Meeting Synthesis for the Ad Hoc Committee on Expanding Pathways to Compensate Producers for Climate-Smart Agriculture Production

Meeting date: August 26, 2026
Summary date: September 11, 2026

Meeting agenda: CDFA - Pathways Committee Overview

Meeting Background

This session convened a diverse group of growers, municipal representatives, state government, project developers, and technical-assistance providers to evaluate pathways for scaling climate-smart agriculture in California. This was the second meeting of the Pathways Committee building directly on the July 8 session, moving from open discussion into the structural work of refining the pathway taxonomy, defining MMRV (measurement, monitoring, reporting, verification) as a shared vocabulary, mapping current-state MMRV gaps by pathway, and stress-testing the evaluation criteria against a live case study for the Healthy Soils Program (HSP).

The session's central tension carried through nearly every topic: the Committee wants MMRV that is cohesive and comparable across pathways, but is wary of creating a new, duplicative reporting burden on growers.

Pathway Types Discussion Summary

The Committee agreed on five pathway buckets:

1. Labels, Certifications, Claims (e.g., Fairtrade, Better Cotton Initiative)
2. Environmental Markets (i.e., carbon offsets)
3. Finance & Risk Instruments (e.g., insurance premium reductions or bonds)
4. Government Programs (e.g., HSP, SWEEP, EQIP)
5. Procurement Supply Chain Programs (e.g., General Mills Scope 3 program)

Ample discussion around what is and isn't included in each pathway bucket occurred – in general Committee Members agreed there needed to be firmer boundaries on these categories.

Two major discussion points came out:

- Insets and offsets do not belong in the same bucket as they often differ in the level of rigor and fungibility. The Committee noted that insets do not always separate the

product from the environmental benefit. General agreement to fold insets into Procurement as a supply-chain mechanism rather than treat them as a fungible asset.

- Another overarching theme was that who pays and who benefits are frequently misaligned. Growers often pay for assurance while brands capture the benefit, which was described in the room as "pay to play." There is not always a premium, so the cost-benefit case cannot always be quantified for the producer.

Below are pathway category discussion points:

Labels, Certifications & Claims

- SISC is hard to place in a bucket because it functions as a standard rather than a certification, and standards exist within each pathway type.
- Auditing should be required across all labels/claims/certifications; unaudited labels risk greenwashing. The entity issuing a label should be separate from the entity auditing it.
- Clarification: A label or claim does not have to carry a real or perceived climate benefit to qualify and does not need to include carbon specifically. The label or claim should be framed around environmental and climate health more broadly.
- The taxonomy of pathways and associated claims should inform the state's climate scoping plan and reward broader effects, not just narrow carbon metrics.
- The state's target is 3 million acres under climate-smart practices[1]; the definition of "environmental benefit" used to scope the committee's work should live in the charter or be anchored on the HSP definition: building organic carbon belowground and some aboveground, reducing land-based GHG emissions, improving soil health, and often providing physical soil protection and habitat.

Environmental Markets

- Insets should not be included here because they can be less rigorous than offsets. That is, they may carry no contractual payment, unlike procurement contracts, which specify an explicit dollar amount.
- Remove Scope 3 language from this pathway's definition given that scoping is not the defining feature, even though Scope 3 demand is what currently drives it.

[1] For the purposes of the AB1757, the 3 million acres are designed to “The NBS climate targets established in Section II: 1) Are designed to deliver resilient ecosystems and durable carbon stocks. 2) Set out the implementation pathway to meet or exceed the Scoping Plan’s carbon stock target.” For our purposes and as defined by the United Nations Framework Convention on Climate Change (UNFCCC) climate-smart agriculture is “an approach to agriculture that seeks to achieve three objectives, 1) the sustainable increase in agricultural productivity and incomes to boost the economy, the social well-being of people and animals, and the environment; 2) agriculture adaptation and resilience to climate change; and 3) the decrease or elimination of greenhouse gas emissions.”

- "Market" implies fungibility, but insets are not always fungible creating a definitional problem. The product is not separated from the environmental benefit in insets.
- The value proposition is no longer fixed; it now depends on who pays, i.e., the customer, or a condition of operating in the state.
- A proposal to remove offsets from the pathway list entirely was raised but the group decided to keep offsets as a program under the environmental markets pathway.
    - Momentum is shifting: the Soil Enrichment Protocol and VM0042 have changed the offset conversation in the last two to three years for agricultural carbon offsets and California projects are emerging.
    - The group should separate and define pathway types without removing anything outright. Even low-value pathways may be worth improving rather than discarding if there are addressable barriers.

Finance & Risk Instruments

- Actuarial data needed to price these instruments, which has been hard to obtain.
- These instruments function as a backstop for a system not designed to work well. Federal direct loans give producers a better starting position regardless of where they begin. Given that, California should take a heavier role so producers have a genuinely profitable alternative, rather than having next year's operation depend on a lender who bears none of the risk and captures most of the return.
- Insurance belongs on the pathway list but if government-administered, it should sit in the Government Programs pathway.
- Risk falls disproportionately on growers, and these programs are usually dependent on other programs or philanthropy rather than standing alone.

Government Programs

- This pathway includes government lending to producers and tax breaks and/or incentives.
- The USDA Natural Resource Conservation Service (NRCS) regenerative ag program and the California Department of Conservation Multi-benefit Land Repurposing Program (MLRP) both fall here.
- The bucket is broad and structurally diverse; a given program's mechanism may actually overlap with one of the other four pathway types.

Procurement Supply Chain Programs

- There was general agreement across the Committee that insets fit here as a supply-chain program type.

- Procurement mechanisms fall into three types: market access, loan incentives, and direct payments.
- Procurement's core function is market access. Participation is required to sell at all, not an incremental benefit. This can also function as product differentiation (e.g., a retailer setting aside shelf space), which blurs the line with labels and shifts where responsibility sits.
- A changing regulatory landscape is altering how farmers reach markets. Historical preference programs, such as small farmers selling to state prisons, may belong in this bucket if still active.

MMRV Discussion Summary

The group set out to define MMRV explicitly, anchored on several ideal outcomes, before applying it to any pathway. At the meeting we discussed that there is no singular MMRV approach that is ideal. They run from light-touch practice attestation (i.e., did the practice happen?), to full outcome quantification (i.e., measured or modeled greenhouse gas and soil-carbon change with third-party verification). A state cost-share program may need only the first. A carbon credit needs the last. Matching intensity to the pathway is where cost, rigor, and grower burden get decided. Feedback from the committee included discussions that:

- An ideal system provides cohesion, i.e., clarity on what is being measured and where the boundaries lie. The current landscape is chaotic; achieving a coherent MMRV requires first knowing the program's goals.
- Cohesion must coexist with programmatic flexibility, i.e., a practice-based incentive program needs a different MMRV than an outcomes-based offset.
- The state should build on what growers already use to report rather than create a separate, duplicative burden.
    - Potential Committee proposal: use GHG Protocol’s Land Sector and Removals Guidance to organize existing grower reporting into tiers usable across different pathways.
- A good MMRV system should be interoperable with other MMRV systems. That is multiple systems can coexist, but standardization is currently missing to let them "speak to each other".
- MMRV should be quantifiable, objective, and verifiable, operating within controlled systems where every outcome becomes apparent.
- Standardizing MMRV is beyond CDFA's runway, and the goal of the Committee should be an objective evaluative tool, not a climate-benefit measurement function.
- Verification was redefined during discussion to remove the word “independent” as second-party (robust internal) verification was raised as a live alternative to strict third-party

requirements. - i.e., the assurance process or how the claim is confirmed and how it holds up under audit.

- Trust was added as a desired outcome of a good MMRV, covering data accuracy and security, grower trust in where their data goes, and consumer trust in the underlying process.
- Who pays and who benefits vary by pathway: for labels, the grower typically pays for assurance while the brand captures the benefit, without a guaranteed premium. Company procurement programs are often not traceable to the individual field; they impose a supply-shed requirement rather than field-level traceability.
- There are structural complicating factors in that field size varies widely and changes the MMRV burden respectively; land ownership is fragmented with fluid operator/owner contracts, which is more pronounced in California than elsewhere; growers already report fragmented data across many programs and timeframes; and California's existing infrastructure, including the HSP and other state support, which could be a specific asset to build from.

MMRV Gap Mapping: The Current State

The Committee conducted a gap-identification exercise to map the specific areas where the processes break down in each MMRV stage across all five pathway types. +1, +2, +3 indicates support across the committee for different gaps that matter to address. This feedback will help the planning team analyze results of the criteria survey and bring those findings to the September 30 meeting. Our plan is to use the MMRV gap analysis and the survey results to help identify development areas and recommendations.

Highest-Priority Gaps

The group concentrated on seven gaps which are the strongest signal of where the most urgent MMRV work lies:

- **+3:** Duration and cycle of grower reporting, identified in Monitoring in the Government pathway, but likely applicable across all pathways.
- **+3:** Consumer understanding of label value, identified in Verification for the Labels pathway.
- **+3:** Certification does not indicate actual impact or outcomes, identified in Verification for the Labels pathway.
- **+2:** Inconsistent SOC tests and ag management data collection, identified in Measurement in the Government pathway.
- **+2:** Incentives prioritize yield over other benefits identified in Measurement for the Finance & Risk pathway.
- **+2:** Spatially explicit management data, identified in both Monitoring and Measurement for the Government pathway but likely applicable across most pathways.

- **+2:** Co-benefits often not quantified, identified in Reporting in the Government pathway.
- **+2:** Data-sharing restrictions across purposes, identified in Reporting for the Environmental Markets pathway.
- **+2:** Who pays for monitoring: the beneficiary should pay, identified in Monitoring in the Procurement pathway, but likely applicable across all pathways.

Monitoring: how change is tracked over time and space

Labels, Claims, and Certifications

- Label proliferation.
- Unclear how influential a given label's requirements are relative to other labels.
- Change monitoring is not always a requirement (+1).

Environmental Markets

- Unclear who performs monitoring and what qualifications they need.
- Verification methods, such as remote sensing, can break down for diverse and specialty crops.

Procurement Programs

- Brands and buyers aggregate on-farm results to the point where the data stops providing management information back to the grower. This is a failure to use aggregated results to drive real, natural-resource improvement on the ground. Brands and buyers need to return results to growers and work with them to track year-over-year improvement or decline (+1).
- Who pays for monitoring? The group's position here was that whoever benefits financially should pay (+2).

Finance & Risk Programs

- Missing connection between financing mechanisms and monitoring of climate outcomes. A dollar benefit is needed for loans tied to implementation and reporting.

Government Programs

- Duration and cycle of grower reporting — this was the most emphasized gap identified in the entire exercise (+3).
- Rigorous, usable, outcome-based data (+1).
- Spatially explicit management data (+2).
- Amount and duration of funding (+1).
- Misalignment between what growers actually care about monitoring (e.g., soil organic carbon, soil characteristics, or profitability) and what programs require them to monitor (+1).

Measurement: what gets quantified, and how (soil sampling, models, remote sensing, activity data)

All Pathways

- Lack of standardization, and an inability to use powerful aggregated data once it exists (+1).

Labels, Claims, and Certifications

- Measurement process is not always dictated or verified, nor is it always based on outcomes or impact.
- Credits given for resource reduction.
- Outcomes often not quantified (+2).

Environmental Markets

- Sample density requirements are scale-dependent (field vs. regional), and model outputs and results carry real uncertainty.
- Challenges with removals and permanence (+1).
- Producers complete a carbon plan and then separately pay for verification.

Procurement Programs

- Need for harmonization across data requests (+1).
- Brands and buyers are internalizing their own measurement standards to differentiate sustainability claims in the marketplace, reflecting a lack of pre-competitive cooperation toward the shared goal of resilient on-farm systems (+1).
- Growers are not given funding or support to do the actual work of measuring.
- Measurements are backward-looking, while credit delivery is increasingly forward-looking creating a structural mismatch.

Finance & Risk Programs

- Incentives prioritize yield over other benefits (+2).
- Adjudication gaps; many programs measure adoption only, not outcomes.

Government Programs

- Different agencies, including regulators, take different measurement approaches (+1).
- Groundwater overdraft is not aggregated.
- Co-benefits are often not quantified (+1).
- Inconsistent soil organic carbon (SOC) tests and inconsistent ag management data collection, undermining connection to larger national and global standards (+2).
- Lack of government clarity on what soil data to actually require.

- Need for consistent technical assistance tied to incentives, e.g., carbon farm plans, practice implementation, and monitoring.
- Data privacy concerns are unaddressed, which blocks growers from sharing data that could evaluate program performance or help set government priorities.

Reporting: how results move to programs, registries, and buyers

Labels, Claims, and Certifications

- Data-sharing restrictions limit reuse across purposes.
- Specific outcomes often not quantified was flagged as possibly belonging under Measurement instead (+1).

Environmental Markets

- Difficulty recording mixed annual and perennial cropping.
- Data-sharing restrictions across purposes (+2).
- Verified-claim data transparency may not be public; verification reports are typically produced at the project level, not the farm level.

Procurement Programs

- Definitional alignment is missing across programs.
- SB 253 should be shaped to request on-farm/Scope 3 information in a way that acts as a harmonizer across all Scope 3 reporting requirements and adds co-benefits, so industry can reuse California state reporting internally and across the supply chain.
- Need standardized reporting data and metrics that can flex across levels and be built into any platform or system.

Finance & Risk Programs

- Landowner vs. grower: unclear who receives the incentive versus who makes the investment (+1).

Government Programs

- Difficulty reporting several crops from different companies on the same land in the same year.
- Co-benefits often not quantified (+2).
- Spatially explicit limitations.
- Lack of alignment between program reporting timelines and growing cycles (+1).
- State reporting requests need to align with industry and international standards.
- Government reporting technology needs to be streamlined and automated to make it easier and more valuable for growers.

Also flagged as open, cross-cutting questions

- Blurry operational scope, i.e., company vs. product.
- Length of claim validity (+1).

Verification: how confirmation of the claim is made

Cross-cutting

- Permanence, data privacy, and who pays were all raised as open questions spanning every pathway (+1 on data privacy).

Labels, Claims, and Certifications

- Consumer understanding of what a label actually signals in terms of value (+3).
- Conflict of interest where the certifier and auditor originate from the same entity.
- Certification does not indicate actual impact or outcomes (+3).

Environmental Markets

- Offsets and credits function as natural capital transactions; project-level dollar figures obscure true per-unit cost (+1).
- Need for multiple measurements to ensure consistency, and clearer boundary definitions.
- Verification costs divert dollars from the incentive pool that would otherwise reach the producer.
- Uncertainty at the field scale is not equivalent to uncertainty at the regional scale.

Procurement Programs

- Tension between buyer assurance and third-party certification.
- Frequently overlaps with eco-labels; where eco-labels aren't required, buyers often accept non-verified attestations instead.

Finance & Risk Programs

- Underlying models are outdated (+1).

Government Programs

- Programs are verified either by the administering agency or through other/self-certification to enable reimbursement which creates a meaningful difference in rigor.
- The quantification models underpinning these programs need continual recalibration for California's diverse soils, climates, crops, and practices.
- Open questions raised on paper: how a tax-based mechanism would allocate benefit between investor and producer, and what dollar investment or methodology would be needed to deliver consumer-confident verification.
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If MMRV Improves: The Five-Year Grower Experience

The group closed the gap-mapping discussion by imagining the downstream effect of a better system.

- Growers and the state gain the ability to identify what works and what doesn't, and buyers gain a basis for trust.
- A shared measurement system that could serve all pathway categories at once.
- The State would better understand what is actually happening on the ground by being able to track acres and climate benefits, allowing the State to target future investment accordingly.
- Standardized and more accurate measurement. A grower with standardized data could answer any future data request without repeating the work, and buyers could communicate back to growers to help them improve.
- The grower experience shifts toward lower ongoing burden.
- Better MMRV would let the state support more public-private funding opportunities.
- Since measurement is the most burdensome step for the grower, the design goal should be to make the grower as hands-off as possible.

Key MMRV Takeaways

- MMRV must be cohesive without being duplicative. Universal support for systems that can "speak to each other" is balanced against explicit caution that the state should not build something separate, unique, and duplicative that adds to grower burden.
  - Preferred path: build on what growers already report.
- Grower burden and technical assistance gatekeep participation. Measurement is the single most burdensome step for growers. Technical assistance is needed to build trust and confidence, especially in the first years, and to make grower reporting reusable across multiple data requests rather than one-off.
- Trust, privacy, and data security are now explicit MMRV dimensions. Added to the definition set: grower trust in where data goes, and consumer trust in the process behind a claim.

Criteria Stress Testing Summary

We finished the day with stress testing our draft criteria by running it through the 2021 - 2022 Healthy Soils Program Incentives Solicitation as a whole group example and then broke out into four groups to further test the scoring, language, and clarity of the criteria.

Major themes for edits included:

- Defining frequently used terms (e.g. Climate benefits and co-benefits).

- Updating questions for what matters in producer decision making and how best to stratify programs and pathways.
- Interrogating how to remove bias in scoring with a numbered score.

Key Discussion Points

- Open question on scoring convention: if a program simply does not address a criterion that was never its goal, should it score NA or 0?
- F6 (supply-chain integration breadth): unclear what counts as "another actor". For example, whether partnering two programs together, or building on top of HSP, should score as broader integration. Farm to School was cited as a program explicitly designed to integrate up and down the supply chain.
- F5 (stackability): A program should be required to state explicitly what stacking it allows. The HSP would scope this a C as stackability is considered on a case-by-case basis.
  - Different practices on the same field can go unincentivized purely due to a communication gap.
  - Some programs (citing HSP) explicitly encourage collaboration via cost share.
- G5: adopt a broad definition of technical assistance, explicitly including enrollment support.
- G1 (producer flexibility): should also capture whether the program dictates how a practice is implemented, not only whether a producer can choose practices.
- The criteria should reward programs that incentivize multiple practices implemented together.
- M1, M4, and M5 should be combined.
- A new criterion is needed on efficiency of fund delivery, i.e., how much of the funding actually reaches the grower versus other parties.
- The Committee proposed replacing raw reporting and monitoring hours with clearer measures and adding transparency and complexity as distinct criteria.
- M2: the climate-benefit measure is not clearly defined enough as written.

Breakout Groups: Evaluating Generic Pathway Types

The closing breakout distilled the day's themes into criteria refinements for pathway evaluation generally and ideas for recommendations to consider, which included:

- The overarching theme that programs need to be far clearer about their terms and provide more technical assistance.

- It would help growers to know the MMRV burden upfront so they can run their own cost/benefit analysis as transparency about that burden may matter more than the raw time burden itself.
- Add a criterion on the sustainable-practice mechanism: how much does the program actually reward growers, and what percentage of a given practice is incentivized?
- Open question: does a farmer need to communicate with every actor in the supply chain just to start a program?
- Combine M1 and M5 specifically to evaluate producer burden.
- Address G7, monitoring and durability, as a distinct criterion.
- Multiple terms used across the criteria still need firmer definitions.

Action Items

Taxonomy and Definitions

- Separate insets and offsets in the framework.
- Fold insets into the Procurement bucket as a supply-chain program.
- Remove Scope 3 language from the Environmental Markets definition.

MMRV Definitions

- Adopt the reframed verification definition, i.e., how a claim is confirmed.
- Add cohesion/harmonization and "how the program achieves its desired outcomes" to the MMRV definition set.
- Add trust (data accuracy, security, and grower/consumer trust) as an explicit MMRV outcome.

Survey Criteria

- Add a comment box under every scoring question.
- Resolve the NA-vs.-0 scoring convention.
- F6: define what counts as "another actor" for supply-chain integration scoring.
- F5: require programs to state their stackability rules explicitly.
- Split the conflated revenue/benefit question into two separate criteria.
- G5: adopt the broad technical-assistance definition, including enrollment.
- G1: add whether the program dictates practice implementation, not just whether producers can choose practices.
- Consider how to address M1, M4, and M5 – potentially combine M1, M4, and M5; separately combine M1 and M5 for the producer-burden measure.

- Add a fund-delivery-efficiency criterion (share of funding that reaches the grower).
- Consider replacing raw reporting and monitoring hours with clearer measures; add transparency and complexity as distinct criteria.
- Sharpen M2 (climate-benefit measure) and G7 (monitoring and durability).
- Add a criterion on percent of practice incentivized and on rewarding multi-practice implementation.

MMRV Gap-Exercise Priorities

This feedback will help the planning team analyze results of the criteria survey and bring those findings to the September 30 meeting. Our plan is to use the MMRV gap analysis and the survey results to help identify development areas and recommendations.

- Prioritize the seven highest dot-voted gaps for the next round of work:
  - Grower reporting duration/cycle for all pathways;
  - Consumer understanding of label value and the certification-outcome disconnect for the Labels, Certification & Claims pathway;
  - Inconsistent SOC testing and ag data collection across multiple pathways;
  - Yield-biased incentives for the Finance & Risk pathway;
  - Spatially explicit data for all pathways;
  - Unquantified co-benefits for the Government pathway; and
  - Data-sharing restrictions for the Environmental Markets pathway.
- Adopt "whoever benefits financially pays for monitoring" as a working principle for procurement-driven programs, per the group's consensus around that idea
- Propose brands and buyers to return aggregated on-farm results to growers in a usable, year-over-year format rather than a one-way data pull.
- Explore how SB 253 implementation guidance could be harmonized with Scope 3 and on-farm reporting requests across programs, reducing duplicate asks on growers.
- Address auditor scarcity directly, which will constrain any pathway's ability to scale.