



Advancing MRV in California Agriculture

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Science Advisory Panel on Resilient and Sustainable Agriculture
California Department of Food and Agriculture
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Overview

- Introduction
- Understanding MRV
- Convening Survey
- MRV Data workflow
- Barriers/Opportunities
- Producer Benefits
- Key Priorities



Monterey Bay, California, USA

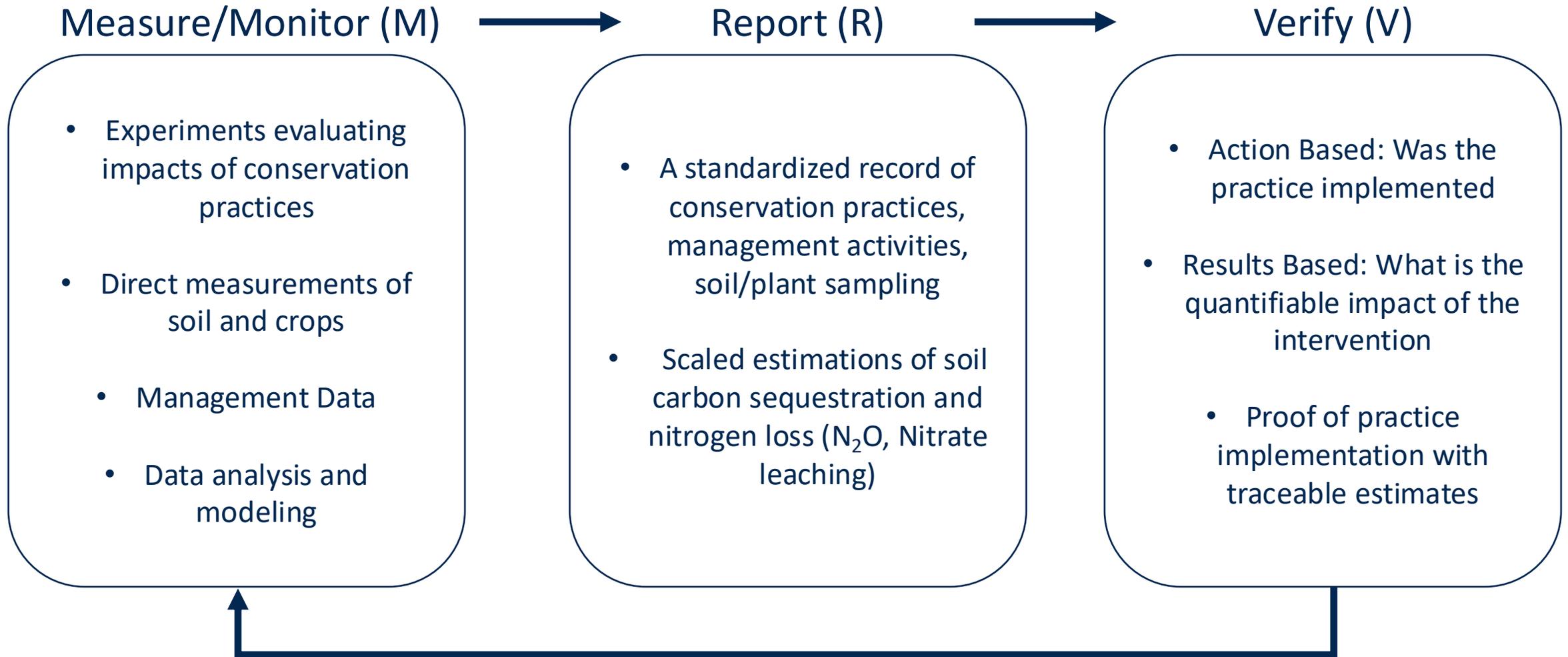
Horwath Biogeochemistry and Nutrient Cycling Lab

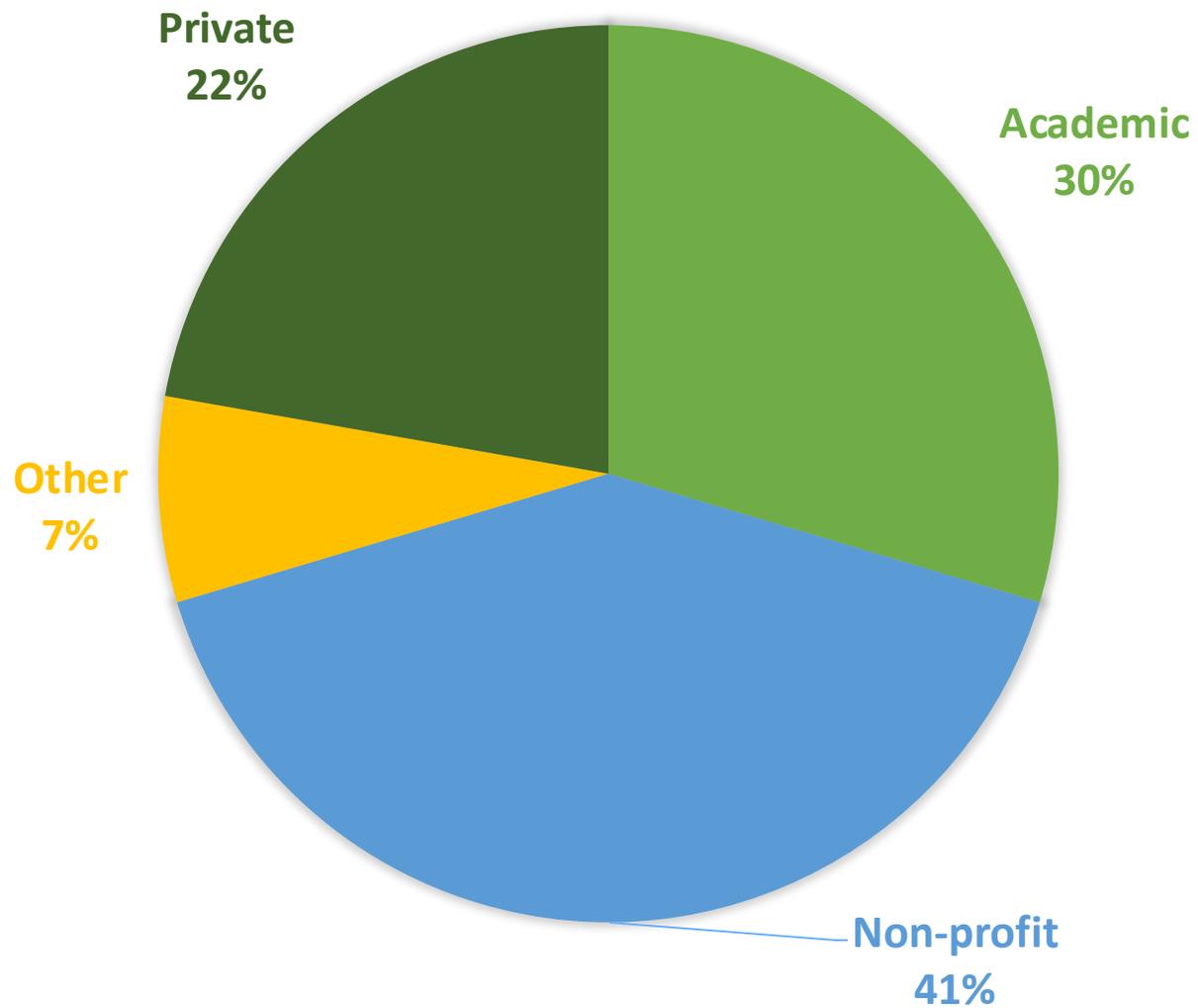
- Research in sustainable nutrient management, soil fertility, and agricultural biogeochemistry.
- Specifically, we investigate how soil, plant, and atmospheric carbon and nitrogen pools are impacted by conservation practices.
- We are currently working to scale up field measurements using biogeochemical models
- We have also supported producers in understanding farm scale carbon and nitrogen balances through extension education



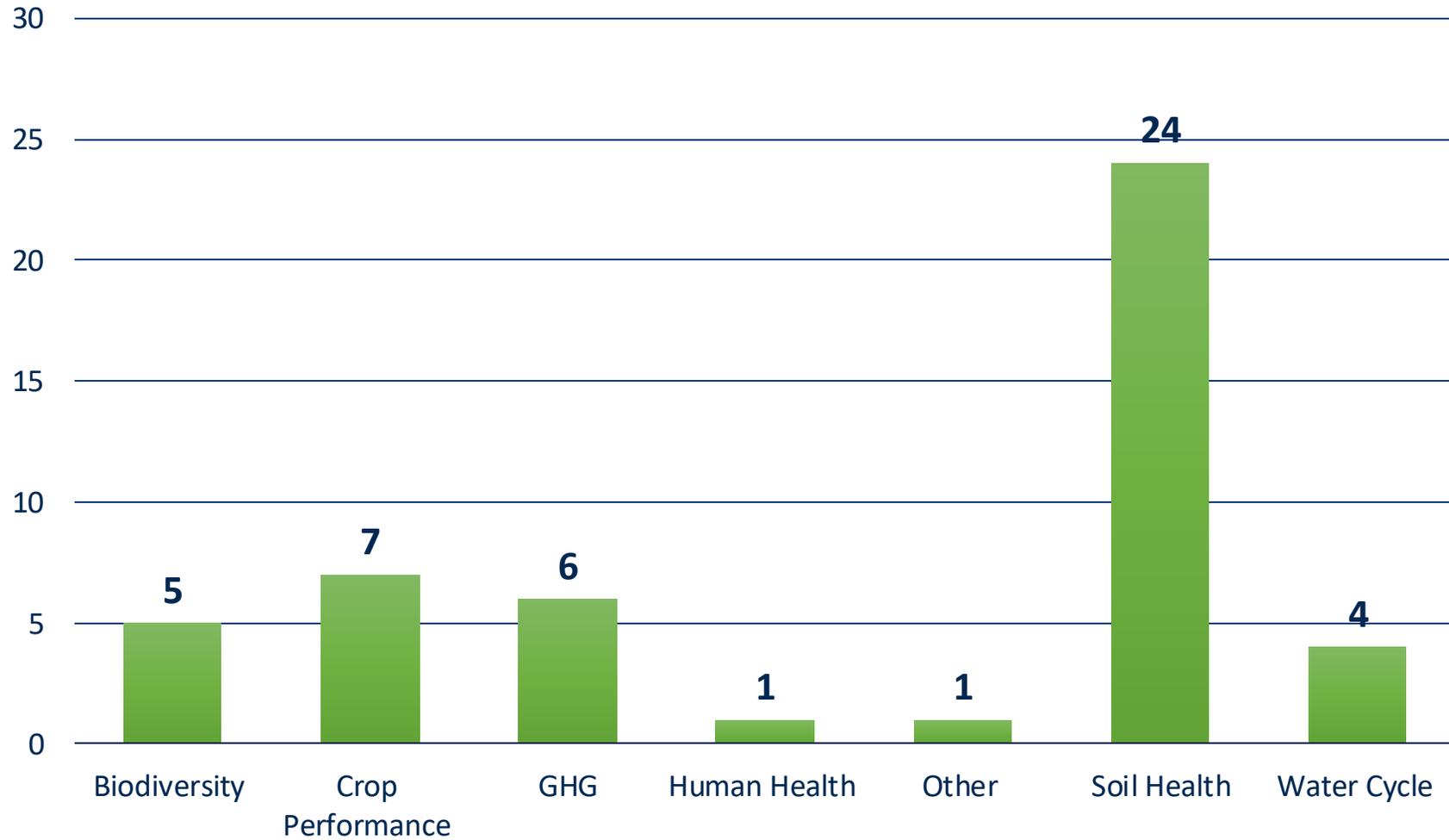
In collaboration with CSU
Monterey Bay



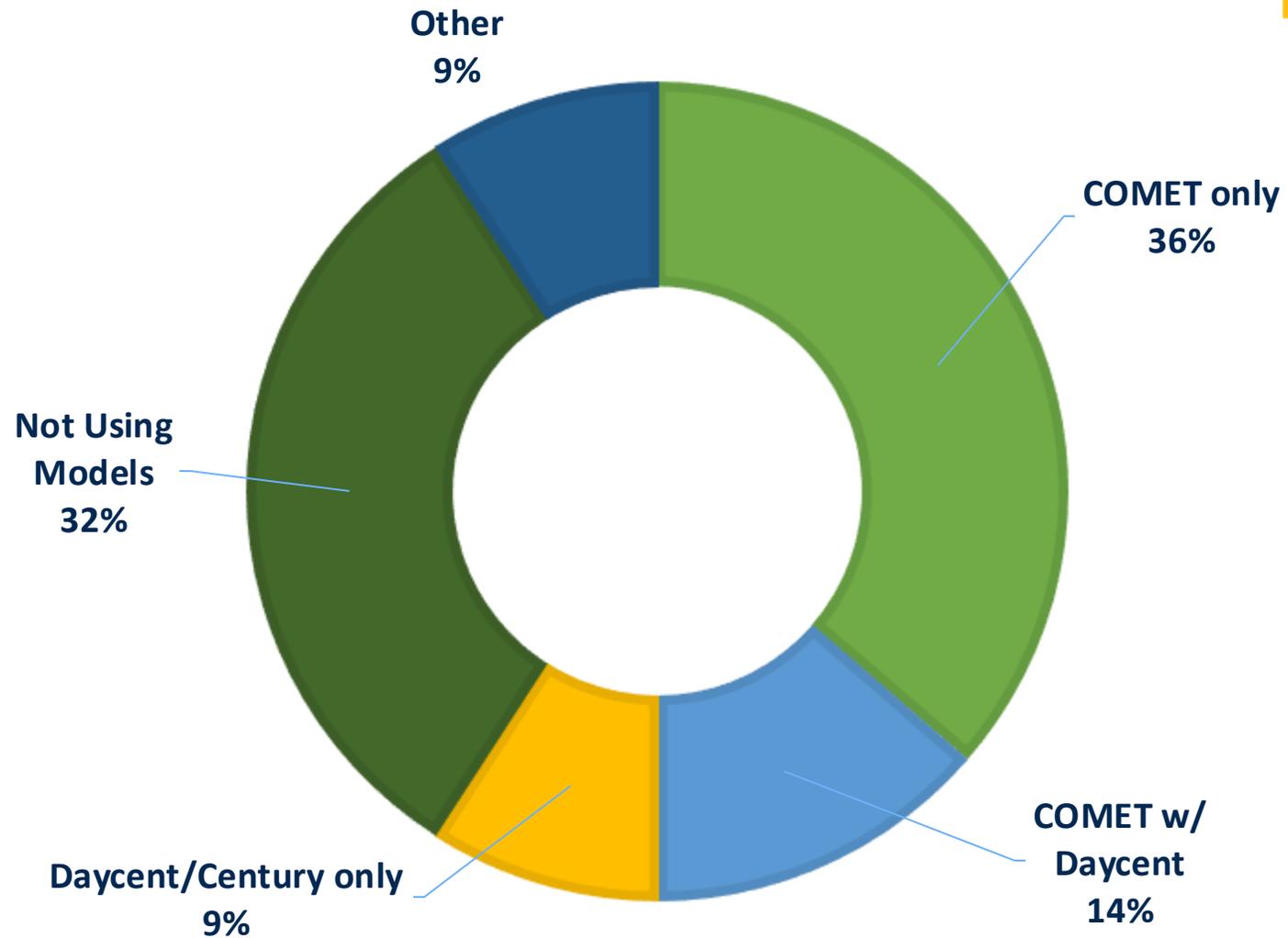




**Affiliations of CDFA MRV Convening participants
(27 projects)**



Measurements taken by CDFA MRV Convening participants

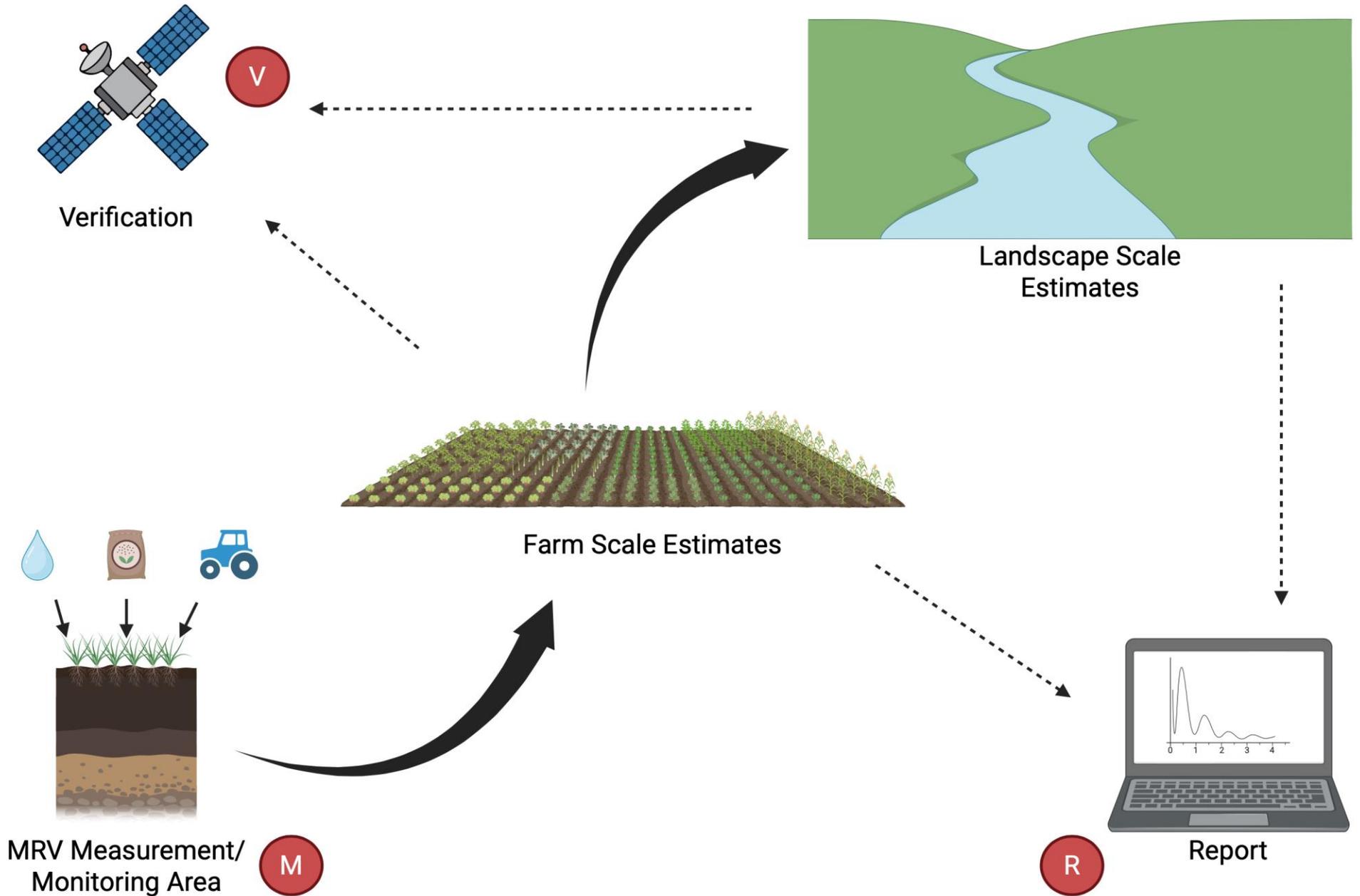


Models being used by CDFA MRV Convening participants

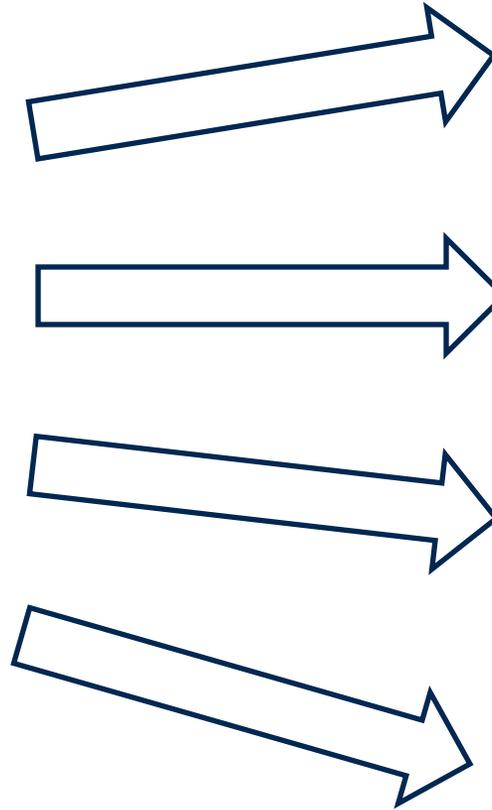
**Regional
Baselines/Inventories:**
Stratify according to soil,
climate, crop, etc
Estimate baselines to set
achievable goals

**Ecosystem/ Process
Modeling**
Calibrate + validate with
measurements
Quantify uncertainty
Gap fill

Site specific data:
Soil Tests
Irrigation
Nutrient Inputs
Management Practices
Crop Type



Barriers to MRV Adoption



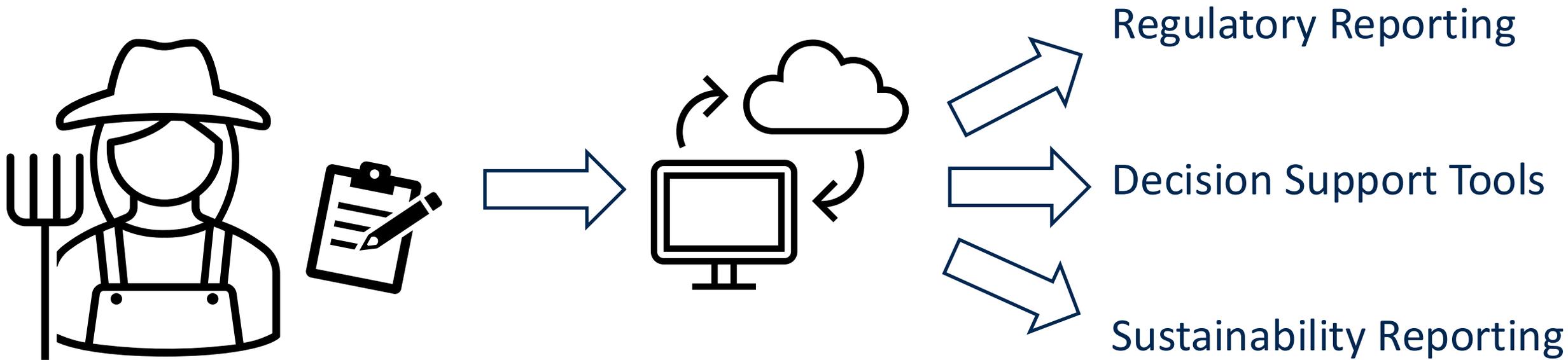
Regulatory Compliance

Decision Support Tools

Sustainability Reporting

MRV Reporting

Opportunities of MRV Adoption



One input, multiple outputs

Benefits to Producers

- Expands access to international and domestic markets by verifying conservation impacts
- Improves efficiency when used with nutrient and irrigation decision support tools
- Reduces reporting burden and improves regulatory compliance
- Enables realistic goal setting through regional benchmarking

Key Priorities

- Map existing MRV activities, projects, and systems within the state
- Establish clear MRV goals – the why!
- Explore public-private partnerships to determine the value proposition of MRV
- Improve CA agroecosystem models through innovations in data collection and harmonization
- Establish clear reporting standards for soil, plant and management data

Comments/Questions?

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