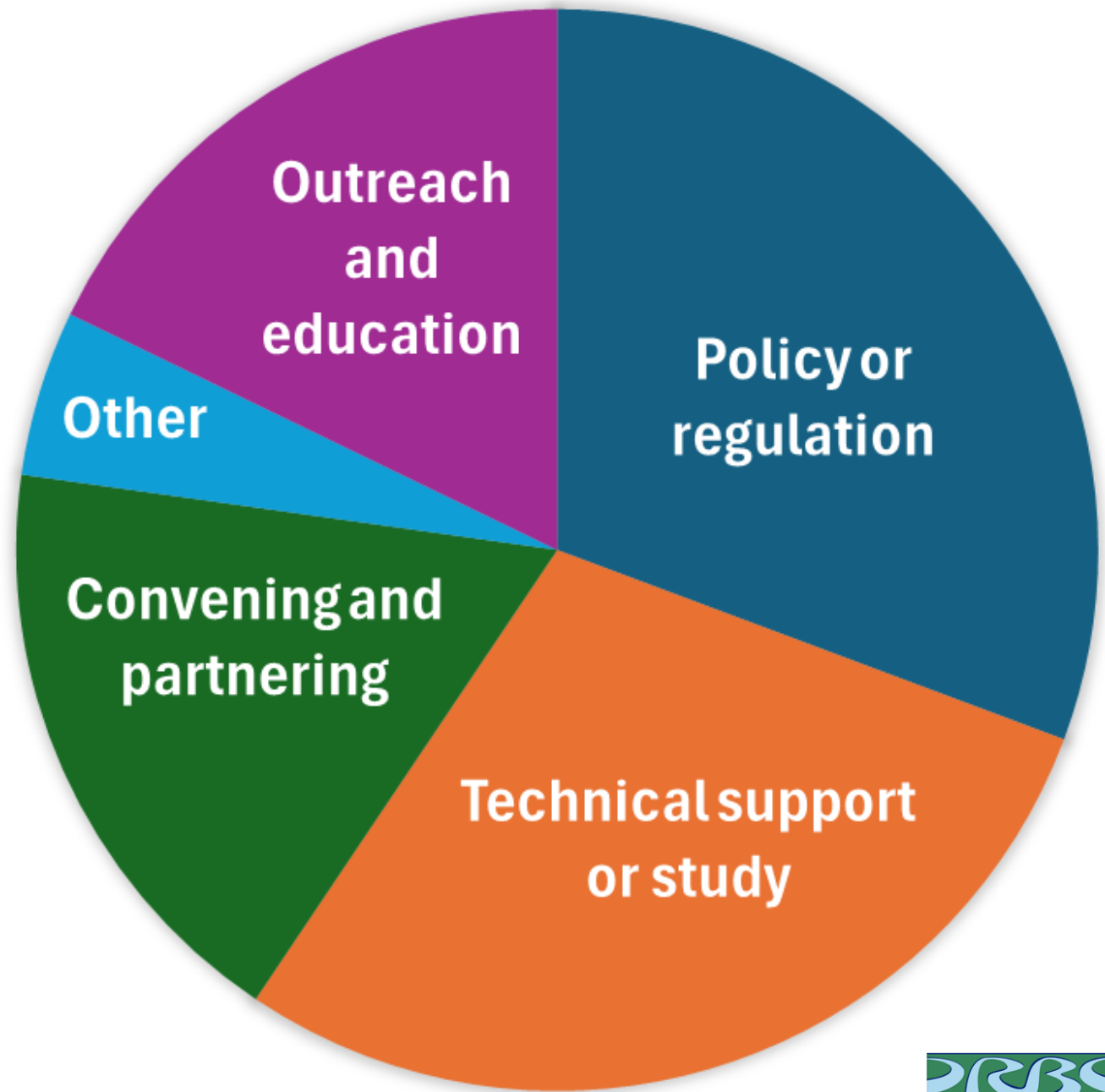
- Reflects public knowledge as well as their concerns
- Other challenges mentioned (for consideration in Phase 3):
  - Over development, deforestation
  - PFAS and other contaminants
  - Non-point source pollution
  - Aging infrastructure
  - Freshwater salinization
  - Affordability
  - Public perception
  - Data centers
  - Dredging
  - Hydraulic fracturing





# Stakeholder feedback reflects **DRBC's primary roles**

- Phase 2 will recommend specific actions and activities in these categories
- We will consider all the comments and ideas that we've heard
- **Thank you for sharing your thoughts!**



# Stakeholder feedback reflects **DRBC's** **primary roles**

- Phase 2 will recommend specific actions and activities in these categories
- We will consider all the comments and ideas that we've heard
- **Thank you for sharing your thoughts!**

DELAWARE RIVER  
BASIN COMMISSION'S

# WATER RESOURCES RESILIENCE PLAN



STAY UPDATED:  
**[TinyURL.COM/DRBCWaterPlan](https://tinyurl.com/DRBCWaterPlan)**





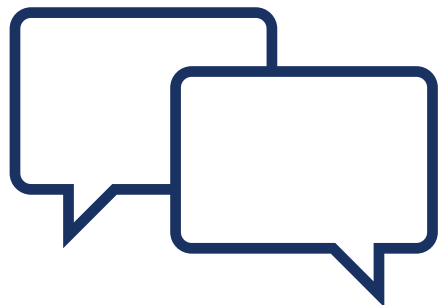
**Stakeholder engagement helped  
clarify shared values and concerns**



Water resource assets and  
climate change hazards



New details for Phase 2 workplan



Stakeholder engagement helped clarify shared values and concerns



**Water resource assets and climate change hazards**



New details for Phase 2 workplan

# The WRRP will focus on protecting and managing **three Basin-wide water resource assets**



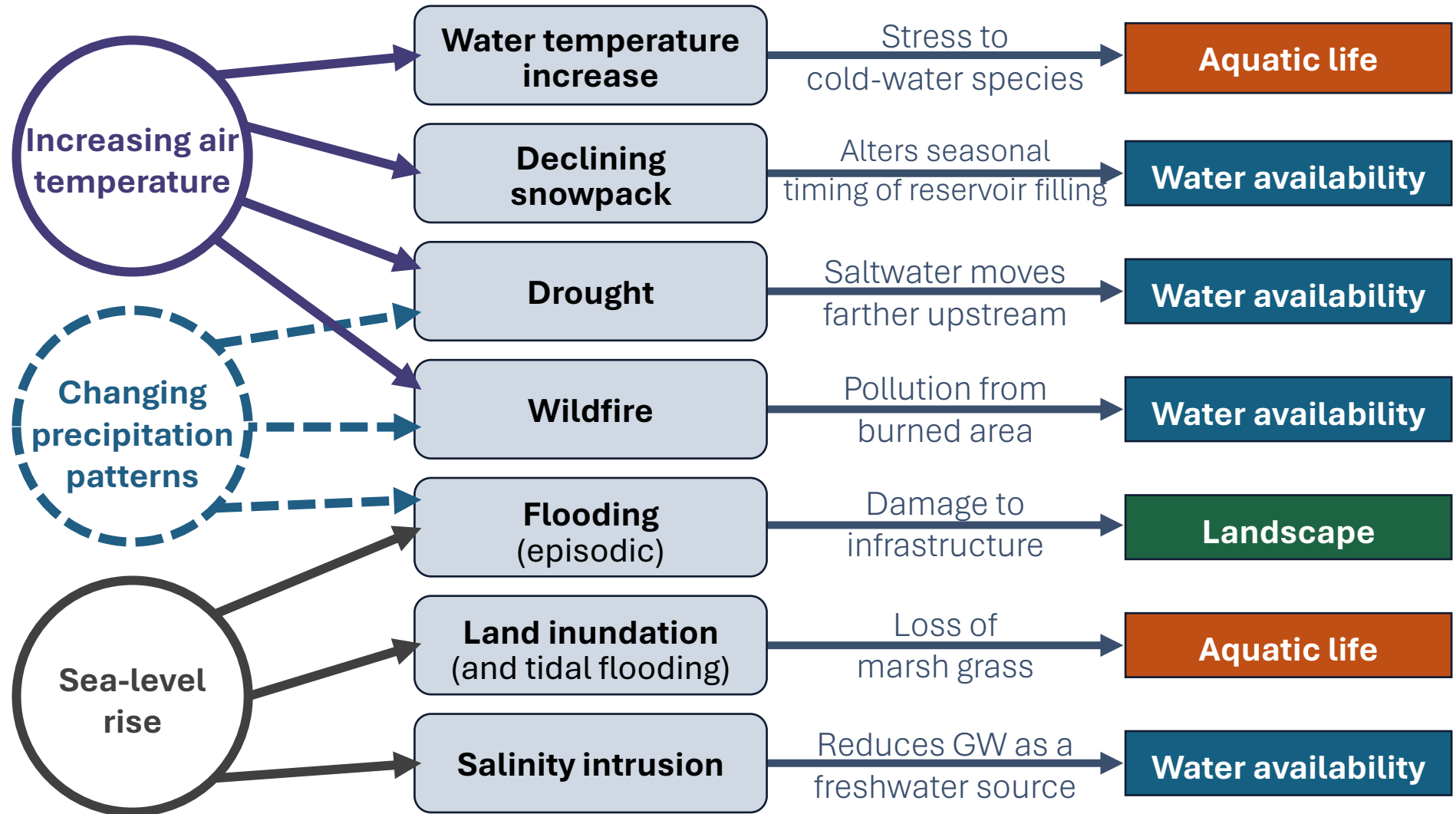
<b>WATER AVAILABILITY</b>	Water supply (streamflow, groundwater, reservoirs) and water quality
<b>AQUATIC LIFE</b>	All species that live in and/or rely on water bodies in the Basin
<b>LANDSCAPE</b>	Wildlife habitat, recreation areas, and human development

- This list reflects stakeholder input: What we **collectively value** about water resources in the Basin
- Each water resource asset includes many **inter-connected components**

## CLIMATE CHANGE DRIVERS

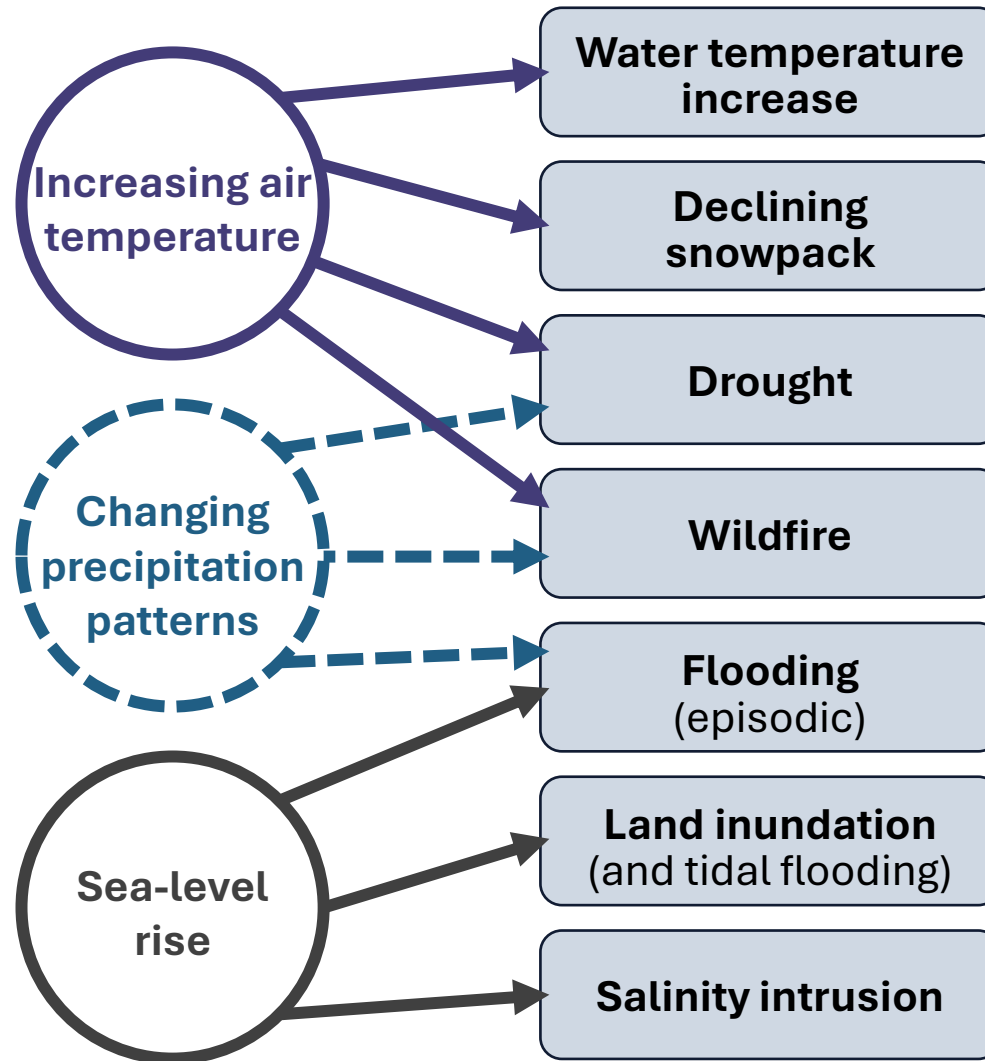
## HAZARDS TO WATER RESOURCES

## EXAMPLE CONSEQUENCES TO WATER RESOURCE ASSETS



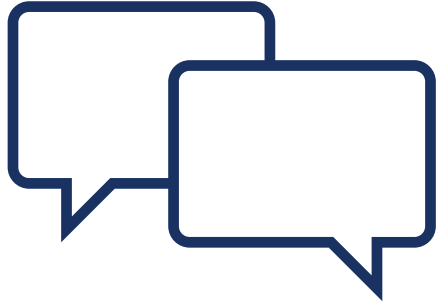
## CLIMATE CHANGE DRIVERS

## HAZARDS TO WATER RESOURCES



- This list aligns with specific climate concerns that stakeholders raised.
- We will also consider compounding effects of multiple simultaneous hazards.





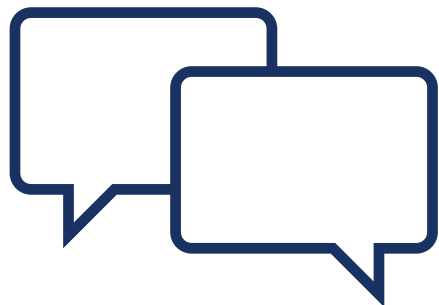
Stakeholder engagement helped clarify shared values and concerns



**Phase 2 will focus on:**  
**3 water resource assets**  
**7 climate change hazards**



New details for Phase 2 workplan



Stakeholder engagement helped  
clarify shared values and concerns



Phase 2 will focus on:  
3 water resource assets  
7 climate change hazards



**New details for Phase 2 workplan**

**Scenario  
Planning**



**Vulnerability  
Assessment**



**Gap Analysis**



**Recommended  
Actions and  
Activities**

## Scenario Planning

## Vulnerability Assessment

## Gap Analysis

## Recommended Actions and Activities

- Include this section in Phase 1
- Future planning horizons
  - Mid-century: 2050 (2035–2065)
  - End-century: 2085 (2070–2100)
- Scenarios
  - Moderate emissions: RCP 4.5 / SSP2-4.5
  - High emissions: RCP 8.5 / SSP5-8.5
- Data sources to evaluate each hazard
  - Water temperature, declining snowpack, drought: Temperature and precipitation projections from IPCC
  - Salinity intrusion and land inundation: NOAA SLR predictions
  - Flooding: IDF tool for DRB (NRCC)
  - Wildfire: Climate Toolbox Future Scenarios tool (NPS)

## Scenario Planning

## Vulnerability Assessment

## Gap Analysis

## Recommended Actions and Activities

- Include this section in Phase 1
  - Future planning horizons
    - Mid-century: 2050 (2035–2065)
    - End-century: 2085 (2070–2100)
  - Scenarios
    - Moderate emissions: RCP 4.5 / SSP2-4.5
    - High emissions: RCP 8.5 / SSP5-8.5
  - Data sources to evaluate each hazard
    - Water temperature, declining snowpack, drought:  
Temperature and precipitation projections from IPCC
    - Salinity intrusion and land inundation: NOAA SLR predictions
    - Flooding: IDF tool for DRB (NRCC)
    - Wildfire: Climate Toolbox Future Scenarios tool (NPS)
- CMIP-5 or  
CMIP-6 data  
available
- Currently available  
with CMIP-5 data only.

Scenario  
Planning

Vulnerability  
Assessment

Gap Analysis

Recommended  
Actions and  
Activities

- WRRP, Basin-wide perspective: **How and where is each water resource asset most vulnerable?**
  - Traditional vulnerability assessment: Given thousands of unique assets, which are most vulnerable?
- Steps to complete for each water resource asset
  1. **Which hazards apply** to this water resource asset?
  2. **Quantify the expected changes to this asset** for each planning horizon and scenario, including compound effects of multiple hazards.
    - Ex: In 2050, with SSP2-4.5, we expect X to Y meters of SLR.
  3. **Characterize the impacts of those expected changes:** What does this mean for this water resource asset?

Scenario  
Planning

Vulnerability  
Assessment

Gap Analysis

Recommended  
Actions and  
Activities

Steps to complete for each water resource asset

**1. Choose a goal outcome for this water resource asset.**

- The goal will consist of several target conditions.

**2. Define a pathway:** How can we advance toward this goal?

- Knowledge: What additional info would help?
- Action: What can we do?
- Equity: How can we ensure that all water users are protected?

**3. Identify any gaps that exist in the pathway.** Review what DRBC and partners are already doing to move toward this goal.



**Scenario  
Planning**



**Vulnerability  
Assessment**

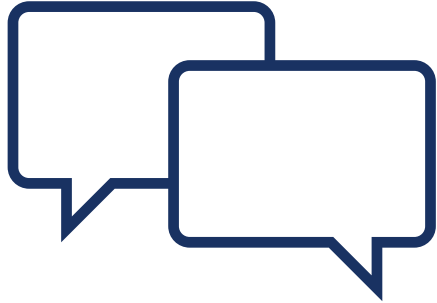


**Gap Analysis**



**Recommended  
Actions and  
Activities**

- How can DRBC contribute to closing these gaps?
  - Prioritize among specific actions identified in the gap analysis.
- Identify where partners are better poised to step in.



Stakeholder engagement helped  
clarify shared values and concerns



Phase 2 will focus on:  
3 water resource assets  
7 climate change hazards



**We have a clear workplan for  
completing Phase 2**

# PRELIMINARY TIMELINE

## Next steps



<u>Activities and Milestones</u>	
<b>January 2026</b>	<ul style="list-style-type: none"><li>• Send final draft of Phase 1 report to ACCC for review</li><li>• DRBC staff begin Phase 2</li></ul>
<b>February 2026</b>	<ul style="list-style-type: none"><li>• ACCC meeting on 2/17:<ul style="list-style-type: none"><li>○ Discuss committee feedback on Phase 1 report</li><li>○ DRBC staff presents on starting Phase 2</li><li>○ DRBC staff presents on two climate change reports</li></ul></li></ul>
<b>~March 2026</b>	<ul style="list-style-type: none"><li>• Publish Phase 1 report</li></ul>

# Discussion questions

---

1. *Are the water resource assets and climate change hazards lists complete? What adjustments, if any, would you recommend?*
2. *Do you have guidance on using the latest projections vs. consistency and expediency of the planning process?*
3. *How have you coded and analyzed qualitative stakeholder input?*
4. *What kind of time frame have you needed for the type of work we have planned in Phase 2?*
5. *What other questions or feedback do you have?*

## Image Credits

Slides 2, 3, 11, 12, 16, 17, 24: Water Drop by Romaldon from Noun Project (<https://thenounproject.com/browse/icons/term/water-drop>) CC BY 3.0



# Discussion questions

1. *Are the water resource assets and climate change hazards lists complete? What adjustments, if any, would you recommend?*

<b>WATER AVAILABILITY</b>	Water supply (streamflow, groundwater, reservoirs) and water quality
<b>AQUATIC LIFE</b>	All species that live in and/or rely on water bodies in the Basin
<b>LANDSCAPE</b>	Wildlife habitat, recreation areas, and human development

- Climate change hazards to water resource assets:
- Flooding** (episodic)
  - Drought**
  - Salinity intrusion**
  - Water temperature increase**
  - Declining snowpack**
  - Wildfire**
  - Land inundation** (and tidal flooding)



# Discussion questions

---

2. *Do you have guidance on using the latest projections vs. consistency and expediency of the planning process?*

## Data sources to evaluate each hazard:

- Water temperature, declining snowpack, drought:  
Temperature and precipitation projections from IPCC
  - Salinity intrusion and land inundation: NOAA SLR predictions
  - Flooding: IDF tool for DRB (NRCC)
  - Wildfire: Climate Toolbox Future Scenarios tool (NPS)
- } CMIP-5 or CMIP-6 data available
- } Currently available with CMIP-5 data only.

# Discussion questions

---

3. *How have you coded and analyzed qualitative stakeholder input?*
4. *What kind of time frame have you needed for the type of work we have planned in Phase 2?*
5. *What other questions or feedback do you have?*

## Image Credits

Slides 2, 3, 11, 12, 16, 17, 24: Water Drop by Romaldon from Noun Project (<https://thenounproject.com/browse/icons/term/water-drop>) CC BY 3.0

